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INTRODUCTION

This annex presents country-level results for 52 benchmarking indicators for which up-to-date data is available. Profiles are provided for each Member State plus Norway, Iceland and Croatia.[1]

The indicators were defined by the Commission in co-operation with Member States and were set out in the i2010 Benchmarking Framework[2] endorsed by the i2010 High Level Group in April 2006. The main sources of data are the Community Surveys of Households and Individuals and of Enterprises undertaken by the National Statistical Offices and Eurostat[3]. These data are complemented by other official statistics on electronic communications collected through the Communication Committee and by ad-hoc studies undertaken by independent contractors notably for broadband coverage, speeds and online availability of public services. A full list of the indicators used, sources and notes is given in the next section.

Data reported in the country profiles come from statistical sources harmonised at EU level.[4] Some indicators, in particular for those related to eCommerce, eBusiness take up by enterprises and eGovernment take up by citizens have to be interpreted with care because of slight changes in the definitions and/or changes in the structure of the questionnaire that could have affected comparability over time. The eCommerce indicator for 2008, in particular, is not available for a number of Member States.

DEFINITIONS AND SOURCES

Broadband

Total DSL coverage (as % of total population) - Source: study for the European Commission, Broadband coverage in Europe (Preliminary data for December 2008)[5], Idate. Estimations for the EU average include IS and NO.

DSL coverage in rural areas (as % of total population) - Source: study for the European Commission, Broadband coverage in Europe (Preliminary data for December 2008), Idate. Estimations for the EU include IS and NO.

Broadband penetration: number of total subscriptions to fixed broadband connections (households, enterprises, public sector) by platform (DSL, all others) divided by the number of

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1 Iceland and Norway are members of the European Economic Area and Croatia is a candidate country to the EU. They contribute to the funding of the Competitiveness and Innovation Programme and participate as such in the Eurostat surveys. However, they are not considered in the country rankings of all indicators except for the two broadband coverage indicators where Iceland and Norway are included. Because of the size of their population and of the advanced state of development of the market under consideration, however, the impact on the EU average can be considered negligible.

2 i2010 Benchmarking Framework: http://ec.europa.eu/information_society/eeurope/i2010/docs/benchmarking/060220_i2010_benchmarking_framework_nov_2006.doc

3 The data used in this version of the paper were extracted from the Eurostat database on 05.06.2009. Almost all Member States contributed to both surveys but there remain some outstanding returns.

4 See http://ec.europa.eu/eurostat/ict

5 "Broadband Coverage" refers to the coverage of DSL networks, the most widespread form of broadband access in Europe, and in particular to the percentage of population depending on a Local Exchange equipped with a DSLAM. Thus, figures do not account for those people that reside too far from these switches to be able to purchase a DSL connection even if they wanted to do so. Hence, coverage figures may overestimate actual eligibility.

inhabitants. 3G subscriptions are not included in the total. Source: Communications Committee (COCOM) (1 January 2009). FR, NL, AT, EE, LT: data as at 1 October 2008. NO at 1st January 2009. For 2003 and 2005, data is at 31st December for all the countries except for NO (1st July). Note that COCOM data does not include mobile broadband connections.

Speed - % of broadband subscriptions above 2 Mbps– Source: study for the European Commission, Broadband coverage in Europe (Preliminary data for December 2008), Idate.

% of households with an Internet connection – households with at least one member aged 16-74. Source: Eurostat survey on ICT use by households 2008

% of households having a broadband connection – households with at least one member aged 16-74. Source: Eurostat survey on ICT use by households and individuals 2008

% of enterprises having a broadband connection - 10+ employees, excluding the financial sector. Source: Eurostat survey on ICT use by enterprises 2008

% of individuals using a mobile phone via UMTS (3G) to access the Internet – individuals aged 16-74. Source: Eurostat survey on ICT use by households and individuals 2008

% of individuals using a laptop via wireless connection away from home/work to access the internet – individuals aged 16-74. Source: Eurostat survey on ICT use by households and individuals 2008

Internet usage

% of population who are regular internet users (using the internet at least once a week in the last 3 months) – individuals aged 16-74. Source: Eurostat survey on ICT use by households and individuals

% of population who are using the internet every day or almost every day (in the last 3 months) – individuals aged 16-74. Source: Eurostat survey on ICT use by households and individuals

% of population who have never used the internet – individuals aged 16-74. Source: Eurostat survey on ICT use by households and individuals

% of population using the Internet for specific activities (in the last 3 months) - Activities: sending emails, looking for information about goods and services, reading online newspapers/magazines, ordering goods or services, over the Internet, for private use (in the last year), selling goods and services (e.g. via auctions), internet banking, downloading computer or video games or their updates, downloading/listening to/watching music and/or films, paying for online audiovisual contents, listening to the web radio/watching web tv, uploading self-created content, seeking health information on injury, disease or nutrition, looking for a job or sending a job application, doing an online course, consultation with the purpose of learning. – individuals aged 16-74. Source: Eurostat survey on ICT use by households and individuals

eGovernment indicators

% of basic public services fully available online (for households and enterprises) - A public service is considered fully online when the publicly accessible website offers the possibility to completely treat the public service via the website, including decision and delivery. No other formal procedure is necessary for the applicant via "paperwork". Source: *The User Challenge. Benchmarking the Supply of Online Public Services*, European Commission. Data for September 2007

% of population using eGovernment services (in the last three months) – individuals aged 16-74. Source: Eurostat survey on ICT use by households and individuals

% of population using eGovernment services for sending filled forms (in the last three months) – individuals aged 16-74. Source: Eurostat survey on ICT use by households and individuals

% of enterprises using eGovernment services (in the last year) – 10+ employees, excluding the financial sector. Source: Eurostat survey on ICT use by enterprises.

% of enterprises using eGovernment services for sending filled forms (in the last year) – 10+ employees, excluding the financial sector. Source: Eurostat survey on ICT use by enterprises.

% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (e-procurement) - 10+ employees, excluding the financial sector. Source: Eurostat survey on ICT use by enterprises.

eCommerce

eCommerce as % of total turnover of enterprises - Turnover on the Internet or via other external computer mediated network as % of the total turnover of enterprises (in 2007). 10+ employees, excluding the financial sector. Source: Eurostat survey on ICT use by enterprises

% of enterprises receiving orders/purchasing on the Internet - Non financial enterprises. % of enterprises receiving orders/purchasing on the Internet or via other external computer mediated network (in 2007). 10+ employees, excluding the financial sector. Source: Eurostat survey on ICT use by enterprises

eBusiness

For all the indicators in this section the source is: Eurostat survey on ICT use by enterprises

% of enterprises using applications for integrating internal business processes– % of enterprises sharing electronically information on sales and/or purchases with the software used for any internal function (management of inventory levels, accounting, production/service management, distribution management), in January 2008. 10+ employees, excluding the financial sector.

% of enterprises using applications for integrating internal business processes (large enterprises) – as above but for enterprises with 250+ employees.

% of enterprises using applications for employees to access HR services – % of enterprises using, in January 2008, dedicated applications for employees to access human resources services

(e.g. see open job positions, request annual leave, view or download payslips, or other services). 10+ employees, excluding the financial sector, excluding the financial sector.

% of enterprises exchanging automatically business documents with customers/suppliers - % of enterprises sending/receiving automatically, in January 2008, orders, e-invoices, product information (catalogues, price lists, etc), transport documents. 10+ employees, excluding the financial sector.

% of enterprises sending/receiving e-invoices - % of enterprises, in January 2008, sending/receiving e-invoices in a digital format which allows its automatic processing.10+ employees, excluding the financial sector.

% of enterprises using analytical CRM - % of enterprises having used, in January 2008, any software application for making analysis of the information about clients for marketing purposes (this is commonly referred to as Customer Relationship Management, e.g. to set prices, make sales promotion, choose distribution channels, etc.).

Indicators on the growth of ICT sector and R&D

ICT sector share on total employment and value added – Source: Eurostat estimation based on SBS (structural business statistics) and National Accounts statistics.

Share of ICT R&D performed by the business sector as % of GDP and as % of total business expenditure in R&D. Source: IPTS (European Commission) – Prospective Insights on R&D in ICT Annual Report 2008.

% of ICT exports/imports on total exports/imports: data for Imports and Exports of goods are from the COMEXT database; data for services are from Balance of Payments statistics. Share of all Exports and Imports is calculated comparing the previously mentioned data with data from National Accounts Exports and Imports. Source: Eurostat.

% of persons employed with ICT user skills - Based on the OECD definition of ICT user (basic + advanced) skills. Source: Eurostat Labour Force Survey. The figure for 2008 refers to the first 3 quarters.

% of persons employed with ICT specialist skills - Based on the OECD definition of ICT specialist skills. Source: Eurostat Labour Force Survey. The figure for 2008 refers to the first 3 quarters.

ICT specialists: they have the ability to develop, operate and maintain ICT systems. ICTs constitute the main part of their job – they develop and put in place the ICT tools for others.

Advanced users: competent users of advanced, and often sector-specific, software tools. ICTs are not the main job but a tool.

Basic users: competent users of generic tools (*e.g.* Word, Excel, Outlook, PowerPoint) needed for the information society, eGovernment and working life. Here too, ICTs are a tool, not the main job.

1. AUSTRIA

The information society at large - connectivity, ICT usage by households, enterprises and government - is more developed than on average in the EU. Austria is a frontrunner in particular in the availability of eGovernment services, for which Austria has been leading developments in the EU consistently over the recent years. More recently particular emphasis has been given to the security of electronic transactions (eSecurity) through the deployment of the social security eCard which can be used for authentication in both public and private transactions.

Broadband

Fixed broadband access indicators do not feature significant progress, but indications are that wireless mobile is developing at a faster rate than in most EU countries. Austria's fixed broadband penetration now stands at 21.4%, close to the EU average, with households exhibiting higher rates of connectivity than enterprises do. For enterprise connectivity, Austria places near the bottom of the ranking. DSL coverage is at average levels, but progress is slow. Wireless mobile connectivity on the other hand is developing fast both for 3G and wireless laptop access and Austria is one of the most advanced country in the take up of these technologies.

Internet Usage

In the EU, Austria ranks 9th in terms of both regular (at least once a week) and frequent (almost every day) internet usage. 66% of the population were regular internet users in 2008 (above the EU average), up from 49% in 2005; 48% were frequent users, up from 32% in 2005. Nevertheless, a quarter of the population has never used the internet – somewhat better than the EU average of 33%. The picture in terms of use of advanced internet services is more mixed. While Austrian citizens are more intensive users of some services, such as sending e-mails, looking for information on goods and services, online shopping and seeking health information, they are less intensive users of others, such as watching web tv, seeking information with the purpose of learning, downloading video games or watching/downloading films and music.

Austria has reached full online availability of basic public services for citizens and enterprises. Take-up of eGovernment services by enterprises, at 80%, is relatively good and the country is one of the best performers in the area of e-procurement. Take-up by citizens, however, is significantly lower, though at 39% is higher than the EU average (28%).

ICTs in the Economy

Austria's performance on the eCommerce dimension is in line with the general situation in Europe. For eBusiness, Austria exhibits some top-ranking scores. This is primarily the case for in-house operations (integrating business processes, providing access to HR-services, using analytical CRM). For activities managing external relations (e.g. sending/receiving e-invoices or electronic information sharing with customers/suppliers), the figures are less impressive.

Austria also has a higher than average business expenditure on ICT R&D, ranking fourth, despite a less than average size of the ICT sector. It also has a rather good specialist eSkills base, but lags behind than expected in the percentage of persons employed with user skills.

Austria

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	86.0	86.0	91.3	92.0	92.2	92.7	17
DSL coverage in rural areas (as % of total population)		67.0	79.0	80.6	81.8	76.6	16
Broadband penetration (as % of population)	10.1	14.3	17.4	19.0	21.4	22.9	12
Speed - % of broadband subscriptions above 2 Mbps		22.9	29.7	42.9	57.3	63.3	16
% of households with an internet connection	44.6	46.7	52.3	59.6	68.9	60.4	8
% of households with a broadband connection	16	23	33	46	54	49	11
% of enterprises with a (fixed) broadband access	55	61	69	72	76	81	20
% of individuals using a mobile phone via UMTS (3G) to access the Internet			1	2	4	3	9
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				14	22	12	2
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	46	49	55	61	66	56	9
% pop. who are frequent internet users (using the internet every day or almost every day)	28	32	39	45	48	43	9
% population who have never used the internet		40	34	28	25	33	9
Take up of internet services (as % of population)							
sending emails	45	48	53	54	63	53	8
looking for information about goods and services	36	42	47	47	51	50	11
uploading self-created content					8	11	16
ordering goods or services, over the Internet, for private use	19	25	32	36	37	32	9
reading online newspapers/magazines	16	21	26	24	30	25	14
selling goods and services (e.g. via auctions)	4	4	8	7	7	10	11
internet banking	18	22	27	30	34	29	12
downloading computer or video games or their updates					6	9	23
downloading/listening to/watching music and/or films					20	28	20
paying for online audiovisual contents					5	5	8
listening to the web radio/watching web tv	3	5	7	7	13	20	24
seeking health information on injury, disease or nutrition	6	16	24	27	32	28	7
looking for a job or sending a job application	4	6	9	8	9	13	18
doing an online course				1		3	
seeking information with the purpose of learning				9	12	26	24
eGovernment Indicators							
% basic public services for citizens fully available online	60		70	100		51	1
% basic public services for enterprises fully available online	88		100	100		72	
% of population using eGovernment services	21	29	33	27	39	28	7
% of population using eGovernment services for returning filled in forms					14	12	9
% of enterprises using eGovernment services	74	75	81	81	80	68	10
% of enterprises using eGovernment services for returning filled in forms	47	41	54	54	59	50	12
of which to submit a proposal in a public electronic tender system (e-procurement)		11	13	11	16	9	3
eCommerce							
eCommerce as % of total turnover of enterprises	7	7	10	11	13	12	7
% enterprises selling online	12	10	15	18	15	16	9
% enterprises purchasing online	22	22	37	42	34	28	7
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					59	41	3
using applications for integrating internal business processes (large enterprises)					92	70	1
using applications for employees to access Human Resources services					19	11	6
exchanging automatically business documents with customers/suppliers					29	25	11
sending/receiving e-invoices				18	17	21	17
sharing information electronically with customers/suppliers on Supply Chain Manag.					20	16	11
using analytical Customer Relation Manag.				29	30	17	1
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP	4.5	4.5	4.4			5.0	11
ICT sector share of total employment	2.9	2.8	2.8			2.7	9
ICT R&D expenditure by the business sector, as % of GDP	0.5	0.5				0.3	4
= = = = =, as % of total R&D expenditure	31.16	31.96				26.43	10
% of ICT exports on total exports	7.1	6.4	6.6	4.5			20
% of ICT exports on total imports	9.3	8.5	8.4	6.1			22
% of persons employed with ICT user skills.	19.7	18.2	18.3	17.6	17.5	18.4	20
% of persons employed with ICT specialist skills	2.9	3.1	3.1	2.9	3.1	3.0	12

2. BELGIUM

The information society is more developed in Belgium than on average in the EU. However, Belgium is not one of the frontrunners: although broadband markets are highly developed and performance is good in the fields of eCommerce and eBusiness, the country still lags behind in the use of advanced services and eGovernment (although some applications are very successful, for example the electronic tax return form "Tax-on-web") . A new national digital strategy is under preparation.

Broadband

With complete DSL coverage and 93.8% of internet connected households having access to broadband (mostly +2Mbps and even +4Mbps connections), Belgium has almost completed the transition from narrowband to broadband. With fixed broadband penetration at 27.5%, and a good balance of platform competition (DSL and cable modem), the country scores above average, even though in terms of ranking it lost two places since last year and no longer belongs to the leading group of countries. Enterprises' broadband access on the other hand has significantly progressed, with Belgium now ranking 4th in the EU (i.e. up 3 places since last year).

Despite good performance in fixed broadband access, there is room for improvement in terms of exploiting mobile opportunities: both for 3G mobile phone access and wireless laptop connections outside the office or home, Belgium scores below average.

Internet Usage

Belgium ranks among the top third in terms of both regular and frequent internet use. 66% of the population are regular internet users, accessing the internet at least once a week, and 51% are frequent users, accessing the internet almost every day. One quarter of the population has never used the internet. Belgians are above average users of the most common internet services, such as sending emails, looking for information on goods and services and internet banking. By contrast, they exhibit below average use of most other services.

In the area of eGovernment, while progress has been made in the provision of eGovernment services, especially for enterprises, uptake is lagging, particularly for citizens, with only 16% of the population making use of these services.

ICTs in the Economy

Progress in enterprises' connectivity has translated into a more intensive take-up of ICT. Belgium scores among the top 8 countries in every eCommerce indicator and shows solid performance in the eBusiness area. The Belgian ICT sector is comparable to the EU27 average, both in terms of contribution to GDP and employment.

Finally, the percentage of people employed with ICT user skills and ICT specialist skills are respectively at and below the European average, a surprising result given the average development of the information society in this country.

Belgium

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	100.0	100.0	100.0	100.0	99.9	92.7	4
DSL coverage in rural areas (as % of total population)		100.0	100.0	100.0	99.6	76.6	4
Broadband penetration (as % of population)	15.5	19.2	22.8	25.6	27.5	22.9	8
Speed - % of broadband subscriptions above 2 Mbps		91.7	91.2	90.8	93.9	63.3	2
% of households with an internet connection		50	54	60	64	60	9
% of households with a broadband connection		41	48	56	60	49	7
% of enterprises with a (fixed) broadband access	70	78	84	86	91	81	4
% of individuals using a mobile phone via UMTS (3G) to access the Internet			1	1	1	3	23
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				7	8	12	17
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)		53	58	63	66	56	8
% pop. who are frequent internet users (using the internet every day or almost every day)		38	45	49	51	43	7
% population who have never used the internet		39	34	29	26	33	12
Take up of internet services (as % of population)							
sending emails		49	54	60	62	53	9
looking for information about goods and services		43	51	55	58	50	8
uploading self-created content					5	11	21
ordering goods or services, over the Internet, for private use		16	19	21	21	32	14
reading online newspapers/magazines		13	16	17	21	25	20
selling goods and services (e.g. via auctions)			7	8	10	10	10
internet banking		23	28	35	39	29	8
downloading computer or video games or their updates					6	9	21
downloading/listening to/watching music and/or films					23	28	17
paying for online audiovisual contents					3	5	17
listening to the web radio/watching web tv			11	13	15	20	20
seeking health information on injury, disease or nutrition		19	23	25	24	28	15
looking for a job or sending a job application		8	9	8	8	13	20
doing an online course				2	3	3	14
seeking information with the purpose of learning				17	20	26	19
eGovernment Indicators							
% basic public services for citizens fully available online	17		18	42		51	16
% basic public services for enterprises fully available online	63		88	88		72	
% of population using eGovernment services		18	30	23	16	28	20
% of population using eGovernment services for returning filled in forms					5	12	21
% of enterprises using eGovernment services	60	61	59	51	69	68	18
% of enterprises using eGovernment services for returning filled in forms	26	33	37	37	49	50	
of which to submit a proposal in a public electronic tender system (e-procurement)			6	3	7	9	20
eCommerce							
eCommerce as % of total turnover of enterprises	6	9	8	11		12	
% enterprises selling online	18	16	15	18	16	16	8
% enterprises purchasing online	9	18	16	43	34	28	6
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					58	41	4
using applications for integrating internal business processes (large enterprises)					89	70	2
using applications for employees to access Human Resources services					17	11	8
exchanging automatically business documents with customers/suppliers					39	25	1
sending/receiving e-invoices				31	36	21	3
sharing information electronically with customers/suppliers on Supply Chain Manag.					35	16	1
using analytical Customer Relation Manag.				17		17	
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP	5.1	5.2	5.0			5.0	6
ICT sector share of total employment	3.0	3.0	2.9			2.7	8
ICT R&D expenditure by the business sector, as % of GDP	0.31	0.29				0.31	9
= = = = =, as % of total R&D expenditure	23.7	23.6				26.4	15
% of ICT exports on total exports	6.2	5.8	5.3	5.0			16
% of ICT exports on total imports	7.0	6.6	6.1	6.2			21
% of persons employed with ICT user skills.	18.0	19.0	18.8	19.0	18.8	18.4	16
% of persons employed with ICT specialist skills	2.7	2.5	2.6	2.8	2.3	3.0	25

3. BULGARIA

The information society in Bulgaria is at a relatively early stage of development. Although some visible progress has taken place since last year in the areas of broadband and internet usage, there is still significant room for improvement: very low rankings on broadband penetration, internet usage and eGovernment show the urgent need of further efforts to narrow the gap with the rest of Europe. To this end, in the 3rd quarter of 2008, a National Programme for Accelerated Information Society Development 2008-2010 was implemented, and proposals for the adoption of two complementary programmes with a three-year term of operation were elaborated: a National Programme for the Development of Information Technologies and a National Programme for the Development of Broadband Access. Both draft programmes are aimed at systematising the efforts and providing for adequate conditions to converge with the advanced EU countries in the area of broadband and ICTs in the economy.

Broadband

Fixed broadband penetration was 11.2% in 2008, less than half of the EU27 average. The percentage of households having access to the internet is among the lowest in Europe. But there is a more positive trend in terms of speed: 68.4% of those with internet access use a +2MB/s connection, a number only exceeded by three other countries. This suggests that Bulgaria is leapfrogging the phases of narrowband and slow broadband internet connections.

Internet Usage

Rates of internet usage have been gradually improving over the last few years. Nevertheless, take-up of the internet in Bulgaria is still very low and a majority (57%) of the population has never used the internet. Usage of internet services is correspondingly low. The most popular services are also the most commonly used ones at EU level: sending emails and looking up information on goods and services. Another popular activity among internet users in Bulgaria is downloading/listening to/watching music and/or films.

In 2007 availability of eGovernment services was low. The rate of adoption of eGovernment services by both citizens and enterprises is also low, especially for citizens for which it is the lowest in the EU.

ICTs in the Economy

83% of Bulgarian enterprises are connected to the internet but only 75% of these connections are based on broadband. . This explains why Bulgarian enterprises are still towards the bottom of the distribution for use of eCommerce, although some minor improvements have been made in terms of ranking. The situation is somewhat better for the take-up of eBusiness. In particular, Bulgaria scores well for the implementation of HR-applications, automatic documents exchange and the use of e-invoices.

Despite the below-average percentages of employees with ICT-skills, the ICT sector is relatively important: its contribution to GDP (6.3% in 2004) exceeds the EU27 average.

Bulgaria

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)					N/A	92.7	24
DSL coverage in rural areas (as % of total population)				0.0	20.0	76.6	25
Broadband penetration (as % of population)			4.5	7.6	11.2	22.9	26
Speed - % of broadband subscriptions above 2 Mbps				58.5	68.4	63.3	9
% of households with an internet connection	10		17	19	25	60	27
% of households with a broadband connection	4		10	15	21	49	26
% of enterprises with a (fixed) broadband access	28	32	57	61	62	81	24
% of individuals using a mobile phone via UMTS (3G) to access the Internet			0	0	1	3	22
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				1	2	12	26
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	13		22	28	33	56	25
% pop. who are frequent internet users (using the internet every day or almost every day)	7		14	20	23	43	26
% population who have never used the internet			71	65	57	33	26
Take up of internet services (as % of population)							
sending emails	14		19	25	28	53	25
looking for information about goods and services	8		13	17	22	50	26
uploading self-created content					3	11	26
ordering goods or services, over the Internet, for private use	1		2	3	3	32	27
reading online newspapers/magazines	7		11	10	15	25	26
selling goods and services (e.g. via auctions)	0		1	1	1	10	21
internet banking	1		1	2	2	29	27
downloading computer or video games or their updates					6	9	20
downloading/listening to/watching music and/or films					21	28	19
paying for online audiovisual contents					2	5	24
listening to the web radio/watching web tv	6		11	10	13	20	23
seeking health information on injury, disease or nutrition	3		5	5	7	28	27
looking for a job or sending a job application	3		4	5	7	13	23
doing an online course				1	1	3	26
seeking information with the purpose of learning				2	5	26	27
eGovernment Indicators							
% basic public services for citizens fully available online				25		51	21
% basic public services for enterprises fully available online				0		72	
% of population using eGovernment services	5		8	6	8	28	27
% of population using eGovernment services for returning filled in forms					3	12	26
% of enterprises using eGovernment services	38	32	46	45	58	68	24
% of enterprises using eGovernment services for returning filled in forms	9	11	23	29	43	50	20
of which to submit a proposal in a public electronic tender system (e-procurement)		8	17	7	8	9	14
eCommerce							
eCommerce as % of total turnover of enterprises	4		0	1	1	12	19
% enterprises selling online	3		2	1	2	16	25
% enterprises purchasing online	4		3	3	3	28	25
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					35	41	21
using applications for integrating internal business processes (large enterprises)					54	70	25
using applications for employees to access Human Resources services					22	11	2
exchanging automatically business documents with customers/suppliers					31	25	10
sending/receiving e-invoices				9	26	21	8
sharing information electronically with customers/suppliers on Supply Chain Manag.					14	16	16
using analytical Customer Relation Manag.				9	9	17	20
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP	6.3					5.0	
ICT sector share of total employment	1.9					2.7	
ICT R&D expenditure by the business sector, as % of GDP	0.02	0.03				0.31	24
= = = = =, as % of total R&D expenditure	17.7	24.9				26.4	14
% of ICT exports on total exports	2.0	2.4	2.4	2.7			24
% of ICT exports on total imports	5.7	5.9	5.8	5.7			25
% of persons employed with ICT user skills.	11.7	11.7	11.4	11.5	12.1	18.4	25
% of persons employed with ICT specialist skills	2.7	2.7	2.6	2.6	2.6	3.0	22

4. CYPRUS

The information society in Cyprus is at early stages of development. Although efforts have been made to improve connectivity, the take-up of internet services by the public systematically remains below the European average. eBusiness scores are showing a brighter picture, while a good e-skill base can be a firm foundation for further development. To exploit the opportunities provided by ICTs, Cyprus is developing an integrated National Strategy for the Information Society, including the appointment of a Commissioner for Information Society, the creation of an appropriate institutional and regulatory framework for increased and safer Internet usage, the promotion of ICT and the internet into everyday life and the expansion of broadband coverage in rural areas.

Broadband

In only four years time, fixed broadband penetration in Cyprus rose from 2.5% to 18.2%, narrowing the gap with the rest of Europe, with enterprise connectivity on the rise and widespread broadband coverage (although rural areas are not covered, only 3% of population resides in these areas). However, only a small fraction of broadband connections are fast (+2MB/s) and mobile access is scarcely used.

Internet Usage

Cyprus exhibits low rates of both regular and frequent internet use, and little improvement has been made in recent years. The rates of regular internet use stagnated at 35% between 2007 and 2008 and only a 1pp. increase was observed in the rate of frequent use, to 24%, over this period. Furthermore, more than half of the population has never used the internet. Usage of internet services is less common than in the majority of other EU countries and the take up of internet services did not increase significantly for any of the indicators measured in 2007.

Some progress has been made with regard to the provision of public services for enterprises and take-up by enterprises has reached 65%. However, both provision and take-up for and by citizens is relatively low.

ICTs in the Economy

The percentage of employees with ICT user/specialist skills is in line with the EU average. The use of applications for integrating internal business processes is above average, but the take up of eBusiness and eCommerce services remains generally low.

Cyprus

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)		69.7	69.7	79.6	93.2	92.7	15
DSL coverage in rural areas (as % of total population)		0.0	0.0	0.0	12.0	76.6	26
Broadband penetration (as % of population)	2.5	6.3	8.9	13.8	18.2	22.9	17
Speed - % of broadband subscriptions above 2 Mbps		0.0	0.0	8.6	11.9	63.3	27
% of households with an internet connection	53	32	37	39	43	60	24
% of households with a broadband connection	2	4	12	20	33	49	23
% of enterprises with a (fixed) broadband access	35	40	55	69	79	81	19
% of individuals using a mobile phone via UMTS (3G) to access the Internet			0	1	1	3	26
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				7	3	12	22
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	28	26	29	35	35	56	24
% pop. who are frequent internet users (using the internet every day or almost every day)	18	16	19	23	24	43	24
% population who have never used the internet		64	62	56	54	33	23
Take up of internet services (as % of population)							
sending emails	24	23	25	30	30	53	24
looking for information about goods and services	21	24	27	32	32	50	23
uploading self-created content					6	11	20
ordering goods or services, over the Internet, for private use	4	5	7	10	9	32	23
reading online newspapers/magazines	17	15	20	22	23	25	17
selling goods and services (e.g. via auctions)	0	0	1	1	1	10	22
internet banking	4	6	6	12	11	29	24
downloading computer or video games or their updates					7	9	19
downloading/listening to/watching music and/or films					16	28	25
paying for online audiovisual contents					1	5	25
listening to the web radio/watching web tv	12	9	9	13	12	20	25
seeking health information on injury, disease or nutrition	6	8	11	14	12	28	24
looking for a job or sending a job application	3	3	5	5	4	13	26
doing an online course				1	1	3	24
seeking information with the purpose of learning				21	17	26	20
eGovernment Indicators							
% basic public services for citizens fully available online	17		25	33		51	18
% basic public services for enterprises fully available online	38		50	63		72	
% of population using eGovernment services	11	11	13	20	16	28	21
% of population using eGovernment services for returning filled in forms					6	12	19
% of enterprises using eGovernment services	35	40	44	54	65	68	20
% of enterprises using eGovernment services for returning filled in forms	11	9	8	14	18	50	26
of which to submit a proposal in a public electronic tender system (e-procurement)		0	0	0	0	9	26
eCommerce							
eCommerce as % of total turnover of enterprises		0	2	1	1	12	18
% enterprises selling online	5	4	6	7	7	16	18
% enterprises purchasing online	14	15	10	12	14	28	16
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					46	41	15
using applications for integrating internal business processes (large enterprises)					81	70	10
using applications for employees to access Human Resources services					7	11	24
exchanging automatically business documents with customers/suppliers					8	25	27
sending/receiving e-invoices				10	7	21	26
sharing information electronically with customers/suppliers on Supply Chain Manag.					8	16	25
using analytical Customer Relation Manag.				14	14	17	14
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP						5.0	
ICT sector share of total employment						2.7	
ICT R&D expenditure by the business sector, as % of GDP	0.03	0.04				0.31	21
= = = = =, as % of total R&D expenditure	42.2	39.4				26.4	3
% of ICT exports on total exports	5.3	7.9	5.6	4.7			18
% of ICT exports on total imports	6.9	9.8	7.5	6.1			23
% of persons employed with ICT user skills.	17.7	18.0	18.9	19.5	18.9	18.4	15
% of persons employed with ICT specialist skills	2.6	2.5	2.6	2.9	3.1	3.0	11

5. THE CZECH REPUBLIC

Progress in the development of the information society in the Czech Republic is visible although the country is still lagging behind in comparison to general developments in the EU. The country scores well in particular in the areas of eCommerce and in the use of applications for integrating internal business processes. To this end, the '*Operational Programme Enterprise and Innovation'* has been conceived to support companies which invest in ICT to increase effectiveness in their internal operations (*'ICT in Enterprises'* programme) or to support the creation/upgrading of ICT companies and services (*''ICT and Strategic Services'* programme).

Broadband

Progress in DSL coverage has been strong and is in line with the EU27 average. There has been a significant improvement in households' connectivity over the last years and the share of broadband subscriptions relative to total internet subscriptions has increased from 23% in 2004 to over 79% in 2008. Fixed broadband penetration and the percentage of households having access to broadband however remain low. Nevertheless, all broadband subscriptions now display +2MB/s speeds, suggesting that the Czech Republic is benefiting from the development of platform competition and accelerating its transition to broadband. The percentage of users accessing the internet through UMTS is also above average.

Internet Usage

The Czech Republic has a somewhat lower proportion of regular and frequent internet users in the population than the EU average, although the proportion of those who have never used the internet is the same as for the EU as a whole. In addition, the number of users has risen substantially over the past few years: the number of regular users has doubled over the period since 2005 to reach 51% in 2008, and the number of frequent users has tripled, to reach 30%.

The most popular internet services used by Czech citizens are sending emails and looking for information on goods and services, as in the rest of EU. Other popular services include reading online newspapers and ordering goods and services online. In relation to the take up of other internet services, the Czech Republic still ranks quite low.

The take-up of eGovernment by citizens is amongst the lowest in the EU. This is possibly related to the fact that the availability of public services is also low. For enterprises, the picture is completely different: 100% of services are available online and take-up exceeds the EU average by 5 p.p.

ICTs in the Economy

The Czech Republic scores relatively well on the eCommerce dimension. With 15% of total turnover coming from eCommerce, the country ranks 4th. The share of enterprises buying and selling online lies around the European average, giving the Czech Republic a place in the top-10 for both aspects. For eBusiness, the picture is less positive: the popularity of business integration applications is important, but the other indicators yield low scores.

It is also clear that ICT is an important export product. Accordingly, the percentage of high-skilled ICT professionals lies above average. The presence of ICT user and ICT specialist skills in enterprises is increasing over time.

The Czech Republic

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)		74.7	81.3	85.0	92.0	92.7	19
DSL coverage in rural areas (as % of total population)				75.0	85.0	76.6	13
Broadband penetration (as % of population)	2.2	6.4	10.6	14.6	17.1	22.9	20
Speed - % of broadband subscriptions above 2 Mbps			9.0	43.4	100.0	63.3	1
% of households with an internet connection	19	19	29	35	46	60	23
% of households with a broadband connection	4	5	17	28	36	49	21
% of enterprises with a (fixed) broadband access	38	52	69	77	79	81	17
% of individuals using a mobile phone via UMTS (3G) to access the Internet			1	4	5	3	5
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				3	7	12	18
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	25	26	36	42	51	56	17
% pop. who are frequent internet users (using the internet every day or almost every day)	10	10	18	24	30	43	22
% population who have never used the internet		63	49	46	33	33	14
Take up of internet services (as % of population)							
sending emails	27	27	37	42	51	53	15
looking for information about goods and services	17	20	32	37	45	50	18
uploading self-created content					2	11	27
ordering goods or services, over the Internet, for private use	5	5	13	17	23	32	12
reading online newspapers/magazines	10	12	19	22	33	25	12
selling goods and services (e.g. via auctions)			5			10	
internet banking	5	5	10	12	14	29	20
downloading computer or video games or their updates					5	9	26
downloading/listening to/watching music and/or films					19	28	22
paying for online audiovisual contents					4	5	12
listening to the web radio/watching web tv	3	3	6	8	13	20	21
seeking health information on injury, disease or nutrition		3	10	11	14	28	23
looking for a job or sending a job application	3	2	4	4	5	13	25
doing an online course				1	2	3	20
seeking information with the purpose of learning				17	10	26	26
eGovernment Indicators							
% basic public services for citizens fully available online	17		8	25		51	21
% basic public services for enterprises fully available online	50		63	100		72	
% of population using eGovernment services	7	5	17	16	14	28	24
% of population using eGovernment services for returning filled in forms					4	12	24
% of enterprises using eGovernment services	75	79	76	73	73	68	17
% of enterprises using eGovernment services for returning filled in forms	24	32	32	34	35	50	24
of which to submit a proposal in a public electronic tender system (e-procurement)		16	10	12	8	9	17
eCommerce							
eCommerce as % of total turnover of enterprises	6	8	7	9	15	12	4
% enterprises selling online	11	13	8	9	15	16	10
% enterprises purchasing online	19	21	17	22	26	28	8
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					49	41	9
using applications for integrating internal business processes (large enterprises)					85	70	4
using applications for employees to access Human Resources services					5	11	26
exchanging automatically business documents with customers/suppliers					15	25	24
sending/receiving e-invoices				33	17	21	19
sharing information electronically with customers/suppliers on Supply Chain Manag.					12	16	23
using analytical Customer Relation Manag.				15	14	17	15
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP						5.0	
ICT sector share of total employment						2.7	
ICT R&D expenditure by the business sector, as % of GDP	0.11	0.14				0.31	13
= = = = =, as % of total R&D expenditure	13.9	15.8				26.4	20
% of ICT exports on total exports	12.2	12.1	13.5	14.9			5
% of ICT exports on total imports	13.2	12.4	14.3	15.3			4
% of persons employed with ICT user skills.	16.5	16.8	17.4	17.9	18.3	18.4	18
% of persons employed with ICT specialist skills	3.9	3.9	4.1	4.5	4.8	3.0	3

6. DENMARK

Denmark is among the top nations for most i2010 indicators and is a clear frontrunner in the development of the information society. It is the leader in broadband penetration and has the highest share of frequent internet users in Europe. With an action plan on green ICT launched in 2008, Denmark is also at the forefront in terms of eco-friendly usage of ICT.

Broadband

Denmark ranks first in the EU in terms of broadband penetration rate (37.3%) and features complete coverage of fixed broadband networks. 90% of internet connected households subscribe to broadband. Mobile connectivity opportunities are used twice as much as the EU average. All this makes Denmark one of the top countries regarding broadband connectivity for citizens. Enterprises however are not capitalising on broadband connectivity at similar rates: broadband take-up has been stabilizing over the last years around 80%, in line with the EU27 average.

Internet Usage

Denmark is one of the frontrunners in terms of regular and frequent use of the internet, with 80% and 71% of the population accessing the internet at least once a week and almost every day, respectively. This is well above the EU averages for these indicators. In addition, the share of individuals never having used the internet, at 12%, is amongst the lowest in the EU.

Furthermore, all internet services are used by a larger percentage of the Danish population than is average for the EU, whether it be the most common ones, such as sending emails or looking for information about goods and services, or the less commonly used ones, such as paying for online content, downloading computer or video games or their updates, selling goods and services and uploading self-created content.

Denmark has around 50% availability of public services for citizens online and 86% for enterprises. As with the majority of Member States, Denmark has a larger uptake of online public services by enterprises than by citizens. However, as with other take-up indicators, take-up of online public services in Denmark has one of the highest rates.

ICTs in the Economy

Despite losing some places on the European ranking for some indicators, Denmark still performs well in the fields of eCommerce and eBusiness, with scores well above average.

For the ICT sector as a whole, figures are again very positive, both in absolute numbers and in terms of ranking. ICT is a significant contributor to the Danish GDP and employment. The R&D expenditure on ICT is relatively high and there is a strong presence of both user and specialist skills in employment.

Denmark

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	95.0	100.0	100.0	100.0	100.0	92.7	1
DSL coverage in rural areas (as % of total population)		100.0	100.0	100.0	100.0	76.6	1
Broadband penetration (as % of population)	19.2	24.7	31.9	35.6	37.3	22.9	1
Speed - % of broadband subscriptions above 2 Mbps		11.3	16.2	48.6	70.5	63.3	8
% of households with an internet connection	69	75	79	78	82	60	3
% of households with a broadband connection	36	51	63	70	74	49	1
% of enterprises with a (fixed) broadband access	80	82	83	80	80	81	16
% of individuals using a mobile phone via UMTS (3G) to access the Internet			1	1	6	3	3
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				25		12	
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	70	73	78	76	80	56	3
% pop. who are frequent internet users (using the internet every day or almost every day)	53	57	65	66	71	43	1
% population who have never used the internet		14	10	12	12	33	3
Take up of internet services (as % of population)							
sending emails	65	69	74	74	76	53	3
looking for information about goods and services	59	63	68	68	73	50	3
uploading self-created content					14	11	10
ordering goods or services, over the Internet, for private use	42	48	55	56	59	32	1
reading online newspapers/magazines	36	38	46	47	52	25	3
selling goods and services (e.g. via auctions)	5	5	17	22	19	10	2
internet banking	45	49	57	57	61	29	4
downloading computer or video games or their updates					11	9	9
downloading/listening to/watching music and/or films					36	28	4
paying for online audiovisual contents					14	5	2
listening to the web radio/watching web tv	16	19	27	34	37	20	2
seeking health information on injury, disease or nutrition	27	24	28	38	36	28	6
looking for a job or sending a job application	16	19	20	26	23	13	2
doing an online course				4	3	3	10
seeking information with the purpose of learning				53	47	26	2
eGovernment Indicators							
% basic public services for citizens fully available online	33		42	50		51	14
% basic public services for enterprises fully available online	88		88	86		72	
% of population using eGovernment services	44		43	58	44	28	5
% of population using eGovernment services for returning filled in forms					27	12	2
% of enterprises using eGovernment services	85	87	87	88	90	68	3
% of enterprises using eGovernment services for returning filled in forms		56	55	61	65	50	8
of which to submit a proposal in a public electronic tender system (e-procurement)			5	7	8	9	15
eCommerce							
eCommerce as % of total turnover of enterprises	12		17	22		12	
% enterprises selling online	25	32	34	33	20	16	5
% enterprises purchasing online	28	32	34	36	38	28	5
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					57	41	6
using applications for integrating internal business processes (large enterprises)					85	70	5
using applications for employees to access Human Resources services					24	11	1
exchanging automatically business documents with customers/suppliers					38	25	3
sending/receiving e-invoices				37	43	21	1
sharing information electronically with customers/suppliers on Supply Chain Manag.					22	16	7
using analytical Customer Relation Manag.				17	19	17	7
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP		4.9	5.1			5.0	5
ICT sector share of total employment		3.6	3.7			2.7	4
ICT R&D expenditure by the business sector, as % of GDP	0.51	0.58				0.31	3
= = = = =, as % of total R&D expenditure	30.0	34.7				26.4	7
% of ICT exports on total exports	5.4	7.2	6.0	4.9			17
% of ICT exports on total imports	8.1	10.5	9.1	8.0			14
% of persons employed with ICT user skills.	22.6	24.0	23.5	23.2	22.8	18.4	4
% of persons employed with ICT specialist skills	4.0	3.5	3.9	4.0	4.4	3.0	4

7. ESTONIA

Estonia presents a mixed picture of information society developments. It is strong in the fields of eGovernment and in some of the eBusiness indicators, including enterprises' connectivity, but generally weak in eCommerce. The "*Estonian Information Society Strategy 2013*" which covers the period from 2007-2013, sets as main objective that each citizen should be able to benefit of the opportunities of the information society in every possible way and actively participate in public life ("*nobody will stay or will be left behind*"). It also states that Estonia's economic growth is based on the wide use of ICT solutions and supported by a public sector which is citizen-centred, transparent and efficient.

Broadband

Estonian households and enterprises have a higher level of broadband connectivity than the EU average – with a broadband penetration rate of 24.6%, Estonia is showing the best performance of the Member States that joined the EU since May 2004 – and growth is continuing. Moreover, 94% of the internet connected households use broadband connections. Despite widespread connectivity, few of these broadband subscriptions have speeds above 2MB/s (only 38.9%, one of the lowest percentages in Europe). 88% of the enterprises have broadband access, giving Estonia a 7th place in the European ranking, up by 20 percentage points relative to four years ago.

Internet Usage

Estonia has a somewhat higher proportion of the population that are regular and frequent internet users than is average for the EU, and only about a quarter of the population has never used the internet, compared to around a third for the EU. With regard to the use of internet services, while Estonians are above average users of some services, for others they record low rates of use. On the one hand Estonia has the highest rate of internet use for the purpose of uploading self-created content, ranks second in terms of the proportion of the population that reads online newspapers and has more than the double the percentage of people using internet banking than is average for the EU. On the other hand only 1% of the population pay for online content and only 10% buy goods and services online. Use of other services is around average.

Both the provision and use of eGovernment services is more advanced in Estonia than the EU average. While 58% of public services for citizens are available online, for enterprises it is 88%. Rates of take up are 34% and 77%, respectively.

ICTs in the Economy

With only 11% and 18% of enterprises selling and purchasing online, Estonia is still lagging behind in the field of eCommerce. The situation is mixed for eBusiness: with the exception of the indicators on the automatic exchange of documents and sending and receiving e-invoices, Estoniais one of the weakest countries in Europe for the other indicators.

The latest figures reveal that the importance of the Estonian ICT sector in terms of GDP and employment is in line with the EU27 average. The same holds for the percentage of employees with ICT user or specialist skills.

ICT R&D represents one quarter of total R&D, but total R&D expenditure is low. The shares of ICT exports and imports have been falling over time.

Estonia

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)		90.0	90.0	85.0	93.9	92.7	13
DSL coverage in rural areas (as % of total population)				73.0	80.0	76.6	17
Broadband penetration (as % of population)	10.3	13.3	18.4	21.2	24.6	22.9	10
Speed - % of broadband subscriptions above 2 Mbps				3.7	38.9	63.3	21
% of households with an internet connection	31	39	46	53	58	60	15
% of households with a broadband connection	20	30	37	48	54	49	12
% of enterprises with a (fixed) broadband access	68	67	76	78	88	81	7
% of individuals using a mobile phone via UMTS (3G) to access the Internet			1	2	2	3	15
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				12	16	12	9
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	45	54	56	59	62	56	12
% pop. who are frequent internet users (using the internet every day or almost every day)	27	40	40	43	45	43	11
% population who have never used the internet		36	34	32	26	33	10
Take up of internet services (as % of population)							
sending emails	39	49	49	54	54	53	12
looking for information about goods and services	32	41	44	48	53	50	10
uploading self-created content					21	11	1
ordering goods or services, over the Internet, for private use	6	7	7	9	10	32	21
reading online newspapers/magazines	38	46	50	50	54	25	2
selling goods and services (e.g. via auctions)	3	4	3	5	5	10	13
internet banking	35	45	48	53	55	29	5
downloading computer or video games or their updates					11	9	7
downloading/listening to/watching music and/or films					25	28	16
paying for online audiovisual contents					1	5	26
listening to the web radio/watching web tv	13	15	17	21	19	20	14
seeking health information on injury, disease or nutrition		16	18	26	25	28	12
looking for a job or sending a job application	12	18	17	13	15	13	9
doing an online course				7	5	3	4
seeking information with the purpose of learning					22	26	14
eGovernment Indicators							
% basic public services for citizens fully available online	36		64	58		51	9
% basic public services for enterprises fully available online	100		100	88		72	
% of population using eGovernment services	20	31	29	30	34	28	8
% of population using eGovernment services for returning filled in forms					24	12	5
% of enterprises using eGovernment services	84	70	69	76	77	68	13
% of enterprises using eGovernment services for returning filled in forms	54	50	54	58	62	50	10
of which to submit a proposal in a public electronic tender system (e-procurement)			13	13	12	9	6
eCommerce							
eCommerce as % of total turnover of enterprises	3	2				12	
% enterprises selling online	8	8	14	7	11	16	13
% enterprises purchasing online	32	13	17	13	18	28	14
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					42	41	18
using applications for integrating internal business processes (large enterprises)					72	70	18
using applications for employees to access Human Resources services					8	11	20
exchanging automatically business documents with customers/suppliers					34	25	7
sending/receiving e-invoices				25	39	21	2
sharing information electronically with customers/suppliers on Supply Chain Manag.					13	16	20
using analytical Customer Relation Manag.				10	9	17	23
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP		4.9	4.7			5.0	8
ICT sector share of total employment		2.9	2.9			2.7	7
ICT R&D expenditure by the business sector, as % of GDP	0.12	0.15				0.31	11
= = = = =, as % of total R&D expenditure	36.9	35.3				26.4	6
% of ICT exports on total exports	13.6	13.9	11.6	6.5			12
% of ICT exports on total imports	12.8	13.7	10.7	7.7			17
% of persons employed with ICT user skills.	17.2	19.9	17.8	19.3	18.9	184	14
% of persons employed with ICT specialist skills	2.4	2.7	2.5	2.6	2.9	3.0	13

8. FINLAND

Finland is amongst the best performing countries in Europe and is one of the frontrunners in information society developments in all respects. The ICT sector is very important for the Finnish economy The National information society policy is planning to further develop infrastructure, to innovate environment and markets, to develop content and services, expertise and preparedness. The public sector structures will be revamped and provision of electronic public services will be increased.

Broadband

In comparison to last year, the broadband penetration rate went down, lowering Finland's ranking from 2 to 4. However, just like for coverage, penetration still largely exceeds the EU27 average. The share of internet connected households (using broadband connections in 92% of the cases) is one of the highest in Europe too. The percentage of broadband subscriptions above 2 Mbps is one of the only indicators for which Finland scores below average. Given the presence of one of the leading mobile phone manufacturers, the adoption of mobile connectivity could be expected to be higher as well.

Finally, 92% of all enterprises have access to broadband internet. Nevertheless, Finland is no longer leading the European ranking in this respect, and scores third.

Internet Usage

With almost 4/5th of the population using the internet on a regular basis, mostly via high speed broadband connections, Finland ranks as one of the best countries for internet use in the EU. This high broadband take-up is clearly reflected in the use of Internet services, for which Finland is placed among the highest ranking countries on almost all measured indicators. In particular, there is nowhere else in the EU where a larger proportion of the population uses the internet to look for health information, take courses, look for a job or read a newspaper.

In the field of eGovernment, Finland is also one of the leading countries. Its use by enterprises and citizens is the highest and second highest in Europe respectively. However, online availability of services for companies lies below the EU average and has decreased substantially in recent years.

ICTs in the economy

In no other European country, the ICT sector contributes more to the GDP than in Finland, and its share in total employment is only higher in Sweden. Accordingly, the (relative) spending on R&D is unseen in any other country. ICT exports account for a relatively large share of total exports and imports, but this share is decreasing. The importance of ICTs for Finnish companies is reflected in the adoption of eBusiness applications, which all score above average. With the notable exception of customer relation management, the rankings and scores on this dimension do not fully match the overall development of the information society in Finland.

Finland

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	89.4	90.4	91.8	96.0	95.7	92.7	10
DSL coverage in rural areas (as % of total population)		78.0	82.0	91.0	90.0	76.6	7
Broadband penetration (as % of population)	14.9	22.4	27.1	34.6	30.7	22.9	4
Speed - % of broadband subscriptions above 2 Mbps		30.8	26.7	31.9	60.3	63.3	15
% of households with an internet connection	51	54	65	69	72	60	6
% of households with a broadband connection	21	36	53	63	66	49	4
% of enterprises with a (fixed) broadband access	71	81	89	91	92	81	3
% of individuals using a mobile phone via UMTS (3G) to access the Internet			2	2	4	3	11
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				8	12	12	10
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	63	62	71	75	78	56	4
% pop. who are frequent internet users (using the internet every day or almost every day)	46	49	56	62	66	43	4
% population who have never used the internet		23	18	17	13	33	4
Take up of internet services (as % of population)							
sending emails	62	63	67	71	74	53	5
looking for information about goods and services	59	62	67	68	73	50	4
uploading self-created content					9	11	12
ordering goods or services, over the Internet, for private use	33	38	44	48	51	32	6
reading online newspapers/magazines	37	41	46	50	57	25	1
selling goods and services (e.g. via auctions)	8	9	14	13	14	10	7
internet banking	50	56	63	66	72	29	1
downloading computer or video games or their updates					7	9	17
downloading/listening to/watching music and/or films					34	28	5
paying for online audiovisual contents					9	5	5
listening to the web radio/watching web tv	12	17	20	24	33	20	4
seeking health information on injury, disease or nutrition	33	39	44	47	51	28	1
looking for a job or sending a job application	22	24	26	26	26	13	1
doing an online course				13	14	3	1
seeking information with the purpose of learning				30	31	26	7
eGovernment Indicators							
% basic public services for citizens fully available online	60		60	80		51	6
% basic public services for enterprises fully available online	75		63	50		72	
% of population using eGovernment services	45	47	47	50	53	28	2
% of population using eGovernment services for returning filled in forms					18	12	7
% of enterprises using eGovernment services	91	91	93	94	95	68	1
% of enterprises using eGovernment services for returning filled in forms	61	71	78	78	81	50	1
of which to submit a proposal in a public electronic tender system (e-procurement)			0	0	0	9	26
eCommerce							
eCommerce as % of total turnover of enterprises	13	14	14	15	16	12	
% enterprises selling online	17	17	14	15	13	16	
% enterprises purchasing online	19	19	23	19		28	
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					49	41	10
using applications for integrating internal business processes (large enterprises)					74	70	15
using applications for employees to access Human Resources services					18	11	7
exchanging automatically business documents with customers/suppliers					28	25	13
sending/receiving e-invoices				27	25	21	9
sharing information electronically with customers/suppliers on Supply Chain Manag.					20	16	12
using analytical Customer Relation Manag.				26	25	17	3
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP	7.9	8.0	8.2			5.0	1
ICT sector share of total employment	4.8	4.8	4.6			2.7	2
ICT R&D expenditure by the business sector, as % of GDP	1.53	1.57				0.31	1
= = = = =, as % of total R&D expenditure	63.1	63.6				26.4	1
% of ICT exports on total exports	17.0	20.2	17.4	14.6			6
% of ICT exports on total imports	13.1	14.8	13.7	13.1			6
% of persons employed with ICT user skills.	19.9	20.0	20.6	20.6	20.0	18.4	9
% of persons employed with ICT specialist skills	4.0	4.3	4.3	4.2	4.1	3.0	5

9. FRANCE

France is fairly advanced in the information society, with many benchmarking indicators above the EU average, notably in the area of broadband, which have translated in advanced internet usage. However, ICT usage by businesses and eSkills are weaker than other areas. Further progress is expected from the France's national strategy "Digital France 2012", the country's action plan for the development of the Digital Economy by 2012. The plan has the goal of making it one of the best ICT countries by 2012, by providing 100% coverage of fixed and mobile broadband and introducing digital television. The plan rests on four priorities: (1) to provide access of the whole population to the internet and digital services, (2) to develop the production and supply of digital content, (3) to increase and diversify usage and digital services within enterprises, administrations and households, and (4) to modernise the governance of the digital economy.

Broadband

The broadband market has continued to grow, reaching a penetration rate of 27.7% in 2008, improving France's ranking by two places, and featuring high speeds. There is almost full DSL coverage in the whole country. 62% of households have an internet connection (92% are broadband), slightly exceeding the EU27 average. Mobile access to the internet is not yet developed. Enterprises on the other hand, do take advantage of the high DSL coverage. With 92% of the companies having broadband access, France ranks first on this indicator.

Internet Usage

In France, regular and frequent rates of internet use have been rising in recent years and they are currently somewhat higher than the average for the EU. Around a quarter of the population has never used the internet, compared to a third for the EU.

On average, use by French citizens of various internet services is also above the EU average. While the most popular activities are sending emails and looking up information about goods and services, as in most other countries, France is also one of the best countries for looking up information for the purpose of learning. The least popular activities include doing online courses, paying for online audiovisual content and downloading computer or video games and their updates. This is the case for most EU countries.

Both availability and take up of eGovernment services is above the EU average in France. As with most Member States, it is more developed for enterprises than it is for citizens.

ICTs in the Economy

France's performance on the eCommerce and eBusiness dimensions is not exceptional. For eCommerce, the share of e-turnover is equal to the EU27 average, but scores for the two other indicators are below average. For eBusiness, the rankings are relatively low, with the exception of the use of applications for integrating internal business processes by large enterprises. Despite high connectivity in Europe, French enterprises do not seem to take advantage of this opportunity to boost eBusiness and eCommerce.

The ICT sector's share in GDP and employment is in line with the European average, just like the ICT R&D expenditure. More could be expected however in terms of eSkills.

France

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	90.8	96.4	98.4	98.5	100.0	92.7	1
DSL coverage in rural areas (as % of total population)		87.9	96.5	96.7	100.0	76.6	1
Broadband penetration (as % of population)	11.2	16.4	20.4	23.3	27.7	22.9	7
Speed - % of broadband subscriptions above 2 Mbps		30.5	40.6	54.7	64.4	63.3	14
% of households with an internet connection	34		41	49	62	60	11
% of households with a broadband connection			30	43	57	49	8
% of enterprises with a (fixed) broadband access			86	89	92	81	1
% of individuals using a mobile phone via UMTS (3G) to access the Internet				1	1	3	19
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				7	10	12	14
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)			39	57	63	56	10
% pop. who are frequent internet users (using the internet every day or almost every day)			26	41	47	43	10
% population who have never used the internet			46	32	26	33	11
Take up of internet services (as % of population)							
sending emails			34	48	57	53	11
looking for information about goods and services			36	55	57	50	9
uploading self-created content					17	11	5
ordering goods or services, over the Internet, for private use			22	35	40	32	8
reading online newspapers/magazines			9	18	22	25	18
selling goods and services (e.g. via auctions)				7	10	10	9
internet banking			18	32	40	29	7
downloading computer or video games or their updates					6	9	22
downloading/listening to/watching music and/or films					38	28	3
paying for online audiovisual contents					5	5	9
listening to the web radio/watching web tv			10	17	24	20	8
seeking health information on injury, disease or nutrition			13	29	39	28	5
looking for a job or sending a job application			6	13	17	13	5
doing an online course				2	4	3	9
seeking information with the purpose of learning				43	47	26	3
eGovernment Indicators							
% basic public services for citizens fully available online	42		58	58		51	9
% basic public services for enterprises fully available online	63		75	88		72	
% of population using eGovernment services			26	41	43	28	6
% of population using eGovernment services for returning filled in forms					25	12	4
% of enterprises using eGovernment services			66	69	73	68	16
% of enterprises using eGovernment services for returning filled in forms			51	59	67	50	7
of which to submit a proposal in a public electronic tender system (e-procurement)			11	9	13	9	5
eCommerce							
eCommerce as % of total turnover of enterprises					12	12	9
% enterprises selling online					13	16	11
% enterprises purchasing online					18	28	13
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					46	41	14
using applications for integrating internal business processes (large enterprises)					81	70	9
using applications for employees to access Human Resources services					11	11	16
exchanging automatically business documents with customers/suppliers					29	25	12
sending/receiving e-invoices				10	20	21	15
sharing information electronically with customers/suppliers on Supply Chain Manag.					12	16	22
using analytical Customer Relation Manag.				9	14	17	17
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP	4.5	4.5	4.4			5.0	10
ICT sector share of total employment	3.2	3.1	3.1			2.7	6
ICT R&D expenditure by the business sector, as % of GDP	0.36	0.34				0.31	7
= = = = =, as % of total R&D expenditure	26.6	25.5				26.4	12
% of ICT exports on total exports	7.5	7.1	7.2	5.2			15
% of ICT exports on total imports	9.4	8.9	8.9	7.6			18
% of persons employed with ICT user skills.	17.1	16.9	16.9	17.7	17.8	18.4	19
% of persons employed with ICT specialist skills	3.1	3.0	3.3	2.4	2.8	3.0	18

10. GERMANY

Germany is just outside the leading countries for information society development with most of benchmarking indicators having values around the EU average. However, there is room for improvement in the fields of eGovernment (especially for enterprises) and eBusiness.

Broadband

The broadband market has expanded further compared to the previous year. The latest figures reveal improvements on every indicator. DSL coverage has increased, particularly in rural areas. The broadband penetration rate exceeds the EU average, yielding a 9th rank. Three quarters of all households have internet access but only 73% of them use broadband connections and only half of all broadband subscribers access speeds above 2MB/s. On the other hand, the use of wireless laptop connections is getting widespread. Significant progress has also been made in broadband connectivity by enterprises, exceeding the EU average rate for the first time.

Internet Usage

Germany performs relatively well in terms of rates of regular and frequent internet users in the population. However, it is not one of the most connected. Only 20% of German citizens have never used the internet, compared to 33% for the EU as a whole. Take up of most internet services is above the EU average, with the exception of reading online newspapers and doing online courses. Germany has the highest rate of population downloading computer or video games or their updates.

The online availability of public services exceeds the EU27 average, for both citizens and enterprises. However, take-up by enterprises is lagging in EU comparison. Despite this, use of e-procurement is average.

ICTs in the Economy

Germany shows a mixed picture in the area of eBusiness: for some indicators like the use of applications to access Human Resources services, Germany is among the leading countries, while for others relating to the integration of internal business processes and to supply chain management, it scores weakly.

The indicators on the ICT sector show that Germany is in line with the EU averages.

Germany

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	90.7	92.0	92.6	95.7	96.6	92.7	9
DSL coverage in rural areas (as % of total population)		55.0	58.5	87.5	89.7	76.6	9
Broadband penetration (as % of population)	8.4	12.8	18.1	23.8	27.5	22.9	9
Speed - % of broadband subscriptions above 2 Mbps		2.1	7.7	32.0	53.6	63.3	17
% of households with an internet connection	60	62	67	71	75	60	5
% of households with a broadband connection	18	23	34	50	55	49	10
% of enterprises with a (fixed) broadband access	54	62	73	80	84	81	12
% of individuals using a mobile phone via UMTS (3G) to access the Internet			1	2	2	3	18
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				14	18	12	4
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	50	54	59	64	68	56	7
% pop. who are frequent internet users (using the internet every day or almost every day)	30	34	40	46	51	43	8
% population who have never used the internet		29	26	23	20	33	7
Take up of internet services (as % of population)							
sending emails	51		60	64	67	53	6
looking for information about goods and services	52		60	63	66	50	6
uploading self-created content					14	11	9
ordering goods or services, over the Internet, for private use	37	42	49	52	53	32	5
reading online newspapers/magazines	15		19	21	21	25	19
selling goods and services (e.g. via auctions)	14		20	21	18	10	3
internet banking	26		32	35	38	29	10
downloading computer or video games or their updates					18	9	1
downloading/listening to/watching music and/or films					29	28	12
paying for online audiovisual contents					5	5	7
listening to the web radio/watching web tv	8		12	15	21	20	12
seeking health information on injury, disease or nutrition			34	41	41	28	4
looking for a job or sending a job application	14		17	17	16	13	7
doing an online course				2	2	3	16
seeking information with the purpose of learning				27	28	26	8
eGovernment Indicators							
% basic public services for citizens fully available online	27		27	64		51	8
% basic public services for enterprises fully available online	75		75	88		72	
% of population using eGovernment services	33		32	43	33	28	9
% of population using eGovernment services for returning filled in forms					10	12	15
% of enterprises using eGovernment services	36	44	49	56	56	68	25
% of enterprises using eGovernment services for returning filled in forms	17	24	37	43	45	50	19
of which to submit a proposal in a public electronic tender system (e-procurement)		13	11	12	10	9	10
eCommerce							
eCommerce as % of total turnover of enterprises	11	13	14	11		12	
% enterprises selling online	18	16	18	24		16	
% enterprises purchasing online	47	41	48	52		28	
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					33	41	22
using applications for integrating internal business processes (large enterprises)					68	70	20
using applications for employees to access Human Resources services					16	11	11
exchanging automatically business documents with customers/suppliers					35	25	5
sending/receiving e-invoices				19	27	21	7
sharing information electronically with customers/suppliers on Supply Chain Manag.					12	16	21
using analytical Customer Relation Manag.				30	26	17	2
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP	4.8	4.6	4.7			5.0	9
ICT sector share of total employment	2.5	2.6	2.6			2.7	12
ICT R&D expenditure by the business sector, as % of GDP	0.39	0.38				0.31	6
= = = = =, as % of total R&D expenditure	22.3	22.3				26.4	17
% of ICT exports on total exports	10.1	9.6	9.2	7.3			10
% of ICT exports on total imports	11.6	11.3	11.1	9.7			10
% of persons employed with ICT user skills.	19.7	20.2	20.3	19.8	18.3	18.4	17
% of persons employed with ICT specialist skills	3.0	3.2	3.3	3.2	3.1	3.0	9

11. GREECE

Greece has experienced good progress in the area of broadband over recent years. However, the information society in Greece is still lagging behind in comparison to general developments in the EU. Scores for the eBusiness dimension are around the European average, but for all other indicators, there is a serious gap between Greece and the large majority of other countries. To fill the gap, Greece has been implementing an ambitious *'Digital Strategy 2006-2013'* plan, aiming to perform a "Digital Leap to Productivity and Quality of life", by leveraging EU Structural Funds. The Digital Strategy comprises two main objectives: enhanced business productivity through the use of ICT; and improved quality of life through ICT. Particular emphasis has been given to increase digital literacy among students and the younger generation through projects to encourage access to broadband (*'Diodos'*), to subsidise the purchase of laptops of top ranking first year students (*'See your life digitally'*), an education-focused initiative (starting in 2009) to provide laptops to school pupils aimed at getting them acquainted with new technologies early on (*'Digital Classroom'*), and certified training courses for all students (*'e-ducate'*).

Broadband

In comparison to the situation five years ago, Greece's performance in broadband has improved significantly thanks to the implementation of the electronic communications regulatory framework and of the "Broadband Action Plan" that used Structural Funds to stimulate broadband investments and extend coverage in Greek regions. Total DSL coverage increased from 9% (in 2004) to 88% in 2008, DSL coverage in rural areas rose from 0% to 55%, and take up reaches 13.4% of the population, up from 0.5%. Despite good progress over 2007, households' connectivity remains low and stands at only half of the European average. Connectivity of enterprises is somewhat better, but still significantly lower than for most EU Member States. Mobile broadband is emerging.

Internet Usage

In Greece, a third of the population uses the internet regularly, 23% are frequent users and 56% have never used the internet. The country also consistently ranks as one of those with the lowest use of various internet services. Most internet users are active in sending emails and looking for information on goods and services. Looking up information for the purpose of learning, reading online news papers and downloading/listening to/watching music and/or films are also popular activities among Greek internet users.

The availability of eGovernment services, for citizens and enterprises, in Greece is below the EU average, though it has grown substantially in recent years. Take up of eGovernment services by citizens is very low and has not shown much improvement. By contrast, at 78%, take up by enterprises is high, 10 p.p. above the EU average.

ICTs in the Economy

No significant progress has been made over the years in terms of eCommerce. The situation is far more positive for eBusiness, where scores are in line with the European average. Only the use of e-invoices is significantly behind.

Information on the impact of ICTs on the Greek economy is limited with no information available on size and growth of the ICT sector. Indicators on ICT exports and eSkills have stabilised over time and remain among the lowest in Europe.

Greece

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	9.0	12.0	18.0	86.3	88.0	92.7	22
DSL coverage in rural areas (as % of total population)		0.0	10.0	50.0	55.0	76.6	21
Broadband penetration (as % of population)	0.5	1.4	4.4	9.1	13.4	22.9	23
Speed - % of broadband subscriptions above 2 Mbps		0.0	9.7	30.0	43.7	63.3	20
% of households with an internet connection	17	22	23	25	31	60	25
% of households with a broadband connection	0	1	4	7	22	49	25
% of enterprises with a (fixed) broadband access	21	44	58	72	71	81	22
% of individuals using a mobile phone via UMTS (3G) to access the Internet			0	1	1	3	24
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				1	3	12	24
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	17	18	23	28	33	56	26
% pop. who are frequent internet users (using the internet every day or almost every day)	9	11	13	19	23	43	25
% population who have never used the internet		73	65	62	56	33	25
Take up of internet services (as % of population)							
sending emails	15	14	17	21	26	53	26
looking for information about goods and services	14	17	23	28	31	50	24
uploading self-created content					4	11	25
ordering goods or services, over the Internet, for private use	1	2	5	8	9	32	24
reading online newspapers/magazines	11	9	14	16	19	25	22
selling goods and services (e.g. via auctions)	0	1	0			10	
internet banking	1	1	2	4	5	29	25
downloading computer or video games or their updates					6	9	24
downloading/listening to/watching music and/or films					19	28	23
paying for online audiovisual contents					2	5	23
listening to the web radio/watching web tv	4	4	5	8	16	20	19
seeking health information on injury, disease or nutrition	6	2	6	8	10	28	26
looking for a job or sending a job application	2	2	4	5	5	13	24
doing an online course				2	2	3	21
seeking information with the purpose of learning				5	22	26	15
eGovernment Indicators							
% basic public services for citizens fully available online	18		17	33		51	18
% basic public services for enterprises fully available online	50		50	63		72	
% of population using eGovernment services	8	7	9	12	10	28	25
% of population using eGovernment services for returning filled in forms					4	12	25
% of enterprises using eGovernment services	77	81	84	82	78	68	11
% of enterprises using eGovernment services for returning filled in forms	45	56	76	77	62	50	9
of which to submit a proposal in a public electronic tender system (e-procurement)		21	11	10	7	9	18
eCommerce							
eCommerce as % of total turnover of enterprises	2	2	3	2	3	12	16
% enterprises selling online	6	7	7	6	6	16	19
% enterprises purchasing online	14	14	11	8	9	28	20
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					42	41	17
using applications for integrating internal business processes (large enterprises)					71	70	19
using applications for employees to access Human Resources services					14	11	12
exchanging automatically business documents with customers/suppliers					20	25	20
sending/receiving e-invoices				10	13	21	20
sharing information electronically with customers/suppliers on Supply Chain Manag.					20	16	13
using analytical Customer Relation Manag.				15	15	17	12
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP	3.1					5.0	
ICT sector share of total employment	1.5					2.7	
ICT R&D expenditure by the business sector, as % of GDP	0.09	0.07				0.31	19
= = = = =, as % of total R&D expenditure	54.5	36.1				26.4	5
% of ICT exports on total exports	1.2	1.0	2.1	1.0			27
% of ICT exports on total imports	4.7	4.2	5.1	4.9			27
% of persons employed with ICT user skills.	12.1	12.3	13.0	12.7	12.9	18.4	24
% of persons employed with ICT specialist skills	2.4	2.2	2.1	2.2	2.0	3.0	26

12. HUNGARY

The share of Internet users in Hungary is increasing and has caught up with EU average levels. The information society in Hungary however is still lagging behind in comparison with the general developments in Europe, with most of the other benchmarking indicators below the EU average. Broadband is widely available, and the strength of the ICT sector with the good eSkills base are strategic assets for in this country. Furthermore, Hungary has launched specific programmes and action plans in the areas of eInclusion and eBusiness, notably the set up of public access points for rural and socially disadvantaged, the 'Digital Literacy Action Plan', and the "e-Economy Action Plan" designed to strengthen the digital maturity of SMEs and remove barriers to ICT introduction and use.

Broadband

DSL coverage in Hungary is above EU average. Households are increasingly connected to the internet. The share of households in the population using broadband connections has increased significantly during 2007 and nowadays 87.5% of connected households have broadband, indicating that Hungary has managed to leapfrog slower access technologies. Enterprises' connectivity remains below EU average and broadband penetration remains among the lowest in the EU.

Internet Usage

Internet use has expanded in Hungary in recent years and the percentages of regular and frequent internet users are equal to those for the EU average. Use of a number of internet services is also similar to the EU average. However, for some services, there are larger differences. On the one hand, Hungary exhibits an above average percentage of the population downloading computer or video games or their updates and uploading self-created content. On the other hand, it has a below average proportion of the population buying goods and services online and doing their banking over the internet.

Both the availability and use of eGovernment services for the citizens is at the same level as the EU average. For enterprises, however, the rates are lower, especially for availability.

ICTs in the Economy

Of all turnover, 12% is generated by eCommerce, a figure equal to the EU average. Nevertheless, the share of enterprises selling or purchasing online is among the lowest in Europe. For the eBusiness dimension, Hungary persistently shows low rankings, with all indicators giving below average scores.

Despite these difficulties, Hungary has a relatively large ICT sector that represents approximately a fifth of its exports, the third highest in the EU, and the percentage of persons employed with ICT user skills exceeds the EU average. The ICT sector contributes significantly to the GDP and employment as well, ranking 4th and 3rd for these indicators respectively. ICT-related R&D drives more than a quarter of total R&D but R&D expenditure as a percentage of GDP remains generally low.

Hungary

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	70.0	85.0	89.0	91.0	93.7	92.7	14
DSL coverage in rural areas (as % of total population)		76.0	77.0	80.0	87.4	76.6	11
Broadband penetration (as % of population)	3.6	6.1	9.9	14.2	16.3	22.9	22
Speed - % of broadband subscriptions above 2 Mbps		2.0	13.4	44.8	33.4	63.3	23
% of households with an internet connection	14	22	32	38	48	60	19
% of households with a broadband connection	6	11	22	33	42	49	17
% of enterprises with a (fixed) broadband access		48	61	70	72	81	21
% of individuals using a mobile phone via UMTS (3G) to access the Internet			1	1	2	3	16
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				2	4	12	21
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	21	34	42	49	56	56	15
% pop. who are frequent internet users (using the internet every day or almost every day)	18	20	29	37	43	43	13
% population who have never used the internet		60	52	46	37	33	16
Take up of internet services (as % of population)							
sending emails	20	31	37	47	53	53	13
looking for information about goods and services	19	25	35	43	49	50	13
uploading self-created content					17	11	6
ordering goods or services, over the Internet, for private use	4	8	7	11	14	32	19
reading online newspapers/magazines	14	18	25	28	33	25	11
selling goods and services (e.g. via auctions)	1	1	3	4	5	10	15
internet banking	3	6	8	12	13	29	22
downloading computer or video games or their updates					13	9	3
downloading/listening to/watching music and/or films					30	28	11
paying for online audiovisual contents					2	5	21
listening to the web radio/watching web tv	3	7	12	16	18	20	16
seeking health information on injury, disease or nutrition	8	10	17	23	29	28	9
looking for a job or sending a job application	6	10	12	13	14	13	10
doing an online course				2	2	3	15
seeking information with the purpose of learning				19	22	26	16
eGovernment Indicators							
% basic public services for citizens fully available online	8		50	50		51	14
% basic public services for enterprises fully available online	25		50	50		72	
% of population using eGovernment services	16	18	17	25	25	28	15
% of population using eGovernment services for returning filled in forms					11	12	14
% of enterprises using eGovernment services	35		45	55	60	68	23
% of enterprises using eGovernment services for returning filled in forms	23		28	44	50	50	16
of which to submit a proposal in a public electronic tender system (e-procurement)			8	8	9	9	13
eCommerce							
eCommerce as % of total turnover of enterprises		3	7	6	12	12	8
% enterprises selling online	6	4	9	4	4	16	22
% enterprises purchasing online	14	5	11	7	7	28	23
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					27	41	25
using applications for integrating internal business processes (large enterprises)					67	70	21
using applications for employees to access Human Resources services					9	11	19
exchanging automatically business documents with customers/suppliers					19	25	21
sending/receiving e-invoices				4	5	21	27
sharing information electronically with customers/suppliers on Supply Chain Manag.					14	16	18
using analytical Customer Relation Manag.				5	5	17	25
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP	6.7	7.0	6.4			5.0	4
ICT sector share of total employment	3.9	3.9	3.9			2.7	3
ICT R&D expenditure by the business sector, as % of GDP	0.05	0.05				0.31	20
= = = = =, as % of total R&D expenditure	12.7	13.1				26.4	23
% of ICT exports on total exports	23.1	23.4	23.3	21.5			3
% of ICT exports on total imports	20.6	19.1	18.5	18.6			3
% of persons employed with ICT user skills.	20.5	20.5	20.6	20.3	20.9	18.4	7
% of persons employed with ICT specialist skills	2.9	2.7	2.9	2.7	2.9	3.0	14

13. IRELAND

Ireland provides a mixed image of information society developments, with good scores for eCommerce and eGovernment services for enterprises, but also levels of connectivity and usage of ICTs by citizens and businesses very close to the EU average. Ireland is developing a 'National Knowledge Society Strategy' focused on the development of its knowledge economy in order to help accelerate the development of knowledge-intensive areas such as: digitally traded services; eLearning products and services; and clinical trial infrastructure. More generally the Strategy will bring together the various actions and supports which will result in Ireland having the ability to develop, produce, licence and export products and services based on knowledge-intensive ideas.

Broadband

In 2007, fixed broadband penetration reached 20.2% of the population, slightly below the EU27 average of 22.9%. 49% of broadband subscriptions exceed the 2MB/s threshold, giving Ireland only the 19th place on the speed ranking.

The take-up of broadband internet by households has been increasing swiftly, but narrowband is still relatively widespread (one third of all connections). Ireland's rankings for fixed connections are average, but the countries ranks high (5th) for wireless laptop connections.

83% of the enterprises have broadband internet access, in line with the EU27 average.

Internet Usage

Internet usage by Irish citizens is similar to that for the EU average: 57% of the population uses the internet on a regular basis and 46% are frequent users. The proportion of those who have never used the internet is also around a third. Take up of services, on the other hand, is generally lower than for the EU as a whole, except for ordering goods online, which at 36% is somewhat larger, and sending emails, which is equal to, the EU average.

In the area of eGovernment, Ireland records below average availability of online public services. Despite this, take up by citizens is similar to the EU average and take up by enterprises is one of the best in Europe, with 91% of enterprises using eGovernment services. Ireland is even the most advanced country for the take up of e-procurement in the EU.

ICTs in the Economy

More than 27% of all Irish exports come from the ICT sector, the highest share in Europe. Moreover, Ireland is one of the leading countries for the share of R&D devoted to ICT. Surprisingly, on the other hand, the country ranks only 24th for specialist eSkills and the share has been slowly declining. This could indicate that there is an important concentration of e-knowledge in few, R&D intensive companies.

The business side of the information society is better developed. Ireland shows some very good ranking for the eBusiness dimension, and it is one of the frontrunners in Europe in eCommerce .

Ireland

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	71.0	82.3	85.6	89.2	90.5	92.7	20
DSL coverage in rural areas (as % of total population)		56.5	64.0	73.3	77.0	76.6	18
Broadband penetration (as % of population)	3.4	6.7	12.3	17.4	20.2	22.9	14
Speed - % of broadband subscriptions above 2 Mbps		6.9	17.1	18.4	49.4	63.3	19
% of households with an internet connection	40	47	50	57	63	60	10
% of households with a broadband connection	3	7	13	31	43	49	15
% of enterprises with a (fixed) broadband access	32	48	61	68	83	81	13
% of individuals using a mobile phone via UMTS (3G) to access the Internet			1	3	2	3	17
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				11	18	12	5
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	27	31	44	51	57	56	13
% pop. who are frequent internet users (using the internet every day or almost every day)	12	17	25	32	39	43	16
% population who have never used the internet		55	42	35	32	33	13
Take up of internet services (as % of population)							
sending emails	27	31	45	48	53	53	14
looking for information about goods and services	22	29	42	44	46	50	17
uploading self-created content					8	11	14
ordering goods or services, over the Internet, for private use	14	19	28	33	36	32	10
reading online newspapers/magazines	5	4	8	10	17	25	25
selling goods and services (e.g. via auctions)	1	1	4	3	3	10	19
internet banking	10	13	21	24	28	29	13
downloading computer or video games or their updates					5	9	25
downloading/listening to/watching music and/or films					19	28	21
paying for online audiovisual contents					2	5	20
listening to the web radio/watching web tv	3	4	9	10	13	20	22
seeking health information on injury, disease or nutrition	6	10	8	12	19	28	20
looking for a job or sending a job application	3	2	6	7	9	13	17
doing an online course				3	3	3	11
seeking information with the purpose of learning				16	21	26	17
eGovernment Indicators							
% basic public services for citizens fully available online	30		30	40		51	17
% basic public services for enterprises fully available online	75		75	63		72	
% of population using eGovernment services	14	18	26	32	27	28	14
% of population using eGovernment services for returning filled in forms					18	12	6
% of enterprises using eGovernment services	69	76	84	89	91	68	2
% of enterprises using eGovernment services for returning filled in forms	32	42	56	69	68	50	5
of which to submit a proposal in a public electronic tender system (e-procurement)		14	21	22	26	9	1
eCommerce							
eCommerce as % of total turnover of enterprises	18	20	17	19	18	12	3
% enterprises selling online	19	21	23	27	25	16	3
% enterprises purchasing online	33	41	53	55	54	28	1
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					62	41	2
using applications for integrating internal business processes (large enterprises)					86	70	3
using applications for employees to access Human Resources services					16	11	10
exchanging automatically business documents with customers/suppliers					23	25	19
sending/receiving e-invoices				26	21	21	14
sharing information electronically with customers/suppliers on Supply Chain Manag.					10	16	24
using analytical Customer Relation Manag.				23	24	17	4
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP						5.0	
ICT sector share of total employment						2.7	
ICT R&D expenditure by the business sector, as % of GDP	0.44	0.48				0.31	5
= = = = =, as % of total R&D expenditure	53.8	58.1				26.4	2
% of ICT exports on total exports	27.6	27.2	27.0	27.6			1
% of ICT exports on total imports	12.3	12.3	12.1	10.4			9
% of persons employed with ICT user skills.	19.4	18.8	18.9	18.9	19.2	18.4	13
% of persons employed with ICT specialist skills	2.8	2.6	2.5	2.4	2.3	3.0	24

14. ITALY

Italy presents a mixed picture of information society developments. It shows good scores in terms of availability of eGovernment services and eBusiness adoption but still lags behind for fixed connectivity, eCommerce and the use of the internet by households. An important framework initiative has been launched in 2008 to enhance public services (the " *new Strategic Plan for Innovation of the Italian Government*"). The "*Linea Amica*" (friendly line) has been launched at the beginning of 2009 to enhance citizens' accessibility to public on-line services. Those who are not familiar with internet can contact Linea Amica by calling a toll free number either from a fixed line or from a mobile phone. A "Programme for infrastructural broadband coverage", was activated by the Government in coordination with Italian Regions, to reach 99% of population with a broadband connection with speeds between 2 and 20 Mb/s by 2012. The programme will increase the capacity of access networks, both through fixed and wireless technologies.

Broadband

Fixed broadband penetration increased in 2008, but is still roughly 4 p.p. below the EU27 average. Total DSL coverage is high, and the latest figures reveal that this is now the case in rural areas too, thanks to significant progress in the past two years. Almost 70% of broadband subscribers access speeds above 2MB/s but the percentage of internet-connected households remains one of the lowest in Europe. Although the figure has doubled in two years, less than one in three households has a broadband connection. Enterprises' broadband connectivity on the other hand is comparable to the EU average. Mobile broadband appears well established.

Internet Usage

Only a minority of Italians use the internet on a regular and/or frequent basis and half of the population has still never used the internet at all. Progress in getting more people online has also been rather gradual. As such, Italy ranks as one of the least internet active countries in Europe. Correspondingly, the take-up of internet services is also weak. The most popular activities are also the most common ones undertaken at EU level; namely, sending emails and looking up information about goods and services. Italian citizens are also approaching the European average in terms of looking up information for the purposes of learning.

Italy scores relatively well in the provision of eGovernment services, with 58% of public services for citizens and 88% for enterprises available online. While take up of these services is relatively good for enterprises, as with general connectivity, take up by citizens is low.

ICTs in the Economy

The importance of eCommerce in the Italian economy is negligible. For eBusiness, the situation is far more positive. For most indicators, the EU27 average is exceeded. Only applications for employees to access HR services are much rarer than in other countries. Most enterprises thus seem to acknowledge the importance of the Internet as a business tool. The ICT sector is comparable to the European average in terms of GDP and employment contribution. The ICT R&D share to total R&D is at EU average, but R&D spending as a whole in Italy is particularly low. Finally, the percentage of employees with ICT specialist skills is below average; while ICT user skills are at EU average.

Italy

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	85.0	87.0	89.0	94.0	95.3	92.7	11
DSL coverage in rural areas (as % of total population)		44.6	50.5	81.7	82.0	76.6	15
Broadband penetration (as % of population)	8.0	11.8	14.5	17.1	19.0	22.9	16
Speed - % of broadband subscriptions above 2 Mbps		4.2	4.3	45.2	68.3	63.3	10
% of households with an internet connection	34	39	40	43	47	60	21
% of households with a broadband connection		13	16	25	31	49	24
% of enterprises with a (fixed) broadband access	23	57	70	76	81	81	14
% of individuals using a mobile phone via UMTS (3G) to access the Internet			2	3	3	3	13
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				7	10	12	13
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	26	28	31	34	37	56	23
% pop. who are frequent internet users (using the internet every day or almost every day)	24	27	29	31	35	43	19
% population who have never used the internet		62	59	54	50	33	22
Take up of internet services (as % of population)							
sending emails		26	29	31	34	53	23
looking for information about goods and services		21	23	27	30	50	25
uploading self-created content					7	11	19
ordering goods or services, over the Internet, for private use		6	9	10	11	32	20
reading online newspapers/magazines		13	13	17	17	25	24
selling goods and services (e.g. via auctions)		2	3	4	4	10	18
internet banking		8	9	12	13	29	23
downloading computer or video games or their updates					4	9	27
downloading/listening to/watching music and/or films					15	28	27
paying for online audiovisual contents					0	5	27
listening to the web radio/watching web tv		5	5	8	9	20	26
seeking health information on injury, disease or nutrition		9	12	16	16	28	22
looking for a job or sending a job application		5	6	7	7	13	22
doing an online course				2	2	3	17
seeking information with the purpose of learning				21	24	26	12
eGovernment Indicators							
% basic public services for citizens fully available online	27		36	58		51	9
% basic public services for enterprises fully available online	88		88	88		72	
% of population using eGovernment services		14	16	17	15	28	23
% of population using eGovernment services for returning filled in forms					5	12	22
% of enterprises using eGovernment services	65	73	87	84	82	68	9
% of enterprises using eGovernment services for returning filled in forms	35	29	49	35	42	50	21
of which to submit a proposal in a public electronic tender system (e-procurement)		10	7	7	9	9	12
eCommerce							
eCommerce as % of total turnover of enterprises	3	2	2	2		12	
% enterprises selling online	7	3	3	2	3	16	24
% enterprises purchasing online	6	4	10	10	12	28	18
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					49	41	8
using applications for integrating internal business processes (large enterprises)					82	70	7
using applications for employees to access Human Resources services					6	11	25
exchanging automatically business documents with customers/suppliers					27	25	15
sending/receiving e-invoices				34	29	21	5
sharing information electronically with customers/suppliers on Supply Chain Manag.					21	16	8
using analytical Customer Relation Manag.				15	14	17	13
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP	3.9	3.9	4.0			5.0	12
ICT sector share of total employment	2.7	2.7	2.6			2.7	11
ICT R&D expenditure by the business sector, as % of GDP	0.13	0.14				0.31	14
= = = = =, as % of total R&D expenditure	25.2	25.1				26.4	13
% of ICT exports on total exports	3.9	3.9	3.8	2.6			25
% of ICT exports on total imports	8.0	7.5	6.9	6.1			24
% of persons employed with ICT user skills.	17.6	17.5	18.9	19.4	19.4	18.4	12
% of persons employed with ICT specialist skills	2.8	2.8	2.9	2.8	2.7	3.0	19

15. LATVIA

The information society in Latvia is still lagging behind in comparison with the general developments in the EU, although internet users are actively taking up advanced services. The wide dissemination of internet usage in the population and a good skill base are laying the foundations for further developments. Several important initiatives have been taken in 2008 to boost information society. In particular, the approval by the Government of a list of high-priority projects related to information society and eServices (education, culture, health care, employment, social security etc) submitted by the ministries and other institutions subordinated to them. Furthermore, the *'Latvian Educational System Informatization Programme for 2007-2013*' envisages the establishment of an educational information system, teacher training in the use of ICT, development of electronic education materials, establishment of an interactive portal for teachers and parents, computerisation of schools and libraries and a number of other measures to improve the quality of education.

Broadband

Total DSL coverage in Latvia grew further to reach 88% of the population, exceeding the EU average. However, broadband coverage in rural areas remains an issue and broadband penetration is still lower than average, as is the connectivity of households. With only 62% of enterprises having broadband internet access, Latvia is placed at the bottom of the European ranking as well (23rd). No significant progress can be observed in the area of broadband over the last year.

Internet Usage

The presence of regular and frequent internet users in Latvia is comparable to that for the EU as a whole. Take-up of internet services is also generally good. Rates of participation for the more popular activities such as sending emails and looking up information about goods and services are similar to the EU average and for a number of other services rates of use are higher. In particular, Latvia records particularly large above average rates of the population using the internet for reading online newspapers (+18 p.p.), internet banking (+10pp.), uploading self-created content (+8 p.p.), doing online courses (+5 p.p.) and downloading video games (+5 p.p.). For a small number of services (seeking information for learning purposes, ordering goods), it records relatively low rates of use by its citizens. The take-up of all services, for which there is comparable data, has increased since last year.

The availability of online public services is very low, both for citizens and for enterprises. Subsequently, the use of eGovernment also lies far below the European average.

ICTs in the Economy

eCommerce and eBusiness are not particularly developed yet in Latvia. Despite improvements in terms of rankings and absolute figures, the three indicators of eCommerce remain below the EU27 average. In eBusiness dimension, indicators are at or below EU average.

Data on the size of the ICT sector are not available and other indicators suggest that ICTs do not yet play an important part in the Latvian economy. The percentage of persons employed with ICT user skills is above average, but ICT specialists score less well.

Latvia

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)			72.0	87.0	88.0	92.7	23
DSL coverage in rural areas (as % of total population)			37.0	65.0	68.0	76.6	20
Broadband penetration (as % of population)	2.4	5.7	10.5	15.0	17.4	22.9	19
Speed - % of broadband subscriptions above 2 Mbps		0.3	7.6	32.6	73.0	63.3	6
% of households with an internet connection	15	31	42	51	53	60	16
% of households with a broadband connection	5	14	23	32	40	49	18
% of enterprises with a (fixed) broadband access	45	48	59	57	62	81	23
% of individuals using a mobile phone via UMTS (3G) to access the Internet			0	1	1	3	20
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				3	10	12	12
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	27	36	46	52	57	56	14
% pop. who are frequent internet users (using the internet every day or almost every day)	16	23	31	37	42	43	14
% population who have never used the internet		51	45	39	34	33	15
Take up of internet services (as % of population)							
sending emails	25	33	41	46	49	53	16
looking for information about goods and services	19	27	36	39	49	50	14
uploading self-created content					19	11	2
ordering goods or services, over the Internet, for private use	3	5	8	11	16	32	18
reading online newspapers/magazines	19	24	27	18	33	25	13
selling goods and services (e.g. via auctions)	1	1	2	2		10	
internet banking	12	16	22	28	39	29	9
downloading computer or video games or their updates					13	9	4
downloading/listening to/watching music and/or films					33	28	8
paying for online audiovisual contents					4	5	10
listening to the web radio/watching web tv	9	11	17	20	24	20	9
seeking health information on injury, disease or nutrition	8	7	12	11	24	28	16
looking for a job or sending a job application	9	10	11	9	16	13	8
doing an online course				6	8	3	2
seeking information with the purpose of learning				5	13	26	23
eGovernment Indicators							
% basic public services for citizens fully available online	8		8	25		51	21
% basic public services for enterprises fully available online	0		13	38		72	
% of population using eGovernment services	13	13	25	18	16	28	22
% of population using eGovernment services for returning filled in forms					6	12	20
% of enterprises using eGovernment services	40	35	40	45	55	68	26
% of enterprises using eGovernment services for returning filled in forms	15	15	21	26	39	50	23
of which to submit a proposal in a public electronic tender system (e-procurement)		0	0	6	8	9	16
eCommerce							
eCommerce as % of total turnover of enterprises		1	1	2	7	12	15
% enterprises selling online		1	2	2	6	16	20
% enterprises purchasing online		1	3	5	9	28	21
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					36	41	20
using applications for integrating internal business processes (large enterprises)					60	70	22
using applications for employees to access Human Resources services					11	11	17
exchanging automatically business documents with customers/suppliers					19	25	22
sending/receiving e-invoices				25	20	21	16
sharing information electronically with customers/suppliers on Supply Chain Manag.					20	16	14
using analytical Customer Relation Manag.				10	9	17	21
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP						5.0	
ICT sector share of total employment	1.6	1.7	1.6			2.7	14
ICT R&D expenditure by the business sector, as % of GDP	0.02	0.02				0.31	25
= = = = =, as % of total R&D expenditure	12.1	8.4				26.4	24
% of ICT exports on total exports	3.1	3.4	4.1	4.1			22
% of ICT exports on total imports	6.5	6.7	7.0	7.1			19
% of persons employed with ICT user skills.	17.0	16.6	19.3	21.0	21.3	18.4	6
% of persons employed with ICT specialist skills	3.3	3.5	3.3	3.3	2.7	3.0	20

16. LITHUANIA

Fast progress in internet usage by individuals and growth in eCommerce activities are laying the foundations for further information. The Strategy for Information Society Development in Lithuania has given priority to the creation of ICT competence in the population (e-skill) and social cohesion (e-Inclusion). The modernization of the public administration through the use of ICTs and the protection of the Lithuanian culture (e-content) are also main objectives of the ICT strategy.

Broadband

Broadband coverage in rural areas has experienced significant progress in recent years. In 2008, fixed broadband penetration increased to 17.5%, moving 4 places up since last year, but still lags behind the EU27 average of 23%. Despite progress, the connectivity of households remains below average and the situation is even weaker for enterprises, as Lithuania ranks at the bottom of the list. New mobile connectivity usages are not yet developed.

Internet Usage

Corresponding to its low level of connectivity, Internet use by Lithuanian households also remains below average. At 43% Lithuania also has an above average proportion of the population that has never used the internet. Nevertheless, the share of regular and frequent users has increased substantially over the past four years; from 26 to 50% and from 13 to 38%, respectively.

The take-up of internet services too shows a sharp increase in comparison to four years ago. For some services, Lithuania ranks among the top ten users e.g. reading online newspapers, downloading games, music of films and doing online courses. For other indicators, however, use is lower than the average.

The online availability of public services for citizens is only half of the EU average, and has not increased since 2004. Take up by citizens is below the EU average but is increasing. Availability is higher for services for enterprises, though but still below average, and take up by enterprises exceeds the EU average by 18pp.

ICTs in the Economy

In only 3 other countries more enterprises sell online than they do in Lithuania, and the country ranks 9th for the share of firms purchasing online. In general, 8% of total turnover in Lithuania comes from eCommerce.

In terms of eBusiness, applications for integrating internal business processes, for HR services or for Customer Relation Management are still rare. On the other hand, ICTs are often used to exchange documents, to share information on Supply Chain Management and for e-invoices.

ICTs have a minimal impact on the Lithuanian economy. R&D investment is very small, as are exports of ICT products. User skills are widespread among Lithuanian employees, but nowhere else in Europe specialist skills are lacking more.

Lithuania

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)		82.0	83.0	87.9	88.4	92.7	21
DSL coverage in rural areas (as % of total population)		54.6	58.0	67.5	68.5	76.6	19
Broadband penetration (as % of population)	3.8	6.8	10.6	13.7	17.5	22.9	18
Speed - % of broadband subscriptions above 2 Mbps		0.7	4.0	14.0	33.3	63.3	24
% of households with an internet connection	12	16	35	44	51	60	18
% of households with a broadband connection	4	12	19	34	43	49	16
% of enterprises with a (fixed) broadband access	50	57	57	53	56	81	26
% of individuals using a mobile phone via UMTS (3G) to access the Internet			0	0	1	3	25
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				2	3	12	23
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	26	30	38	45	50	56	18
% pop. who are frequent internet users (using the internet every day or almost every day)	13	16	23	30	38	43	17
% population who have never used the internet		61	54	49	43	33	19
Take up of internet services (as % of population)							
sending emails	23	26	32	39	42	53	20
looking for information about goods and services	15	22	30	36	37	50	20
uploading self-created content					8	11	15
ordering goods or services, over the Internet, for private use	1	2	4	6	6	32	25
reading online newspapers/magazines	21	24	30	32	43	25	5
selling goods and services (e.g. via auctions)	0	1	2	1	1	10	20
internet banking	7	10	15	21	27	29	14
downloading computer or video games or their updates					12	9	6
downloading/listening to/watching music and/or films					32	28	9
paying for online audiovisual contents					3	5	18
listening to the web radio/watching web tv	8	11	17	20	19	20	13
seeking health information on injury, disease or nutrition		9	15	19	21	28	19
looking for a job or sending a job application	4	7	9	10	10	13	14
doing an online course				5	4	3	7
seeking information with the purpose of learning				20	20	26	18
eGovernment Indicators							
% basic public services for citizens fully available online	25		25	25		51	21
% basic public services for enterprises fully available online	63		63	50		72	
% of population using eGovernment services	10	12	13	18	20	28	16
% of population using eGovernment services for returning filled in forms					13	12	10
% of enterprises using eGovernment services	65	72	76	76	86	68	7
% of enterprises using eGovernment services for returning filled in forms	30	52	56	60	75	50	3
of which to submit a proposal in a public electronic tender system (e-procurement)		8	13	16	20	9	2
eCommerce							
eCommerce as % of total turnover of enterprises	2	2	5	5	8	12	13
% enterprises selling online	5	6	13	14	22	16	4
% enterprises purchasing online	13	7	17	18	25	28	9
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					23	41	27
using applications for integrating internal business processes (large enterprises)					55	70	24
using applications for employees to access Human Resources services					10	11	18
exchanging automatically business documents with customers/suppliers					33	25	9
sending/receiving e-invoices				15	35	21	4
sharing information electronically with customers/suppliers on Supply Chain Manag.					29	16	3
using analytical Customer Relation Manag.				9	8	17	24
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP	3.2	2.8				5.0	
ICT sector share of total employment	1.8	1.8				2.7	
ICT R&D expenditure by the business sector, as % of GDP	0.03	0.03				0.31	22
= = = = =, as % of total R&D expenditure	17.8	20.5				26.4	18
% of ICT exports on total exports	5.3	4.8	4.4	4.3			21
% of ICT exports on total imports	6.9	6.8	6.4	6.4			20
% of persons employed with ICT user skills.	17.5	18.8	19.4	21.2	23.4	18.4	3
% of persons employed with ICT specialist skills	2.0	1.4	1.4	1.5	1.9	3.0	27

17. LUXEMBOURG

Luxembourg is well advanced in the information society, with many benchmarking indicators significantly above the EU average, in particular in the area of broadband connectivity, households' Internet usage and eSkills endowments. The country is also very active in Green IT: all the companies have accepted the challenge and a variety of concrete solutions have been deployed to significantly reduce energy use in other sectors of the economy and in the society as a whole.

Broadband

Luxembourg has further improved its broadband penetration since last year, reaching 28.8% and rising 2 places in the EU ranking. There is full DSL coverage and the use of wireless laptop connections is the highest in Europe. The good infrastructure is reflected in the percentage of households connected to (broadband) internet (80%).

Speeds are the only downside in the connectivity dimension: only one in two broadband connections is faster than 2MB/s.

Internet Usage

Luxembourg performs well in terms of the proportion of its population that are using the internet. 77% of citizens are regular internet users, most accessing the internet almost every day, and only 16% have never used the internet. Use of various internet services is also high in comparison to other EU Member States; with Luxemburg exhibiting above average use by its citizens of all but two activities: looking for a job and downloading computer or video games or their updates. Luxemburg has the highest proportion of its population using the internet to look for information for the purpose of learning.

Despite below average availability, the use of eGovernment services by citizens and enterprises is one of the highest in Europe.

ICTs in the Economy

There are fewer enterprises in Luxembourg selling and purchasing online relative to EU averages. eBusiness on the other hand is well developed, with rankings ranging from 6th to 14th place.

No information is available on the size of the ICT sector in Luxembourg, but exports are significant despite a decline since 2006. The workforce displays the highest user eSkills and second highest specialist eSkills in Europe (an improvement of two places since last year). Together with the high connectivity rate and widespread take up of internet services in the general population, this forms a very good starting point for further information society developments.

Luxembourg

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	100.0	100.0	100.0	100.0	100.0	92.7	1
DSL coverage in rural areas (as % of total population)		100.0	100.0	100.0	100.0	76.6	1
Broadband penetration (as % of population)	8.1	15.5	21.5	25.4	28.8	22.9	5
Speed - % of broadband subscriptions above 2 Mbps		7.7	8.1	12.4	53.0	63.3	18
% of households with an internet connection	59	65	70	75	80	60	4
% of households with a broadband connection	16	33	44	58	61	49	6
% of enterprises with a (fixed) broadband access	48	64	76	81	87	81	9
% of individuals using a mobile phone via UMTS (3G) to access the Internet			1	4	4	3	10
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				31	31	12	1
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	59	63	65	72	77	56	5
% pop. who are frequent internet users (using the internet every day or almost every day)	36	44	47	56	65	43	5
% population who have never used the internet		29	27	20	16	33	5
Take up of internet services (as % of population)							
sending emails	59	63	65	71	74	53	4
looking for information about goods and services	53	61	64	68	69	50	5
uploading self-created content					15	11	7
ordering goods or services, over the Internet, for private use	40	39	44	47	49	32	7
reading online newspapers/magazines	28	29	29	42	41	25	7
selling goods and services (e.g. via auctions)	5	6	5	12	12	10	8
internet banking	35	37	41	46	48	29	6
downloading computer or video games or their updates					9	9	11
downloading/listening to/watching music and/or films					42	28	2
paying for online audiovisual contents					12	5	3
listening to the web radio/watching web tv	15	19	22	29	36	20	3
seeking health information on injury, disease or nutrition	41	41	27	48	44	28	3
looking for a job or sending a job application	11	12	11	14	12	13	13
doing an online course				3	5	3	6
seeking information with the purpose of learning				47	50	26	1
eGovernment Indicators							
% basic public services for citizens fully available online	8		8	33		51	18
% basic public services for enterprises fully available online	38		50	50		72	
% of population using eGovernment services	45	46	46	52	48	28	4
% of population using eGovernment services for returning filled in forms					16	12	8
% of enterprises using eGovernment services	71		83	85	90	68	4
% of enterprises using eGovernment services for returning filled in forms	26		32	35	41	50	22
of which to submit a proposal in a public electronic tender system (e-procurement)			12	5	7	9	21
eCommerce							
eCommerce as % of total turnover of enterprises						12	
% enterprises selling online	11	10	11	13	10	16	15
% enterprises purchasing online	34	22	30	34	23	28	10
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					49	41	11
using applications for integrating internal business processes (large enterprises)					79	70	12
using applications for employees to access Human Resources services					13	11	14
exchanging automatically business documents with customers/suppliers					35	25	6
sending/receiving e-invoices				23	24	21	12
sharing information electronically with customers/suppliers on Supply Chain Manag.					23	16	6
using analytical Customer Relation Manag.				13	17	17	9
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP						5.0	
ICT sector share of total employment						2.7	
ICT R&D expenditure by the business sector, as % of GDP	0.12	0.11				0.31	16
= = = = =, as % of total R&D expenditure	8.3	8.0				26.4	25
% of ICT exports on total exports	15.9	18.2	17.8	12.0			8
% of ICT exports on total imports	14.2	15.4	17.4	11.8			7
% of persons employed with ICT user skills.	27.0	27.5	27.2	27.7	29.1	18.4	1
% of persons employed with ICT specialist skills	3.6	3.5	3.2	3.4	5.0	3.0	2

18. MALTA

Malta performs well in the fields of eCommerce, eBusiness and the provision of eGovernment services, and displays a relatively high proportion of eSkills among employees. However, it is lagging in terms of regular use of the internet and the take up of many internet services. ICT exports are very important for the economy. This is an indication of the economic importance of the information society in this country. Even more impetus is expected from the *'Smart Island National ICT Strategy 2008-2010*' which sets a vision for the country to become one of the top 10 information societies in the world. The strategic plan prepares Malta for the next generation of technology by laying the foundations for a world class inclusive infrastructure; developing a smart workforce; using IST to improve quality of life; re-inventing government and enhancing the productivity of the private sector and its competitiveness.

Broadband

After a stall in broadband growth in 2006, there was a substantial increase in 2007 and 2008. Broadband penetration now stands at 24% of population. This gives Malta the 11th place in Europe, up five places since last year. There also is virtually complete DSL and cable modem networks coverage, while mobile connectivity methods are not yet fully exploited.

55% of Maltese households (or 93% of those connected to the internet) have broadband access. For the enterprises, this figure is at 89%. Broadband speeds however are among the lowest in Europe and this is a consequence of interconnection issues to the main land.

Internet Usage

While internet use has been growing among the population, Malta is placed in the bottom third of EU Member States with respect to rates of regular and frequent internet users and almost half of the population has never used the internet. The take up of internet services is also generally below the EU average; with the exception of downloading computer and/or video games, reading online newspapers, downloading/listeningto/watching music and/or films and listening to web radio/watching web TV, for which use is slightly above the average.

Malta performs very well in terms of the provision online public services; with 92% of public services for citizens and 100% of public services for enterprises available online. In terms of take up, however, it performs less well. While an above average proportion of enterprises use online pubic services (74%, compared to an EU average of 68%), use by citizens is relatively low.

ICTs in the Economy

Malta's position is strong in eCommerce and eBusiness. No other EU Member States features such a high share of enterprises' turnover from eCommerce. And all the eBusiness indicators are above the EU average.

The latest figures indicate that the Maltese business sector tripled its R&D expenditure in ICT between 2004 and 2005. ICT R&D expenditure relative to GDP remains lower than average, but one third (compared to 11% in the previous year) of all R&D spending goes to the ICT sector, resulting in a steep increase of Malta's ranking (from 23rd to 8th position), mainly led by the presence of the semiconductors industry. In 2006, Malta had the highest proportion of ICT exports in total exports in the EU. ICT plays an important role in the Maltese economy, as also underlined by strong eSkills, both at user and specialist levels, in the workforce.

Malta

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	95.0	99.0	99.0	99.0	99.0	92.7	6
DSL coverage in rural areas (as % of total population)						76.6	
Broadband penetration (as % of population)	9.4	12.7	12.5	16.9	23.9	22.9	11
Speed - % of broadband subscriptions above 2 Mbps		0.0	59.6	29.0	21.2	63.3	25
% of households with an internet connection		41	53	54	59	60	12
% of households with a broadband connection		23	41	44	55	49	9
% of enterprises with a (fixed) broadband access		78	83	89	89	81	6
% of individuals using a mobile phone via UMTS (3G) to access the Internet			0	0	2	3	14
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				4	4	12	20
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)		34	36	43	46	56	20
% pop. who are frequent internet users (using the internet every day or almost every day)		25	26	34	36	43	18
% population who have never used the internet		57	58	51	49	33	21
Take up of internet services (as % of population)							
sending emails		32	31	40	43	53	19
looking for information about goods and services		27	26	34	42	50	19
uploading self-created content					5	11	23
ordering goods or services, over the Internet, for private use		14	14	20	22	32	13
reading online newspapers/magazines		14	17	20	27	25	15
selling goods and services (e.g. via auctions)		1	3	7	5	10	14
internet banking		16	16	22	25	29	15
downloading computer or video games or their updates					12	9	5
downloading/listening to/watching music and/or films					29	28	13
paying for online audiovisual contents					3	5	15
listening to the web radio/watching web tv		8	10	14	21	20	11
seeking health information on injury, disease or nutrition		16	18	20	23	28	17
looking for a job or sending a job application		5	8	10	10	13	15
doing an online course				3	2	3	18
seeking information with the purpose of learning				21	23	26	13
eGovernment Indicators							
% basic public services for citizens fully available online	33		83	92		51	2
% basic public services for enterprises fully available online	50		63	100		72	
% of population using eGovernment services		19	17	25	20	28	17
% of population using eGovernment services for returning filled in forms					7	12	18
% of enterprises using eGovernment services		68	67	77	74	68	15
% of enterprises using eGovernment services for returning filled in forms		45	35	49	46	50	17
of which to submit a proposal in a public electronic tender system (e-procurement)		7	9	11	7	9	19
eCommerce							
eCommerce as % of total turnover of enterprises					22	12	1
% enterprises selling online		16	14	16	13	16	12
% enterprises purchasing online		33	25	27	13	28	17
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					58	41	5
using applications for integrating internal business processes (large enterprises)					72	70	17
using applications for employees to access Human Resources services					19	11	4
exchanging automatically business documents with customers/suppliers					28	25	14
sending/receiving e-invoices				24	25	21	10
sharing information electronically with customers/suppliers on Supply Chain Manag.					19	16	15
using analytical Customer Relation Manag.				22	19	17	8
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP						5.0	
ICT sector share of total employment						2.7	
ICT R&D expenditure by the business sector, as % of GDP	0.04	0.14				0.31	15
= = = = =, as % of total R&D expenditure	11.2	33.4				26.4	8
% of ICT exports on total exports	32.4	26.7	27.3	23.5			2
% of ICT exports on total imports	26.5	22.4	22.7	18.7			2
% of persons employed with ICT user skills.	20.5	20.5	20.8	21.2	22.4	18.4	5
% of persons employed with ICT specialist skills	4.1	3.4	2.9	3.4	3.4	3.0	7

19. THE NETHERLANDS

The Netherlands is among the best performing ICT countries in Europe, leading the way in a broad range of information society developments. The connectivity of households is the highest in Europe and the take-up of internet services is widespread. There is still room for improvement however in the area of eGovernment despite worthwhile progress has been made in 2008, driven by the implementation of Citizen Service Numbers and the widespread use of DigiD. In Spring 2008, the national ICT agenda 2008-2011 was published, formulating the cabinet's objectives around five priority areas: eSkills, eGovernment, interoperability and standards, ICT and public domains, and services innovation and ICT.

Broadband

The Netherlands is one of the world's leaders in the broadband ranking and now stands in second place in the EU with 36.2% (one place up since last year). Speeds are generally high and coverage virtually complete. Nowhere else in Europe a higher proportion of households is connected to the internet, and broadband households' connectivity is only higher in Denmark. For the mobile connectivity methods, the country scores above average as well. With 86% of the Dutch enterprises having broadband access, the EU average is exceeded by 5%. However, there has been no progress since last year, resulting in a loss of four places on the EU ranking.

Internet Usage

Good connectivity had translated into high shares of internet users in the population and growth in the use of advanced services. 83% of Dutch citizens are accessing the Internet at least weekly, while 67% are doing so almost daily, well above the EU27 average. Furthermore, only 11% of the population has never used the internet, as compared to 33% for the EU. The Netherlands is also leading the way in the take-up of internet services, with well above average rates of use for all but one of the indicators: seeking information for the purpose of learning.

The Netherlands ranks first in terms of the take up of eGovernment services by its citizens and second in terms of take up by enterprises, despite an only slightly better than average provision of online public services.

ICTs in the Economy

The three indicators measuring eCommerce adoption by enterprises all reveal scores exceeding the EU27 average, resulting in top-5 rankings. eBusiness is widely taken up by enterprises, although there is scope for improvement in the electronic sharing of information with customers and suppliers.

Data on the size of the ICT sector are not available, but the ICT export sector appears important. The eSkills base is above average.

The Netherlands

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	99.0	99.0	99.0	99.0	99.0	92.7	6
DSL coverage in rural areas (as % of total population)		99.0	99.0	99.0	99.0	76.6	6
Broadband penetration (as % of population)	18.9	25.2	31.8	34.2	36.2	22.9	2
Speed - % of broadband subscriptions above 2 Mbps		39.1	46.6	63.3	72.9	63.3	7
% of households with an internet connection		78	80	83	86	60	1
% of households with a broadband connection		54	66	74	74	49	2
% of enterprises with a (fixed) broadband access	54	71	82	87	86	81	10
% of individuals using a mobile phone via UMTS (3G) to access the Internet			1	4	4	3	8
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				12	16	12	7
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)		74	76	81	83	56	2
% pop. who are frequent internet users (using the internet every day or almost every day)		53	61	66	67	43	3
% population who have never used the internet		18	16	13	11	33	2
Take up of internet services (as % of population)							
sending emails		73	76	79	82	53	1
looking for information about goods and services		70	73	76	76	50	1
uploading self-created content					19	11	3
ordering goods or services, over the Internet, for private use		43	48	55	56	32	3
reading online newspapers/magazines		29	36	40	43	25	6
selling goods and services (e.g. via auctions)		14	18	20	25	10	1
internet banking		50	59	65	69	29	2
downloading computer or video games or their updates					15	9	2
downloading/listening to/watching music and/or films					46	28	1
paying for online audiovisual contents					7	5	6
listening to the web radio/watching web tv		20	28	35	32	20	5
seeking health information on injury, disease or nutrition		41	45	45	46	28	2
looking for a job or sending a job application		16	19	19	17	13	6
doing an online course				3	4	3	8
seeking information with the purpose of learning				14	15	26	21
eGovernment Indicators							
% basic public services for citizens fully available online	18		36	55		51	13
% basic public services for enterprises fully available online	50		75	75		72	
% of population using eGovernment services		46	52	55	54	28	1
% of population using eGovernment services for returning filled in forms					32	12	1
% of enterprises using eGovernment services	47	57	70	81	85	68	8
% of enterprises using eGovernment services for returning filled in forms	27	44	61	73	75	50	2
of which to submit a proposal in a public electronic tender system (e-procurement)			5	6	6	9	24
eCommerce							
eCommerce as % of total turnover of enterprises					14	12	5
% enterprises selling online	17	14	23	26	27	16	2
% enterprises purchasing online	22	20	32	36	40	28	4
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					72	41	1
using applications for integrating internal business processes (large enterprises)					84	70	6
using applications for employees to access Human Resources services					19	11	5
exchanging automatically business documents with customers/suppliers					34	25	8
sending/receiving e-invoices				11	29	21	6
sharing information electronically with customers/suppliers on Supply Chain Manag.					13	16	19
using analytical Customer Relation Manag.				14	20	17	6
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP						5.0	
ICT sector share of total employment						2.7	
ICT R&D expenditure by the business sector, as % of GDP	0.33	0.32				0.31	8
= = = = =, as % of total R&D expenditure	32.6	32.1				26.4	9
% of ICT exports on total exports	18.2	19.9	19.0	18.4			4
% of ICT exports on total imports	19.7	21.2	19.7	19.4			1
% of persons employed with ICT user skills.	21.2	20.2	20.9	20.7	20.0	18.4	10
% of persons employed with ICT specialist skills	4.2	4.2	3.8	3.9	4.0	3.0	6

20. POLAND

The information society in Poland is still only developing slowly and in two thirds of all benchmarking indicators Poland is close to the bottom of the EU ranking. Poland is however taking active steps through a national ICT strategy, the 'Computerization Plan for Poland in 2007-2010' and a new one was adopted in December 2008 for the period up to 2013: 'Strategy for Information Society Development till 2013'. The two strategies are principally aimed at counteracting digital exclusion for low-income citizens and at widening access to the Internet for micro, small and medium entrepreneurs. The former plan aims at developing data communication systems used to carry out public tasks, while the latter focuses on the use of ICT for accelerating the growth of intellectual and social capital of citizens, for increasing productivity and competitiveness of Polish companies and for improving the effectiveness of the public administration.

Broadband

Broadband penetration by population in Poland stood at 13.6% in 2008. It went up by almost 60% since last year, but is still one of the lowest in EU27. DSL coverage at the national level and in rural areas is widely below the EU average. It is therefore no surprise that broadband connectivity for both households and enterprises is at a low level, with Poland ranking 20th and 25th respectively.

Internet Usage

While they have grown steadily over the past few years, rates of regular and frequent internet in Poland are still relatively low compared to the EU average. Furthermore, there are as many people (44%) never having used the internet as there are regular users. Correspondingly, rates of usage of internet services are also relatively low in EU comparison, with the exception of seeking information with the purpose of learning.

Similar conclusions hold for the take-up of eGovernment services. With availability of public services far below the European average, take-up by citizens is low, while use by businesses has reached EU average levels.

ICTs in the Economy

Investment in ICT R&D is very small, but progress in terms of ICT exports (in terms of ranking) confirms an important role for the Polish economy in the manufacturing of ICT goods.

ICT take-up by businesses, reflected by eCommerce and eBusiness indicators, is still at a low level. The share of turnover generated through eCommerce is a quarter lower than on average in Europe, while the proportion of enterprises selling online is only half of the average figure.

The automatic exchange of business documents, however, slightly exceeds the EU average and, together with eGovernment take-up, is a promise for progress in the further development of the information society.

Poland

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	55.2	62.3	67.1	64.0	69.6	92.7	26
DSL coverage in rural areas (as % of total population)		51.9	54.8	42.5	42.5	76.6	23
Broadband penetration (as % of population)	1.4	2.7	5.2	8.4	13.2	22.9	24
Speed - % of broadband subscriptions above 2 Mbps		0.0	3.3	8.0	13.6	63.3	26
% of households with an internet connection	26	30	36	41	48	60	20
% of households with a broadband connection	8	16	22	30	38	49	20
% of enterprises with a (fixed) broadband access	28	43	46	53	59	81	25
% of individuals using a mobile phone via UMTS (3G) to access the Internet			0	1	1	3	21
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				3	6	12	19
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	22	29	34	39	44	56	21
% pop. who are frequent internet users (using the internet every day or almost every day)	12	17	22	27	32	43	21
% population who have never used the internet		58	52	48	44	33	20
Take up of internet services (as % of population)							
sending emails	19	24	27	32	38	53	21
looking for information about goods and services	15	18	25	27	33	50	22
uploading self-created content					7	11	17
ordering goods or services, over the Internet, for private use	5	7	12	16	18	32	16
reading online newspapers/magazines	14	13	16	15	19	25	23
selling goods and services (e.g. via auctions)	1	1	5	5	7	10	12
internet banking	4	6	9	13	17	29	19
downloading computer or video games or their updates					7	9	18
downloading/listening to/watching music and/or films					21	28	18
paying for online audiovisual contents					2	5	22
listening to the web radio/watching web tv	6	6	10	13	18	20	15
seeking health information on injury, disease or nutrition	5	7	11	13	19	28	21
looking for a job or sending a job application	5	5	7	7	8	13	19
doing an online course					2	3	22
seeking information with the purpose of learning				19	28	26	9
eGovernment Indicators							
% basic public services for citizens fully available online			8	17		51	25
% basic public services for enterprises fully available online	25		38	38		72	
% of population using eGovernment services	13	13		15	16	28	19
% of population using eGovernment services for returning filled in forms					5	12	23
% of enterprises using eGovernment services	74	64	61	64	68	68	19
% of enterprises using eGovernment services for returning filled in forms	68	60	56	56	60	50	11
of which to submit a proposal in a public electronic tender system (e-procurement)		6	7	8	6	9	23
eCommerce							
eCommerce as % of total turnover of enterprises	3	4	6	6	9	12	11
% enterprises selling online	4	5	9	9	8	16	17
% enterprises purchasing online	9	9	16	13	11	28	19
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					24	41	26
using applications for integrating internal business processes (large enterprises)					58	70	23
using applications for employees to access Human Resources services					8	11	22
exchanging automatically business documents with customers/suppliers					26	25	17
sending/receiving e-invoices				8	11	21	22
sharing information electronically with customers/suppliers on Supply Chain Manag.					14	16	17
using analytical Customer Relation Manag.				12	12	17	19
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP						5.0	
ICT sector share of total employment						2.7	
ICT R&D expenditure by the business sector, as % of GDP	0.02	0.03				0.31	23
= = = = =, as % of total R&D expenditure	11.5	14.7				26.4	21
% of ICT exports on total exports	4.1	4.2	5.1	5.7			13
% of ICT exports on total imports	8.4	8.8	9.2	9.1			11
% of persons employed with ICT user skills.	15.1	14.7	15.1	15.1	15.4	18.4	23
% of persons employed with ICT specialist skills	2.8	2.8	2.8	2.8	2.9	3.0	15

21. PORTUGAL

Portugal has a fairly strong position in the information society as far as eBusiness and eCommerce are concerned. It is also one of the leading countries in terms of eGovernment availability. The country is lagging behind in eSkills and in households' connectivity, but mobile broadband penetration has had a strong development. The 'Connecting Portugal' programme launched in 2005 aims at improving the spread of the information society. Priority is given to increase the ICT capacity of the scientific community (eScience) and of basic and secondary schools and students through the Technological Plan for Education. In eScience, this includes the development of a high performance network for research and education, digital scientific libraries (including the provision of online access to scientific publications by research and higher education institutions), open access scientific repositories and the National Grid Computing Initiative. Regarding basic and secondary education, all the 1st to 12th grade public schools are connected to broadband since January 2006, and in 2007 pioneering programs were launched to facilitate de acquisition of laptops with broadband connections to students.

Broadband

As fixed broadband penetration only increased very little, Portugal fell from 17th to 21st place. However, mobile broadband connectivity is higher than the EU average (ranking 3rd) and the speed of the subscribed fixed broadband is comparatively high (4th in connections above 10 Mbps, and 3rd for connections above 2 Mps). Despite high coverage and speeds, household's connectivity and fixed broadband connectivity is far below average (rankings 22nd and 19th respectively). The situation is more positive for enterprises' broadband connectivity, with a score equal to the EU average.

Internet Usage

Portugal is one of the countries with the lowest rates of regular and frequent internet users, and has a high share of the population who have never used the internet. Subsequently, usage of online services is also relatively low. The main exception to this is for the use of internet with the purpose of learning, which at 33% of the population is well above the EU average of 26%.

Portugal is one of the best EU Member States in terms of the provision of online public services. 83% of public services for citizens are available online, exceeding the EU average of 51%, and 100% of services for enterprises are available online. While enterprises are actively exploiting the new opportunities well above EU average, including in the area of e-procurement, take-up by citizens remains more limited.

ICTs in the Economy

Portugal scores well in eCommerce and eBusiness. The contribution of eCommerce to total turnover is equal to the EU average, while slightly more Portuguese companies sell and fewer purchase online. Portugal is among the leading countries for enterprises' implementation of eBusiness applications, with almost every indicator exceeding the EU average.

The ICT sector as a whole does not play a major role in the Portuguese economy. Investment in R&D is very small, as are exports of ICT products. Its contribution to GDP and employment is below average too. Although some evidence suggests that the situation may have improved in the last years, fully comparable data are not yet available. Finally, the country is underachieving in terms of eSkills, for which it worsened its ranking over the last year.

Portugal

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	92.0	92.6	94.0	95.0	95.0	92.7	12
DSL coverage in rural areas (as % of total population)		79.0	84.0	86.0	86.0	76.6	12
Broadband penetration (as % of population)	8.1	11.6	13.9	16.1	16.5	22,9	21
Speed - % of broadband subscriptions above 2 Mbps		16.2	43.0	54.9	85.1	63.3	3
% of households with an internet connection	26	31	35	40	46	60	22
% of households with a broadband connection	12	20	24	30	39	49	19
% of enterprises with a (fixed) broadband access	49	63	66	76	81	81	15
% of individuals using a mobile phone via UMTS (3G) to access the Internet			1	3	5	3	7
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				8	16	12	8
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	25	28	31	35	38	56	22
% pop. who are frequent internet users (using the internet every day or almost every day)	16	19	22	27	29	43	23
% population who have never used the internet		63	60	56	54	33	24
Take up of internet services (as % of population)							
sending emails	24	26	29	33	36	53	22
looking for information about goods and services	23	26	30	33	34	50	21
uploading self-created content					7	11	18
ordering goods or services, over the Internet, for private use	5	6	7	9	10	32	22
reading online newspapers/magazines	15	16	16	15	20	25	21
selling goods and services (e.g. via auctions)	1	1	1			10	
internet banking	8	8	10	12	14	29	21
downloading computer or video games or their updates					7	9	16
downloading/listening to/watching music and/or films					19	28	24
paying for online audiovisual contents					2	5	19
listening to the web radio/watching web tv	8	9	11	14	17	20	17
seeking health information on injury, disease or nutrition		10	14	18	22	28	18
looking for a job or sending a job application	3	4	5	6	8	13	21
doing an online course				1	2	3	19
seeking information with the purpose of learning				26	33	26	5
eGovernment Indicators							
% basic public services for citizens fully available online	25		42	83		51	5
% basic public services for enterprises fully available online	63		88	100		72	
% of population using eGovernment services	13	14	17	19	18	28	18
% of population using eGovernment services for returning filled in forms					13	12	11
% of enterprises using eGovernment services	57	58	60	72	75	68	14
% of enterprises using eGovernment services for returning filled in forms	50	52	54	66	68	50	6
of which to submit a proposal in a public electronic tender system (e-procurement)		6	10	9	14	9	4
eCommerce							
eCommerce as % of total turnover of enterprises	5		8	7	12	12	10
% enterprises selling online	6	9	7	9	19	16	7
% enterprises purchasing online	8	12	14	12	20	28	11
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					53	41	7
using applications for integrating internal business processes (large enterprises)					82	70	8
using applications for employees to access Human Resources services					21	11	3
exchanging automatically business documents with customers/suppliers					39	25	2
sending/receiving e-invoices				14	24	21	11
sharing information electronically with customers/suppliers on Supply Chain Manag.					31	16	2
using analytical Customer Relation Manag.				15	16	17	11
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP		4.0				5.0	
ICT sector share of total employment		1.4				2.7	
ICT R&D expenditure by the business sector, as % of GDP	0.07	0.08				0.31	18
= = = = =, as % of total R&D expenditure	23.9	26.0				26.4	11
% of ICT exports on total exports	6.9	7.4	7.9	7.3			11
% of ICT exports on total imports	8.6	9.0	9.1	9.1			12
% of persons employed with ICT user skills.	13.4	12.6	12.2	11.5	11.8	18.4	26
% of persons employed with ICT specialist skills	2.1	2.3	2.7	2.8	2.7	3.0	21

22. ROMANIA

The information society is at early stages of development in Romania. The use of eProcurement, an important development for this country, is progressing at a good pace (the number of auctions in the Electronic System of Public Acquisitions (SEAP - www.e-licitatie.ro) grew from under 2% to over 12%). In November 2008 the *Agency for Information Society Services (ASSI)* published its eGovernment strategy which aims at improving the performance of the public administration at the service of citizens. This is complemented by several initiatives: recently, the e-Romania Portal was launched, offering online administrative services for citizens and companies. It aims, inter alia, to cut administrative costs between 30% and 70% by the end of 2009. Secondly, there is the *eStore* Portal for the promotion of electronic commerce and the business networks. And finally, initiatives were started aiming at enhancing digital inclusion to reduce the rural-urban digital divide, stimulate the use of ICTs in schools as well as facilitating the interaction between citizens and administration.

Broadband

Broadband penetration is growing slowly and now stands 11.7%, the third lowest in the EU. In order to solve this problem, the Romanian Government has launched the National Strategy for Broadband Development, with the aim of achieving an increase in the penetration rate at household level to 40% by 2010 and up to 80% by 2015. Broadband coverage is still limited, translating into low take-up of broadband by both households and enterprises. On the positive side, almost 80% of all broadband subscriptions are fast (+2MB/s), suggesting good basis for future leapfrogging of traditional broadband access. Still, only one third of households had an internet connection.

Internet Usage

Low connectivity is reflected in rates of internet usage. Despite a gradual increase over the past few years, Romania records the lowest rates of regular and frequent internet use in the EU. In addition, a majority of Romanian citizens (64%) have never used the internet. On the whole, most internet services are used to a significantly lesser degree than on average in the EU.

Similar conclusions can be drawn for eGovernment. Take up by citizens and enterprises is one of the weakest in Europe. Having said this, availability of online public services for enterprises exceeds the EU27 average, as does use of e-procurement.

ICTs in the Economy

Levels of eCommerce and eBusiness are still low. The eSkills base is also relatively weak.

The ICT industry is nevertheless important for the Romanian economy and it is highly prioritised by the Government: although it contributes little to total GDP (3.6%) and employment (1.5%), it is responsible for 5.3% of total exports.

Romania

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)					67.6	92.7	27
DSL coverage in rural areas (as % of total population)				0.0	34.0	76.6	24
Broadband penetration (as % of population)			5.0	9.8	11.7	22.9	25
Speed - % of broadband subscriptions above 2 Mbps				33.3	79.1	63.3	5
% of households with an internet connection	6		14	22	30	60	26
% of households with a broadband connection			5	8	13	49	27
% of enterprises with a (fixed) broadband access	7		31	37	44	81	27
% of individuals using a mobile phone via UMTS (3G) to access the Internet			0	0	1	3	27
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				1	2	12	25
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	10		18	22	26	56	27
% pop. who are frequent internet users (using the internet every day or almost every day)	4		9	12	15	43	27
% population who have never used the internet			74	69	64	33	27
Take up of internet services (as % of population)							
sending emails	10		16	20	24	53	27
looking for information about goods and services	5		10	12	17	50	27
uploading self-created content					5	11	22
ordering goods or services, over the Internet, for private use	0		1	3	4	32	26
reading online newspapers/magazines	3		7	9	14	25	27
selling goods and services (e.g. via auctions)	0		0	1	1	10	23
internet banking	0		1	2	2	29	26
downloading computer or video games or their updates					8	9	14
downloading/listening to/watching music and/or films					16	28	26
paying for online audiovisual contents					4	5	11
listening to the web radio/watching web tv	2		4	6	7	20	27
seeking health information on injury, disease or nutrition			5	6	11	28	25
looking for a job or sending a job application	1		3	3	3	13	27
doing an online course				1	1	3	23
seeking information with the purpose of learning				8	11	26	25
eGovernment Indicators							
% basic public services for citizens fully available online				8		51	27
% basic public services for enterprises fully available online				75		72	
% of population using eGovernment services			3	5	9	28	26
% of population using eGovernment services for returning filled in forms					3	12	27
% of enterprises using eGovernment services	31		39	42	39	68	27
% of enterprises using eGovernment services for returning filled in forms	12		13	20	23	50	25
of which to submit a proposal in a public electronic tender system (e-procurement)			6	8	10	9	9
eCommerce							
eCommerce as % of total turnover of enterprises			1	2	2	12	17
% enterprises selling online			2	3	3	16	23
% enterprises purchasing online				8	4	28	24
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					28	41	23
using applications for integrating internal business processes (large enterprises)					53	70	26
using applications for employees to access Human Resources services					12	11	15
exchanging automatically business documents with customers/suppliers					18	25	23
sending/receiving e-invoices				15	11	21	23
sharing information electronically with customers/suppliers on Supply Chain Manag.					7	16	26
using analytical Customer Relation Manag.				14		17	
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP	3.7	0.0	3.6			5.0	14
ICT sector share of total employment	1.2	1.3	1.5			2.7	15
ICT R&D expenditure by the business sector, as % of GDP	0.01	0.01				0.31	27
= = = = =, as % of total R&D expenditure	4.6	5.7				26.4	27
% of ICT exports on total exports	4.6	5.4	6.6	5.3			14
% of ICT exports on total imports	8.8	9.2	8.8	8.0			15
% of persons employed with ICT user skills.		6.3	8.7	9.1	9.8	18.4	27
% of persons employed with ICT specialist skills		1.8	2.4	2.5	2.5	3.0	23

23. SLOVAKIA

The information society in Slovakia is still lagging behind in comparison to general developments in the EU. However, Slovakia has strategic advantages for future developments: important ICT exports, a high level of adoption of Internet by the population, and a high take-up of eBusiness applications by enterprises. The slow development of broadband, however, remains a constraint.

Broadband

Fixed broadband penetration is at only 10.9%, the lowest rate in Europe. Despite this result, there has been positive progress in terms of households' connectivity, approaching the EU average and climbing some places in terms of ranking, probably because of the larger than average size of Slovakian households. For DSL coverage, Slovakia remains at the bottom end of the EU ranking. As of December 2008, DSL coverage was 78% of population (compared to a EU27 average of 92.7%) and 43% of population in rural areas (the EU27 average standing at 76.6%). Penetration of cable modem in Slovakia is relatively important (about 35% of the market), although limited to urban areas. Take-up of FTTx services is developing quickly and approaches 70,000 lines at the end of 2008. More than half of broadband users subscribe to speeds above 2 MB/s, mainly through cable and FTTx access. Slovakia is also experiencing a generally rapid development of commercial and municipal wireless broadband with increasing take-up rates.

Internet Usage

Despite the absence of widespread broadband networks, there are slightly more regular and frequent internet users in Slovakia than on average in the EU. At 25%, Slovakia also has a lower proportion of the population which have never used the internet. The picture with regard to take-up of internet services is rather mixed. While a larger proportion of the population uses services such as sending emails, reading online newspapers/magazines and downloading computer or videogames or their updates, the proportion of the population which uses other services is relatively low.

The availability of eGovernment services in Slovakia is lagging, especially for citizens. Despite low availability, take up by citizens and enterprises is above the EU average; with, in particular, Slovak enterprises having one of the highest rates of eGovernment take up in the EU.

ICTs in the Economy

Slovakia is lagging behind on the eCommerce dimension, with all indicators below average. This could be related to the low diffusion of broadband. The picture is far more positive for eBusiness. All applications are implemented more often than on average. This is a particularly good result, given the fact that last year's report expressed concerns about the eBusiness use by Slovak enterprises.

The contribution of the ICT sector to GDP and employment is similar to the average situation. For ICT exports and specialist eSkills, Slovakia even is one of the highest scoring countries.

Slovakia

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	44.2	61.0	65.7	73.9	77.9	92.7	25
DSL coverage in rural areas (as % of total population)		25.0	29.5	38.5	43.5	76.6	22
Broadband penetration (as % of population)	1.0	2.6	5.2	8.8	10.9	22.9	27
Speed - % of broadband subscriptions above 2 Mbps		0.6	1.8	48.6	65.5	63.3	13
% of households with an internet connection	23	23	27	46	58	60	14
% of households with a broadband connection	4	7	11	27	35	49	22
% of enterprises with a (fixed) broadband access	25	48	61	76	79	81	18
% of individuals using a mobile phone via UMTS (3G) to access the Internet			0	3	5	3	6
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				4	9	12	15
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	40	43	43	51	62	56	11
% pop. who are frequent internet users (using the internet every day or almost every day)	20	23	26	33	44	43	12
% population who have never used the internet		42	41	35	25	33	8
Take up of internet services (as % of population)							
sending emails	38	42	42	50	58	53	10
looking for information about goods and services	27	30	33	39	49	50	12
uploading self-created content					4	11	24
ordering goods or services, over the Internet, for private use	10	9	11	16	23	32	11
reading online newspapers/magazines	23	23	25	25	34	25	9
selling goods and services (e.g. via auctions)	2	0	2	2	5	10	16
internet banking	10	10	13	15	24	29	16
downloading computer or video games or their updates					11	9	8
downloading/listening to/watching music and/or films					28	28	15
paying for online audiovisual contents					3	5	16
listening to the web radio/watching web tv	6	6	8	11	17	20	18
seeking health information on injury, disease or nutrition	18	9	14	16	25	28	14
looking for a job or sending a job application	11	11	10	11	13	13	11
doing an online course				1	1	3	25
seeking information with the purpose of learning				3	14	26	22
eGovernment Indicators							
% basic public services for citizens fully available online	8		8	17		51	25
% basic public services for enterprises fully available online	25		38	63		72	
% of population using eGovernment services	25	27	32	24	30	28	12
% of population using eGovernment services for returning filled in forms					12	12	13
% of enterprises using eGovernment services	47	57	77	85	88	68	6
% of enterprises using eGovernment services for returning filled in forms	18	16	45	56	51	50	14
of which to submit a proposal in a public electronic tender system (e-procurement)		2	4	6	7	9	22
eCommerce							
eCommerce as % of total turnover of enterprises		0	0	3	8	12	14
% enterprises selling online	6	7		5	5	16	21
% enterprises purchasing online	3	7		8	9	28	22
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					45	41	16
using applications for integrating internal business processes (large enterprises)					76	70	13
using applications for employees to access Human Resources services					13	11	13
exchanging automatically business documents with customers/suppliers					36	25	4
sending/receiving e-invoices				14	23	21	13
sharing information electronically with customers/suppliers on Supply Chain Manag.					20	16	9
using analytical Customer Relation Manag.				11	13	17	18
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP	3.9		4.7			5.0	7
ICT sector share of total employment	2.6		2.7			2.7	10
ICT R&D expenditure by the business sector, as % of GDP	0.02	0.02				0.31	26
= = = = =, as % of total R&D expenditure	7.0	6.1				26.4	26
% of ICT exports on total exports	6.6	9.4	12.6	14.5			7
% of ICT exports on total imports	8.5	9.4	9.8	14.8			5
% of persons employed with ICT user skills.	15.7	15.4	15.4	15.6	15.9	18.4	22
% of persons employed with ICT specialist skills	3.0	3.2	3.3	3.5	3.2	3.0	8

24. SLOVENIA

Slovenia is fairly advanced in the information society. The past year was characterised by further improvements in terms of connectivity and Slovenia is one of the leading countries in eGovernment. Significant initiatives have been taken in the field of eLearning. The general framework for the development of the information society in Slovenia is provided by the national 'Strategy for the Development of the Information Society in the Republic of Slovenia (si2010)', which, in terms of its structure, follows the European i2010 initiative. The main objectives of the Strategy are to promote competitiveness and productivity, ensure balanced social and regional development, and improve the quality of life of society as a whole and of each individual.

Broadband

The latest indicators reveal stabilization in DSL coverage, which now exceeds the EU average also for rural areas. Broadband penetration stands at 21%, just below average. Households and enterprises' connectivity is in line with the EU average. Despite progress, there is room for improvement in terms of broadband speeds, as only a third of broadband subscribers can experience speeds above 2MB/s. Finally, Slovenia is experiencing the take up of mobile broadband through 3G at faster rates than most other countries.

Internet Usage

There are slightly less regular and frequent internet users in Slovenia than on average in the EU. Similarly, there is a somewhat large proportion of people never having used the internet. Subsequently, most indicators measuring take-up of internet services are comparable to the EU average.

Slovenia is one of the leading countries in the adoption of eGovernment. Both online availability and take-up of public services are above average. Especially for enterprises, the rankings are among the highest in Europe.

ICTs in the Economy

2008 data for eCommerce are not available, but progress was flat in previous years. The take-up of most eBusiness applications is higher than average with the exception of Human Resources services, e-invoices and Customer Relation Management.

Data on the contribution of the ICT sector to the economy are not available. Slovenia experiences a fairly good eSkills base which represents a strong basis for future developments.

Slovenia

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)		55.0	88.2	92.2	92.2	92.7	18
DSL coverage in rural areas (as % of total population)		27.0	78.5	85.5	82.6	76.6	14
Broadband penetration (as % of population)	5.9	9.8	14.0	17.3	21.0	22.9	13
Speed - % of broadband subscriptions above 2 Mbps			15.0	17.5	37.2	63.3	22
% of households with an internet connection	47	48	54	58	59	60	13
% of households with a broadband connection	10	19	34	44	50	49	13
% of enterprises with a (fixed) broadband access	62	74	75	79	84	81	11
% of individuals using a mobile phone via UMTS (3G) to access the Internet			3	5	6	3	4
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				6	8	12	16
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	33	40	47	49	52	56	16
% pop. who are frequent internet users (using the internet every day or almost every day)	22	27	36	38	40	43	15
% population who have never used the internet		48	43	39	40	33	18
Take up of internet services (as % of population)							
sending emails	29	36	42	44	47	53	17
looking for information about goods and services	29	36	42	47	48	50	15
uploading self-created content					10	11	11
ordering goods or services, over the Internet, for private use	8		13	16	18	32	17
reading online newspapers/magazines	16	20	24	23	34	25	10
selling goods and services (e.g. via auctions)	2		8	9	17	10	4
internet banking	9	12	16	19	21	29	17
downloading computer or video games or their updates					9	9	12
downloading/listening to/watching music and/or films					29	28	14
paying for online audiovisual contents					3	5	14
listening to the web radio/watching web tv	6	10	15	23	26	20	6
seeking health information on injury, disease or nutrition	13	15	22	26	27	28	10
looking for a job or sending a job application	6	7	9	11	10	13	16
doing an online course				2	3	3	13
seeking information with the purpose of learning				24	31	26	6
eGovernment Indicators							
% basic public services for citizens fully available online	50		58	92		51	2
% basic public services for enterprises fully available online	38		75	88		72	
% of population using eGovernment services	13	19	30	30	31	28	11
% of population using eGovernment services for returning filled in forms					7	12	17
% of enterprises using eGovernment services	47	72	75	83	88	68	5
% of enterprises using eGovernment services for returning filled in forms	36	45	49	61	69	50	4
of which to submit a proposal in a public electronic tender system (e-procurement)		5	4	5	11	9	7
eCommerce							
eCommerce as % of total turnover of enterprises			9	9		12	
% enterprises selling online	15	12	11	10		16	16
% enterprises purchasing online	17	15	18	21		28	15
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					47	41	12
using applications for integrating internal business processes (large enterprises)					75	70	14
using applications for employees to access Human Resources services					8	11	23
exchanging automatically business documents with customers/suppliers					26	25	16
sending/receiving e-invoices				7	8	21	25
sharing information electronically with customers/suppliers on Supply Chain Manag.					27	16	5
using analytical Customer Relation Manag.				14	9	17	22
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP						5.0	
ICT sector share of total employment						2.7	
ICT R&D expenditure by the business sector, as % of GDP	0.1	0.1				0.3	12
= = = = =, as % of total R&D expenditure	15.8	17.5				26.4	19
% of ICT exports on total exports	4.2	3.6	3.5	2.4			26
% of ICT exports on total imports	6.8	6.1	5.7	5.2			26
% of persons employed with ICT user skills.	20.8	19.7	19.8	20.8	19.6	18.4	11
% of persons employed with ICT specialist skills	2.5	2.7	2.9	2.8	2.9	3.0	17

25. SPAIN

Spain scores well in the areas of eGovernment services and availability for citizens and businesses and in some broadband indicators. However, general ICT usage by businesses and households is still below the EU average and progress is slow. The *'Avanza Plan'*, the national ICT strategic plan, is expected to fill the gap with the European Union: the plan comprises a series of specific programmes focused on citizens, companies, the digital context, digital public services and the eAdministration. Since the end of 2008, the implementation of the *'AvanzaDos Plan'* has begun with new strategic lines for developing the information society for the period up to 2012. Specific initiatives have been taken for boosting infrastructures and provide IT equipments to schools and universities.

Broadband

DSL coverage in Spain further increased, but broadband penetration remains below average. The connectivity of households is lower than average as well, both for broadband and narrowband connections. Enterprises on the other hand are better connected and Spain ranks in second place in the EU. A significant share of broadband subscriptions (the fourth highest in the EU) features speeds above the 2 MB/s threshold.

Spain scores well in mobile connectivity indicators. The take-up of 3G even is the second highest in Europe (after Sweden) and wireless solutions have been deployed in rural areas.

Internet Usage

Spanish citizens are not heavy internet users. The shares of both regular and frequent internet users in the population are significantly below the EU average, resulting in a 19th and 20th place respectively. For the take-up of internet services, Spain is not a frontrunner either. A lot of indicators are below average and show low rankings. Exceptions are: doing online courses, reading newspapers online and online media consumption or downloading.

The take-up of eGovernment services by citizens is in line with the EU average. But for the use by enterprises, Spain is one of the lowest ranking countries. The high online availability of services for both citizens and enterprises is thus not reflected in the adoption.

ICTs in the Economy

For eCommerce, Spain ranks in the middle part of the EU ranking, with all three indicators below average. For eBusiness, the picture is mixed, as the country scores average for some indicators (suggesting a more intensive take up by large enterprises), and poorly for others (exchanging automatically documents with customers and suppliers and sanding/receiving e-invoices).

The ICT sector is not particularly important for the economy and eSkills, both user and specialist levels, are below average.

Spain

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	87.0	89.0	90.0	91.0	93.0	92.7	16
DSL coverage in rural areas (as % of total population)		82.0	86.0	88.0	89.7	76.6	9
Broadband penetration (as % of population)	8.0	11.7	15.2	18.3	20.2	22.9	15
Speed - % of broadband subscriptions above 2 Mbps		4.0	26.5	83.4	83.7	63.3	4
% of households with an internet connection	34	36	39	45	51	60	17
% of households with a broadband connection	15	21	29	39	45	49	14
% of enterprises with a (fixed) broadband access	72	76	87	90	92	81	2
% of individuals using a mobile phone via UMTS (3G) to access the Internet				5	6	3	2
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				10	12	12	11
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	31	35	39	44	49	56	19
% pop. who are frequent internet users (using the internet every day or almost every day)	18	21	25	30	34	43	20
% population who have never used the internet		50	47	43	38	33	17
Take up of internet services (as % of population)							
sending emails	31	34	37	42	46	53	18
looking for information about goods and services	30	33	38	42	46	50	16
uploading self-created content					8	11	13
ordering goods or services, over the Internet, for private use	8	12	15	18	20	32	15
reading online newspapers/magazines	21			24	27	25	16
selling goods and services (e.g. via auctions)	2	2	3	3	4	10	17
internet banking	12	14	15	16	20	29	18
downloading computer or video games or their updates					7	9	15
downloading/listening to/watching music and/or films					31	28	10
paying for online audiovisual contents					3	5	13
listening to the web radio/watching web tv		24		17	23	20	10
seeking health information on injury, disease or nutrition	9	13	19	21	25	28	13
looking for a job or sending a job application				10	12	13	12
doing an online course				5	6	3	3
seeking information with the purpose of learning				19	25	26	10
eGovernment Indicators							
% basic public services for citizens fully available online	33		33	58		51	9
% basic public services for enterprises fully available online	88		88	88		72	
% of population using eGovernment services			25	26	29	28	13
% of population using eGovernment services for returning filled in forms					9	12	16
% of enterprises using eGovernment services	50	55	58	58	64	68	22
% of enterprises using eGovernment services for returning filled in forms	32	35	38	38	45	50	18
of which to submit a proposal in a public electronic tender system (e-procurement)		2	2	3	5	9	25
eCommerce							
eCommerce as % of total turnover of enterprises	3	3	7	9	8	12	12
% enterprises selling online	2	3	8	8	10	16	14
% enterprises purchasing online	3	4	15	16	19	28	12
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					40	41	19
using applications for integrating internal business processes (large enterprises)					74	70	16
using applications for employees to access Human Resources services						11	
exchanging automatically business documents with customers/suppliers					13	25	25
sending/receiving e-invoices				9	12	21	21
sharing information electronically with customers/suppliers on Supply Chain Manag.					20	16	10
using analytical Customer Relation Manag.				15	17	17	10
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP	3.9	3.8	3.8			5.0	13
ICT sector share of total employment	2.0	1.9	1.9			2.7	13
ICT R&D expenditure by the business sector, as % of GDP	0.08	0.09				0.31	17
= = = = =, as % of total R&D expenditure	14.3	14.3				26.4	22
% of ICT exports on total exports	4.6	4.6	4.3	3.8			23
% of ICT exports on total imports	7.5	7.5	7.5	7.9			16
% of persons employed with ICT user skills.	15.7	15.4	15.5	15.6	16.0	18.4	21
% of persons employed with ICT specialist skills	2.7	2.7	2.7	3.0	2.9	3.0	16

26. SWEDEN

Sweden is among the top nations for information society developments and is firmly within the group of leading countries in the European Union. It also has a competitive and dynamic ICT sector. New important actions have been launched in 2008 by the Swedish government. They include: a new citizen-centred national e-health strategy designed to use ICT to achieve improvements for patients, health professionals and decision-makers; the adoption of a new action plan for e-Government aiming to improving the coordination of related strategies within the Swedish Government Offices and retaking a leading position in the eGovernment field by 2010; actions to support ICT & Ageing as well as accessibility and usability of eServices websites.

Broadband

Broadband penetration stands at 31.3%, the third highest figure in the EU and amongst the world leaders. There is also almost full (97.9%) DSL coverage. This results in the second highest percentage of households with internet connections, 85% of which are broadband. Enterprises' broadband connectivity exceeds the EU average too, yielding Sweden a fifth place for this indicator. Sweden is also a frontrunner for the take-up of new mobile methods as well. Nowhere else in Europe, for example, 3G access is more widespread.

Internet Usage

As a result of high connectivity, Sweden ranks 1st and 2nd for the proportion of regular and frequent internet users in the population. Correspondingly, the country has the lowest share of people that have never used the internet.

High connectivity is also reflected in the take-up of online services. There is only one indicator for which the score is slightly below average: downloading computer or video games or their updates. For all the other activities, Sweden is one of the leading countries.

The same holds for the take-up of eGoverment services by citizens, despite somewhat lower availability. As far as eGovernment for enterprises goes, Sweden scores above average as well, although the difference is smaller.

ICT in the Economy

Like for most other dimensions, Sweden is among the top countries for the use of ICT in the economy. It is one of the six best performing countries for eCommerce and exceeds EU averages for most eBusiness indicators. Relative to other areas of take up, however, there is clear scope for improvement in the take up of eBusiness solutions.

Sweden also has a large ICT sector. Its contribution to employment and GDP is the highest and second highest in Europe respectively. Roughly 10% of the exports are ICT exports. Expenditure in ICT R&D as a percentage of GDP is the second highest in Europe. The important role of ICT in the Swedish economy is further strengthened by its large base of ICT specialists.

Sweden

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	91.0	93.5	95.3	97.8	97.9	92.7	8
DSL coverage in rural areas (as % of total population)		66.0	84.0	90.0	90.0	76.6	7
Broadband penetration (as % of population)	15.4	20.7	25.9	31.2	31.3	22.9	3
Speed - % of broadband subscriptions above 2 Mbps		41.5	27.3	56.5	66.6	63.3	11
% of households with an internet connection		73	77	79	84	60	2
% of households with a broadband connection		40	51	67	71	49	3
% of enterprises with a (fixed) broadband access		83	89	87	89	81	5
% of individuals using a mobile phone via UMTS (3G) to access the Internet			5	9	9	3	1
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				15	22	12	3
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	75	76	80	75	83	56	1
% pop. who are frequent internet users (using the internet every day or almost every day)	52	57	61	58	69	43	2
% population who have never used the internet		12	10	15	9	33	1
Take up of internet services (as % of population)							
sending emails	64	67	74	69	78	53	2
looking for information about goods and services	59	70	74	70	75	50	2
uploading self-created content					15	11	8
ordering goods or services, over the Internet, for private use	43	50	55	53	53	32	4
reading online newspapers/magazines	28	39	41	43	45	25	4
selling goods and services (e.g. via auctions)	6	10	14	13	15	10	6
internet banking	40	51	57	57	65	29	3
downloading computer or video games or their updates					8	9	13
downloading/listening to/watching music and/or films					34	28	7
paying for online audiovisual contents					16	5	1
listening to the web radio/watching web tv	13	21	28	33	42	20	1
seeking health information on injury, disease or nutrition	18	23	28	25	32	28	8
looking for a job or sending a job application	16	23	24	18	22	13	3
doing an online course				3	3	3	12
seeking information with the purpose of learning				27	33	26	4
eGovernment Indicators							
% basic public services for citizens fully available online	64		64	75		51	7
% basic public services for enterprises fully available online	88		88	75		72	
% of population using eGovernment services	39	52		53	52	28	3
% of population using eGovernment services for returning filled in forms					26	12	3
% of enterprises using eGovernment services	92	80	80	79	78	68	12
% of enterprises using eGovernment services for returning filled in forms	53	48	53	55	58	50	13
of which to submit a proposal in a public electronic tender system (e-procurement)		10	12	11	11	9	8
eCommerce							
eCommerce as % of total turnover of enterprises			14	14	13	12	6
% enterprises selling online	20	23	24	27	19	16	6
% enterprises purchasing online	38	41	44	48	50	28	2
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					47	41	13
using applications for integrating internal business processes (large enterprises)					79	70	11
using applications for employees to access Human Resources services					16	11	9
exchanging automatically business documents with customers/suppliers					25	25	18
sending/receiving e-invoices				18	17	21	18
sharing information electronically with customers/suppliers on Supply Chain Manag.					27	16	4
using analytical Customer Relation Manag.				22	23	17	5
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP	6.8	7.0	6.9			5.0	2
ICT sector share of total employment	4.5	4.8	4.8			2.7	1
ICT R&D expenditure by the business sector, as % of GDP	0.97	1.06				0.31	2
= = = = =, as % of total R&D expenditure	36.3	37.6				26.4	4
% of ICT exports on total exports	11.2	11.2	10.7	10.6			9
% of ICT exports on total imports	11.5	11.2	11.4	11.2			8
% of persons employed with ICT user skills.	20.1	19.3	19.6	19.8	20.0	18.4	8
% of persons employed with ICT specialist skills	4.4	4.9	4.9	4.9	5.0	3.0	1

27. UNITED KINGDOM

The United Kingdom is one of the best performing countries in Europe, with most of the benchmarking indicators above EU average. There is high connectivity, which leads on the one hand to a widespread take-up of internet services by households and on the other hand to a significant share of eCommerce, although eBusiness take up is lagging behind. Moreover, the ICT sector holds an important share of the British economy. The recent 'Digital Britain' report sets out the next steps of the British government to maximise the economic and social opportunities of ICT, with four action points: to assist the private sector in delivering an effective modern communications infrastructure, including a universal service commitment to ensure access to 2MB/s broadband services by 2012, and proposals to assist the development of next generation broadband to those areas that will not benefit from commercial deployments; to enable Britain to be a global centre for the creative industries in the digital age, including public service content, within a clear and fair legal framework; to ensure that people have the capabilities and skills to flourish in the digital economy, and that all can participate in digital society; and actions to modernise and improve its service to the taxpayer through digital procurement and the digital delivery of public services.

Broadband

Broadband penetration in the UK has further increased to 28.4%, meaning that it has almost tripled since 2004 (10.4%). There is also almost complete DSL coverage and the proportion of +2MB/s connections is in line with the EU average. Mobile connectivity is well established as well.

This results in one of the highest shares of internet connected households in Europe (with 86% of them using broadband). Over 87% of the British enterprises have broadband internet access, an increase of 9 p.p. or five places in the ranking relative to last year.

Internet Usage

Due to high household connectivity, the UK ranks 6th in terms of the percentage of regular and frequent internet users in the population. The country is also one of the frontrunners for a wide variety of internet services. All activities except for seeking health and learning information are carried out more often online than on average amongst EU Member States.

However, there was a fallback in the ranking of the take-up of eGovernment services by citizens in 2008, despite high online availability of public services. For enterprises, the availability was very high as well, and there was an increase in their use of eGovernment, however the UK still remains at the bottom end of the EU ranking for this indicator.

ICTs in the Economy

The UK is one of the frontrunners in the field of eCommerce, with one in three companies selling online, and only in Malta accounts for a larger portion of turnover generated by eCommerce.

Despite the importance of electronic trade, British companies seriously lag behind in terms of the use of eBusiness applications, where it is among the lowest of all Member States.

The ICT sector as a whole is an important contributor to the GDP and to employment, but business expenditure in ICT R&D is below average. Finally, the UK is second in terms of employees with ICT user skills, but there is room for improvement in terms of specialist eSkills.

United Kingdom

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	95.0	99.4	99.5	99.6	99.8	92.7	5
DSL coverage in rural areas (as % of total population)		94.9	95.0	96.1	99.4	76.6	5
Broadband penetration (as % of population)	10.2	16.5	21.7	25.7	28.4	22.9	6
Speed - % of broadband subscriptions above 2 Mbps		1.4	30.8	46.6	65.8	63.3	12
% of households with an internet connection	56	60	63	67	71	60	7
% of households with a broadband connection	16	32	44	57	62	49	5
% of enterprises with a (fixed) broadband access	50	65	77	78	87	81	8
% of individuals using a mobile phone via UMTS (3G) to access the Internet			2	2	3	3	12
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				13	18	12	6
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	49	54	57	65	70	56	6
% pop. who are frequent internet users (using the internet every day or almost every day)	29	34	39	48	53	43	6
% population who have never used the internet		28	29	22	19	33	6
Take up of internet services (as % of population)							
sending emails	53	57	53	61	66	53	7
looking for information about goods and services	49	57	55	62	64	50	7
uploading self-created content					19	11	4
ordering goods or services, over the Internet, for private use	37	44	45	53	57	32	2
reading online newspapers/magazines	18	24	23	22	37	25	8
selling goods and services (e.g. via auctions)	5	8	12	13	15	10	5
internet banking	22	27	28	32	38	29	11
downloading computer or video games or their updates					10	9	10
downloading/listening to/watching music and/or films					34	28	6
paying for online audiovisual contents					12	5	4
listening to the web radio/watching web tv	10	15	15	18	26	20	7
seeking health information on injury, disease or nutrition	26	25	18	20	26	28	11
looking for a job or sending a job application	14	16	16	15	20	13	4
doing an online course				5	5	3	5
seeking information with the purpose of learning				24	25	26	11
eGovernment Indicators							
% basic public services for citizens fully available online	60		80	91		51	4
% basic public services for enterprises fully available online	57		57	88		72	
% of population using eGovernment services	22	24		38	32	28	10
% of population using eGovernment services for returning filled in forms					12	12	12
% of enterprises using eGovernment services	34	39	52	54	64	68	21
% of enterprises using eGovernment services for returning filled in forms	12	19	38	40	51	50	15
of which to submit a proposal in a public electronic tender system (e-procurement)			12	10	9	9	11
eCommerce							
eCommerce as % of total turnover of enterprises	14	16	17	19	21	12	2
% enterprises selling online	29	25	30	29	32	16	1
% enterprises purchasing online	53	51	51	49	47	28	3
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					27	41	24
using applications for integrating internal business processes (large enterprises)					51	70	27
using applications for employees to access Human Resources services					8	11	21
exchanging automatically business documents with customers/suppliers					11	25	26
sending/receiving e-invoices				15	11	21	24
sharing information electronically with customers/suppliers on Supply Chain Manag.					7	16	27
using analytical Customer Relation Manag.				13	14	17	16
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP	6.6	6.8	6.9			5.0	3
ICT sector share of total employment	3.7	3.7	3.5			2.7	5
ICT R&D expenditure by the business sector, as % of GDP	0.25	0.24				0.31	10
= = = = =, as % of total R&D expenditure	23.6	23.0				26.4	16
% of ICT exports on total exports	7.9	9.9	13.3	4.7			19
% of ICT exports on total imports	10.6	10.0	10.7	8.9			13
% of persons employed with ICT user skills.	24.3	24.8	24.9	25.2	25.2	18.4	2
% of persons employed with ICT specialist skills	3.3	3.2	3.2	3.2	3.1	3.0	10

28. ICELAND

Iceland shows extraordinary scores for connectivity and citizens' use indicators. For these dimensions, it is more advanced than the EU Member States. However, the availability of eGovernment services does not seem to match the overall development of the information society in the country. To this end, the Icelandic Government published in May 2008 a new 2008-2012 policy on the Information Society, known as e-nation aiming at providing efficient, simple and secure online accessibility of all public services. eProcurement was one of the biggest projects in the IT budget for 2008 and 2009. It has a strong focus on open standards and interoperability and aims at enabling all public administrations to carry out 100 % of their procurement electronically by 2009.

Broadband

Households' connectivity is high. A remarkable rate of 88% of households has internet access, almost fully (95%) through broadband connections. Virtually all enterprises (99.5%) have broadband internet access. This means that narrowband has already become obsolete.

Furthermore, a third of the population accesses the internet through mobile laptops. Broadband coverage is high, despite the remoteness of some regions, and further progress is expected to take place on average speed, which nowadays exceeds 2MB/s for 72% of broadband lines.

Internet Usage

Iceland also outperforms all the EU27 countries in terms of regular, frequent and non users of the Internet. 88% of the Icelandic population are regular Internet users, which is better than the 83.5% in Sweden, while 78% even are frequent users, exceeding Denmark's 71%. Only 8% have never used the Internet (compared to 9% in Sweden).

This outstanding situation is reflected in the take-up of internet services. For nearly all indicators (even for the most frequent activities), the EU average is largely exceeded.

The use of eGovernment services by citizens and enterprises is much higher than the EU average as well. But the online availability of public services is insufficient to Icelandic standards. This one of the rare indicators for which Iceland is not one of the best performing countries in the European Area.

ICTs in the Economy

Both eCommerce and eBusiness indicators confirm a positive performance in the use of ICT. The eSkills base is close to EU averages.

Iceland

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	92.0	92.0	92.0	92.0	94.8	92.7	
DSL coverage in rural areas (as % of total population)		79.0	79.0	79.0	86.0	76.6	
Broadband penetration (as % of population)						22.9	
Speed - % of broadband subscriptions above 2 Mbps		44.3	44.1	46.1	72.3	63.3	
% of households with an internet connection	81	84	83	84	88	60	
% of households with a broadband connection	45	63	72	76	83	49	
% of enterprises with a (fixed) broadband access			95		99	81	
% of individuals using a mobile phone via UMTS (3G) to access the Internet			1	1	3	3	
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				29	28	12	
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	77	81	84	86	88	56	
% pop. who are frequent internet users (using the internet every day or almost every day)	61	65	71	74	78	43	
% population who have never used the internet		11	9	8	8	33	
Take up of internet services (as % of population)							
sending emails	73	75	77	80	83	53	
looking for information about goods and services	72	73	76	78	78	50	
uploading self-created content					20	11	
ordering goods or services, over the Internet, for private use	37	44	50	50	47	32	
reading online newspapers/magazines	61	65	67	67	69	25	
selling goods and services (e.g. via auctions)	6	6	8	12		10	
internet banking	54	61	67	72	68	29	
downloading computer or video games or their updates					9	9	
downloading/listening to/watching music and/or films					37	28	
paying for online audiovisual contents					13	5	
listening to the web radio/watching web tv	21	31	43	48	57	20	
seeking health information on injury, disease or nutrition	40	39	40	44	39	28	
looking for a job or sending a job application	16	16	17	16	14	13	
doing an online course				9	13	3	
seeking information with the purpose of learning				42	65	26	
eGovernment Indicators							
% basic public services for citizens fully available online	36		36	42		51	
% basic public services for enterprises fully available online	71		63	63		72	
% of population using eGovernment services	58	55	61	59	63	28	
% of population using eGovernment services for returning filled in forms					20	12	
% of enterprises using eGovernment services			95		91	68	
% of enterprises using eGovernment services for returning filled in forms			81		87	50	
of which to submit a proposal in a public electronic tender system (e-procurement)			16		11	9	
eCommerce							
eCommerce as % of total turnover of enterprises			8			12	
% enterprises selling online			22		21	16	
% enterprises purchasing online			38		35	28	
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					46	41	
using applications for integrating internal business processes (large enterprises)					78	70	
using applications for employees to access Human Resources services					12	11	
exchanging automatically business documents with customers/suppliers					18	25	
sending/receiving e-invoices					20	21	
sharing information electronically with customers/suppliers on Supply Chain Manag.					10	16	
using analytical Customer Relation Manag.					19	17	
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP						5.0	
ICT sector share of total employment						2.7	
ICT R&D expenditure by the business sector, as % of GDP						0.31	
= = = = =, as % of total R&D expenditure						26.4	
% of ICT exports on total exports							
% of ICT exports on total imports							
% of persons employed with ICT user skills.	18.3	23.3	18.6	19.7		18.4	
% of persons employed with ICT specialist skills	3.2	3.1	3.0	3.1		3.0	

29. NORWAY

Norway is placed among the top nations for information society developments and firmly belongs to the group of leading European countries. All available indicators show better scores than the EU27 average.

Broadband

Norway is one of the most advanced countries for Internet connectivity, with high broadband penetration, good DSL coverage and fast broadband lines. Moreover, both 3G and wireless laptop connections are used more than twice as much as on average in the EU.

This provides a good basis for positive outcomes in terms of households and enterprises' connectivity: 73% of households and 86% of enterprises subscribe to broadband connections.

Internet usage

Norway's status as one of the world's leading Internet countries is not only reflected by the very high number of internet connected households, but also by the widespread take-up of most internet services.

With 30% more regular and frequent internet users than on average in the EU27, the results of the top scoring EU countries (Sweden and Denmark respectively) are even exceeded. Moreover, the share of people having never used the internet before is lower than in Sweden, Europe's best performing country on this indicator.

Nearly all the reported internet activities are done significantly more often than on average in the EU. The most popular activities are sending emails, looking up information about goods and services, internet banking and reading online newspapers; where rates of use exceed the EU average by between 30 and 50pp. However, use of other services is also for the most part significantly higher. However, uploading self-created content and selling goods and services are only marginally above the EU average.

It is no surprise then that the use of eGovernment is also higher than on average in the EU, especially for citizens' services. Availability of these services is also high. While also above the EU average, enterprise related eGovernment indicators differ less from the EU average.

ICTs in the Economy

The take up of eBusiness applications has progressed and tops EU averages. The importance of eCommerce is even more significant. Norway is clearly benefiting from the good opportunities provided by the important eSkills base it enjoys.

Norway

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)	82.0	88.4	91.0	95.8	95.8	92.7	
DSL coverage in rural areas (as % of total population)		82.7	86.0	94.0	94.0	76.6	
Broadband penetration (as % of population)		18.1	24.3	29.1	33.5	22.9	
Speed - % of broadband subscriptions above 2 Mbps		27.0	22.8	62.0	78.2	63.3	
% of households with an internet connection	60	64	69	78	84	60	
% of households with a broadband connection	30	41	57	67	73	49	
% of enterprises with a (fixed) broadband access	60	78	86	85	86	81	
% of individuals using a mobile phone via UMTS (3G) to access the Internet			0	4	7	3	
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				21	28	12	
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)	68	74	77	81	86	56	
% pop. who are frequent internet users (using the internet every day or almost every day)	43	50	59	66	72	43	
% population who have never used the internet		15	17	11	8	33	
Take up of internet services (as % of population)							
sending emails	66	68	72	76	82	53	
looking for information about goods and services	62	67	74	76	80	50	
uploading self-created content					12	11	
ordering goods or services, over the Internet, for private use	41	55	61	63	63	32	
reading online newspapers/magazines	56	60	65		73	25	
selling goods and services (e.g. via auctions)	4	6	10	8	11	10	
internet banking	55	62	67	71	75	29	
downloading computer or video games or their updates					14	9	
downloading/listening to/watching music and/or films					42	28	
paying for online audiovisual contents					10	5	
listening to the web radio/watching web tv	21	24	34	37	42	20	
seeking health information on injury, disease or nutrition	29	26	34	37	41	28	
looking for a job or sending a job application	16	18	22	22	22	13	
doing an online course				4	6	3	
seeking information with the purpose of learning				46	52	26	
eGovernment Indicators							
% basic public services for citizens fully available online	40		60	80		51	
% basic public services for enterprises fully available online	75		88	75		72	
% of population using eGovernment services	37	52	57	60	62	28	
% of population using eGovernment services for returning filled in forms					27	12	
% of enterprises using eGovernment services	69	84	74	71	76	68	
% of enterprises using eGovernment services for returning filled in forms	40	59	62	61	63	50	
of which to submit a proposal in a public electronic tender system (e-procurement)		20	15	15	16	9	
eCommerce							
eCommerce as % of total turnover of enterprises	8	15	14	18	22	12	
% enterprises selling online	13	26	28	32	30	16	
% enterprises purchasing online	27	36	49	48	44	28	
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					60	41	
using applications for integrating internal business processes (large enterprises)					81	70	
using applications for employees to access Human Resources services					18	11	
exchanging automatically business documents with customers/suppliers					37	25	
sending/receiving e-invoices				29	31	21	
sharing information electronically with customers/suppliers on Supply Chain Manag.					22	16	
using analytical Customer Relation Manag.				18	21	17	
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP						5.0	
ICT sector share of total employment						2.7	
ICT R&D expenditure by the business sector, as % of GDP						0.31	
= = = = =, as % of total R&D expenditure						26.4	
% of ICT exports on total exports							
% of ICT exports on total imports							
% of persons employed with ICT user skills.	19.5	19.6	19.7	19.2	19.1	18.4	
% of persons employed with ICT specialist skills	4.5	5.0	4.7	5.0	4.7	3.0	

30. CROATIA

Available data for Croatia are based on Eurostat. They show that the country is lagging behind EU Member States in most dimensions of the information society, with the notable exception of ICT take up by businesses. Several initiatives have been launched in 2008 to progress information society in Croatia and bridge the digital gap: the Electronic Communication Act to comply with the aquis communitaire; the Operational Plan of implementation of eCroatia to progress of the ICT infrastructures; the Action Plan for the development of broadband Internet access to achieve 500 000 broadband connections until the end of 2008. More recently (January 2009 the Croatian Government has adopted the Strategy for the Development of eGovernment over the period 2009-2012 to build a modern, transparent, efficient and streamlined public services for citizens.

Broadband

The percentage of households with broadband connections is below EU average but 88% of Croatian firms do have broadband access, exceeding the EU average of 81%.

Internet Usage

In Croatia, regular and frequent internet users are largely underrepresented compared to the average situation in Europe. More than half of the Croatians have even never used the internet before.

These rates are reflected in the take-up of internet services. Except for reading online newspapers, Croatians perform the reported activities far less than on average in the EU. This is also the case for eGovernment services. Especially for the use by citizens, the gap is still very wide.

ICTs in the Economy

While developments in eCommerce are slow, the take up of eBusiness solutions is positive. Most applications are used even more than on average in the EU27. However, the availability of eSkills among employees is limited and this may put a brake to further eBusiness developments.

Croatia

Description	2004	2005	2006	2007	2008	EU27	ranking
Broadband							
Total DSL coverage (as % of total population)						92.7	
DSL coverage in rural areas (as % of total population)						76.6	
Broadband penetration (as % of population)						22.9	
Speed - % of broadband subscriptions above 2 Mbps						63.3	
% of households with an internet connection				41	45	60	
% of households with a broadband connection				23	27	49	
% of enterprises with a (fixed) broadband access				80	88	81	
% of individuals using a mobile phone via UMTS (3G) to access the Internet				1	2	3	
% of indiv. using a laptop via wireless connect. away from home/work to access the inter.				5	9	12	
Internet Usage							
% pop. who are regular internet users (using the internet at least once a week)				32	39	56	
% pop. who are frequent internet users (using the internet every day or almost every day)				21	27	43	
% population who have never used the internet				56	54	33	
Take up of internet services (as % of population)							
sending emails				26	31	53	
looking for information about goods and services				30	33	50	
uploading self-created content					6	11	
ordering goods or services, over the Internet, for private use				7	7	32	
reading online newspapers/magazines				17	28	25	
selling goods and services (e.g. via auctions)				2	4	10	
internet banking				9	13	29	
downloading computer or video games or their updates					6	9	
downloading/listening to/watching music and/or films					18	28	
paying for online audiovisual contents					2	5	
listening to the web radio/watching web tv				9	10	20	
seeking health information on injury, disease or nutrition				15	20	28	
looking for a job or sending a job application				8	11	13	
doing an online course				1	1	3	
seeking information with the purpose of learning				13	17	26	
eGovernment Indicators							
% basic public services for citizens fully available online						51	
% basic public services for enterprises fully available online						72	
% of population using eGovernment services				14	12	28	
% of population using eGovernment services for returning filled in forms				5	3	12	
% of enterprises using eGovernment services				51	57	68	
% of enterprises using eGovernment services for returning filled in forms				33	37	50	
of which to submit a proposal in a public electronic tender system (e-procurement)				20	17	9	
eCommerce							
eCommerce as % of total turnover of enterprises				3	4	12	
% enterprises selling online				11	16	16	
% enterprises purchasing online				19	22	28	
eBusiness: % of enterprises							
using applications for integrating internal business processes (all enterprises)					45	41	
using applications for integrating internal business processes (large enterprises)					68	70	
using applications for employees to access Human Resources services					18	11	
exchanging automatically business documents with customers/suppliers					32	25	
sending/receiving e-invoices				19	25	21	
sharing information electronically with customers/suppliers on Supply Chain Manag.					36	16	
using analytical Customer Relation Manag.				10	11	17	
Indicators on the ICT sector, ICT skills and R&D							
ICT sector share of total GDP						5.0	
ICT sector share of total employment						2.7	
ICT R&D expenditure by the business sector, as % of GDP						0.31	
= = = = =, as % of total R&D expenditure						26.4	
% of ICT exports on total exports							
% of ICT exports on total imports							
% of persons employed with ICT user skills.					13.6	18.4	
% of persons employed with ICT specialist skills					2.0	3.0	