ICT **Country Profiles**

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Europe's Digital Competitiveness Report

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Introduction

This annex presents country-level results for 50 benchmarking indicators for which up-to-date data are available. Profiles are provided for each Member State plus Norway, Iceland and Croatia ([1]).

The indicators were defined by the Commission in cooperation 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 Communications Committee and by ad-hoc studies undertaken by independent contractors, in particular for broadband coverage and speeds and for the online availability of public services. A full list of the indicators used, sources and notes is given in the next section.

1 Iceland and Norway are members of the European Economic Area and Croatia is an EU candidate country. 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 for all indicators.

2 i2010 Benchmarking Framework: http://ec.europa.eu/information_society/eeurope/i2010/benchmarking/index_en.htm.

3 The data used in this version of the paper were extracted from the Eurostat database on 26.2.2010. Almost all Member States contributed to both surveys but some returns are still outstanding. All data are estimations and it should be considered that they can be affected by sampling errors and bias due to translation of the questions into national languages.

Definitions and Sources

Broadband

Total DSL coverage (as % of total population) — Source: study for the European Commission, *Broadband coverage in Europe* (data for December 2008) ([4]), 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* (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 inhabitants. 3G subscriptions are not included in the total. Source: Communications Committee (COCOM). Figures are as of 1 January 2010. NL, SE: data are as at July 2009. Some figures are estimates. Note that COCOM data do not include mobile broadband connections.

Speed — % of broadband subscriptions with at least 2 Mbps — Source: Communications Committee (COCOM). Figures are as of 1 January 2010. CZ, SE: as of July 2009. UK: as of Q3 2009. DE, RO SK, IT: based on estimates. FR, NL, HU, AT: no data. No EU average can be calculated for these data.

3G+ coverage (as % of total population) — (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 and individuals.

% 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.

% of enterprises having a fixed broadband connection (DSL or other) — 10+ persons employed, excluding the financial sector ([5]). Source: Eurostat survey on ICT use and eCommerce in enterprises.

% 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.

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

4 'Broadband Coverage' refers to the coverage of DSL networks (the most widespread form of broadband access in Europe), in particular to the percentage of the population connected to a local exchange equipped with a DSL access multiplexer (DSLAM). Thus, figures also include those who reside too far from these switches to be able to purchase a DSL connection even if they wanted to. Hence, coverage figures may overestimate actual eligibility.

5 The data used for all the enterprise indicators come from a database using the NACE rev 1.1 classification of enterprises by economic sectors, so as to ensure comparability with previous years. NACE rev 2 is implemented in the 2009 survey for the first time, and is used in the Digital Competitiveness Report for the indicators by economic sectors. Due to minor differences between the two classifications, some data for the entire population of enterprises with 10+ employees may differ.

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 use 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: looking for information about goods and services, reading online newspapers/magazines, internet banking, playing or downloading games, images, films or music, 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, 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 a publicly accessible website allows the public service to be used completely via the website, including decision and delivery. No other formal procedure is necessary for users via 'paperwork'. Source: study for the European Commission, *Smarter, Faster, Better eGovernment, 8th Benchmark Measurement*, (data for November 2009), Capgemini.

% 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+ persons employed, excluding the financial sector. Source: Eurostat survey on ICT use and eCommerce in enterprises.

% of enterprises using eGovernment services for sending filled forms (in the last year) — 10+ persons employed, excluding the financial sector. Source: Eurostat survey on ICT use and eCommerce in enterprises.

% of enterprises using eGovernment services to submit a tender in a public electronic tendering system (eProcurement) — 10+ persons employed, excluding the financial sector. Source: Eurostat survey on ICT use and eCommerce in enterprises.

eCommerce

% population ordering goods or services for private use — In the last 12 months, individuals aged 16–74. Source: Eurostat survey on ICT use by households and individuals.

% population ordering goods or services from sellers in other EU countries — In the last 12 months, individuals aged 16–74. Source: Eurostat survey on ICT use by households and individuals.

% population selling goods and services (e.g. via auctions) — In the last 3 months, individuals aged 16–74. Source: Eurostat survey on ICT use by households and individuals.

% of population ordering or buying online content — Films/music or books/magazines/newspapers/eLearning material or computer software (including video games, software upgrades) ordered/bought over the internet in the last 12 months for non-work use and delivered online. Individuals aged 16–74. Source: Eurostat survey on ICT use by households and individuals.

eCommerce as % of total turnover of enterprises — Turnover resulting from orders received electronically as % of the total turnover of enterprises (in 2008). 10+ persons employed, excluding the financial sector. Source: Eurostat survey on ICT use and eCommerce in enterprises.

% of enterprises purchasing/selling online — % of enterprises purchasing/selling electronically (in 2008),

for an amount equal to or greater than 1 % of turnover/total purchases. 10+ persons employed, excluding the financial sector. Source: Eurostat survey on ICT use and eCommerce in enterprises.

eBusiness

For all the indicators in this section the source is the Eurostat survey on ICT use and eCommerce in enterprises

% of enterprises using applications for integrating internal business processes — % of enterprises sharing electronically information on sales and/or purchases with software used for any internal function (management of inventory levels, accounting, production/service management, distribution management), in January 2009. 10+ persons employed, 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 exchanging automatically business documents with customers/suppliers — % of enterprises sending orders to suppliers/receiving orders from customers in a digital format allowing automated processing. 10+ persons employed, excluding the financial sector.

% of enterprises sending/receiving e-invoices — % of enterprises, in January 2009, sending/receiving e-invoices in a digital format allowing automated processing. 10+ persons employed, excluding the financial sector.

% of enterprises sharing information electronically with customers/suppliers on supply chain management — % of enterprises, in January 2009, regularly sharing electronically information on supply chain management with suppliers or customers. 10+ persons employed, excluding the financial sector.

% of enterprises using analytical CRM — % of enterprises having used, in January 2009, any software application for analysis of information about clients for marketing purposes (this is commonly referred to as customer relationship management, e.g. to set prices, promote sales, choose distribution channels, etc.). 10+ persons employed, excluding the financial sector.

Indicators on the growth of ICT sector and R&D

ICT sector share of 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 on R&D — Source: Eurostat R&D statistics.

% of ICT exports/imports in total exports/imports — Source: Eurostat; for goods: statistics on European Union external trade and trade between EU Member States (COMEXT); for services: balance-of-payments statistics. The share of total exports and imports is calculated comparing these data with National Accounts data on exports and imports.

% 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 2009 refers to the first three 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 2009 refers to the first three 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, 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 ICT sector is one of the most dynamic in the Austrian economy and the utilisation of ICT is constantly progressing in all domains — business, administration, health, education and transport — as well as among households and individuals, supported by long-term coordinating measures such as the ICT master plan and *Internetoffensive Austria*, which covers all areas of life. More recently, the Austrian government has decided to set up a competence centre for the internet industry as general platform to support its ICT policies.

Austria continues to be one of the leaders in eGovernment (the Austrian administration is one of the most interactive in Europe). Companies are able to carry out nearly all their dealings with authorities online, and the central government portal www.help.gv.at provides a 'one-stop shop' for citizens and businesses, bringing together all services provided by the public administration.

The use of PCs and the internet by young people is very high: in Austrian schools, PCs and the internet have become a routine tool for learning and teaching. A comprehensive strategy (*Future Learning II*) is introducing new forms of learning and 'Web 2.0' teaching methods.

Safe, effective and inclusive access to the internet is supported by campaign initiatives on online safety (*Saferinternet.at*) as well as specific investment in broadband provision and the development of new services in rural areas.

Broadband

Fixed broadband penetration is increasing at a low rate, Austria still being below the EU average. This is partly offset by the relatively large take-up of mobile internet, especially on laptops. In terms of the population, fixed broadband penetration is 22.7 % as opposed to the EU average of 24.8 %. In terms of household penetration, Austria performs slightly better than the average with 65 % of households having an internet connection, and 56 % having a broadband subscription. Internet penetration among enterprises has been progressing very slowly, reaching only 77 % by 2009. DSL coverage is at average levels, but progress is slow as well. As for wireless connectivity, despite the further growth in mobile internet markets, Austria's ranking has somewhat worsened.

Internet usage

In the EU, Austria ranks 10th in terms of regular internet usage (at least once a week) and 12th in terms of frequent internet usage (almost every day). Some 67 % of the population were regular internet users in 2009 (above the EU average), up from 55 % in 2006; 48 % were frequent users, up from 39 % in 2006. Nevertheless, a quarter of the population has never used the internet — somewhat better than the EU average of 30 %. The picture in terms of advanced internet services is more mixed. While Austrian citizens are more intensive users of some services, such as looking for information on goods and services, internet banking and seeking health information, they are less intensive users of others, such as looking for a job, doing an online course, seeking information about education and training, downloading video games or watching/downloading films and music. eCommerce indicators show that ordering goods and services is a more popular activity in general but buying online content less popular in Austria than in the EU on average.

eGovernment

Austria has been one of the leaders in eGovernment in the EU in recent years. eGovernment is a fully integrated aspect of government, which is demonstrated by a 100 % level of services online. Austria's strategy and organisation demonstrate a high level of consistency, continuity and inclusiveness. Different layers of government and other stakeholders are effectively engaged in developing and implementing the eGovernment strategy. Austria, through its federal chief information officer (CIO), has also been advocating pan-European eGovernment and has played an active role in EU activities. Take-up of eGovernment services by enterprises, at 79 %, is relatively good and the country is one of the best performers in the area of eProcurement. Take-up by individuals, however, is significantly lower, though at 39 % is higher than the EU average (30 %).

Austria

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	91.3	92.0	92.2	94.0	94.0	15
DSL coverage in rural areas (as % of total population)	79.0	80.6	81.8	83.0	79.7	16
Broadband penetration (as % of population)	17.4	19.9	21.4	22.7	24.8	13
Speed — % of broadband subscriptions above 2 Mbps						
3G+ coverage (as % of total population)			94.0			8
% of households with an internet connection	52	60	69	70	65	8
% of households with a broadband connection	33	46	54	58	56	11
% of enterprises with a (fixed) broadband access	69	72	76	77	83	20
% of population using a mobile phone via UMTS (3G) to access the internet	1	2	4	6	4	11
% of population using a laptop via wireless connection away from home/work to access the internet		14	22	25	17	6
Internet usage						
% population who are regular internet users (using the internet at least once a week)	55	61	66	67	60	10
% population who are frequent internet users (using the internet every day or almost every day)	39	45	48	48	48	12
% population who have never used the internet	34	28	25	25	30	10
Take up of internet services (as % of population)						
Looking for information about goods and services	47	47	51	54	51	
Uploading self-created content			8	17	20	
Reading online newspapers/magazines	26	24	30	41	31	
Internet banking	27	30	34	35	32	
Playing or downloading games, images, films or music	15	17		21	26	
Seeking health information on injury, disease or nutrition	24	27	32	36	33	
Looking for a job or sending a job application	9	8	9	10	15	
Doing an online course		1		1	4	
Looking for information about education, training or course offers		18	23	24	24	
eGovernment indicators						
% basic public services for citizens fully available online	70	100		100	66	1
% basic public services for enterprises fully available online	100	100		100	86	1
% of population using eGovernment services	33	27	39	39	30	7
% of population using eGovernment services for returning filled in forms	12	13	14	12	13	14
% of enterprises using eGovernment services	81	81	80	79	71	12
% of enterprises using eGovernment services for returning filled in forms	54	54	59	58	55	13
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	13	11	16	16	11	4
eCommerce						
% population ordering goods or services for private use	32	36	37	41	37	9
% population ordering goods or services from sellers from others EU countries			24	27	8	3
% population selling goods and services (e.g. via auctions)	8	7	7	5	10	13
% population ordering or buying online content	4	5	5	5	10	12
eCommerce as % of total turnover of enterprises	10	11	13	12	13	14
% enterprises purchasing online	37	42	34	31	24	6
% enterprises selling online	15	18	15	10	12	16
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			59	59	41	2
Using applications for integrating internal business processes (large enterprises)			91	91	71	1
Exchanging automatically business documents with customers/suppliers			29	19	26	20
Sending/receiving e-invoices		18	17	13	23	19
Sharing information electronically with customers/suppliers on Supply Chain Management			20	14	15	12
Using analytical Customer Relation Management		29	30	28	17	1
Indicators on the ICT sector, ICT skills and R&D						
ICT sector share of total GDP	4.4	3.8			5.0	15
ICT sector share of total employment	2.8	2.5			2.7	14
ICT R&D expenditure by the business sector, as % of GDP	0.5	0.3			0.3	6
ICT R&D expenditure by the business sector, as % of total R&D expenditure	28.6	19.5			25.0	16
% of ICT exports on total exports		6.1	6.7			13
% of ICT imports on total imports		7.5	7.6			17
% of persons employed with ICT user skills.	18.3	17.6	17.6	17.9	18.4	19
% of persons employed with ICT specialist skills	3.1	3.0	3.1	3.1	3.2	10

2. Belgium

Belgium ranks around average in implementing the Information Society, although it has all the structural conditions in place to become a frontrunner. Broadband is widespread in Belgium, the penetration of computers is high, business usage and skills are also high, there is a well-developed competition environment, the share of ICT investment is above the EU average, eGovernment is fairly well developed and eCommerce applications are in place. There is therefore great potential for developing ICT infrastructure and the use of ICT to benefit the broader economy and society as a whole.

Important initiatives have been launched by the Belgian Government and regional administrations to make progress in different sectors:

- an eBusiness initiative has been launched to promote ICT best practices among SMEs ('*Je suis fantasTIC*');
- ICT investment in education includes upgrading the Flemish super-computer and support for school access to broadband, PC availability in schools and ICT incubators (eLearning);
- to close the digital divide, a plan (Start2Surf) has been launched to stimulate the use of PCs and the internet among disadvantaged groups;
- in eGovernment, an e-ID for every Belgian has been introduced to simplify and modernise interaction with the administration for citizens and businesses. eGovernment measures have been integrated in a broad programme of administrative simplification, yielding measurable savings in 2009;
- ICT in Brussels: for the 2009–2014 regional legislatures, the Brussels CIBG/CIRB has drawn up an action plan with 34 ICT measures for the city.

Broadband

Belgium is above average on all fixed broadband indicators. Broadband access is widely available, with almost full DSL coverage in rural areas as well. Broadband population penetration stands at 29.1 %, while household internet penetration is 67 %. As for speeds, more than 90 % of broadband subscriptions are at least 2 Mbps, which is better than the EU average. As progress has slowed down, however, Belgium is no longer among the best-performing countries in fixed broadband. Moreover, there is room for improvement in exploiting mobile and wireless internet opportunities: both 3G mobile phone access and wireless laptop connections outside the office or home are below average.

Internet usage

Belgium ranks among the top eight in terms of both regular and frequent internet use. Some 70 % of the population are regular internet users, accessing the internet at least once a week, and 56 % are frequent users, accessing the internet almost every day. One fifth of the population has never used the internet. Belgians are above-average users of the most common internet services, such as reading online newspaper/magazines, downloading/listening to/watching music and/or films, looking for information on goods and services, and internet banking. By contrast, they make below-average use of most other services. Buying online content and ordering goods or service over the internet are similar to the EU average, while cross-border eCommerce stands well above the EU-27 average.

eGovernment

Belgium has embraced eGovernment and now leads the way in the EU in a number of domains, notably eIDM. Through FedICT, the federal eGovernment agency for the development of central infrastructure, implementation and support, Belgium has made notable advances in back-office integration and restructuring, to provide critical central infrastructure and platforms such as common standards, eSignature, eIDM, etc. While Belgian performance in the delivery of online services remains average, improvements can be seen on both the supply and demand side. In particular, it is worth to noting that take-up by citizens almost doubled in 2009, increasing from 16 % to 31 %.

Belgium

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	100.0	100.0	99.9	100.0	94.0	1
DSL coverage in rural areas (as % of total population)	100.0	100.0	99.6	100.0	79.7	1
Broadband penetration (as % of population)	22.8	25.6	27.5	29.1	24.8	9
Speed — % of broadband subscriptions above 2 Mbps				93.0		9
3G+ coverage (as % of total population)			90.2			9
% of households with an internet connection	54	60	64	67	65	9
% of households with a broadband connection	48	56	60	63	56	8
% of enterprises with a (fixed) broadband access	84	86	91		83	
% of population using a mobile phone via UMTS (3G) to access the internet	1	1	1	3	4	14
% of population using a laptop via wireless connection away from home/work to access the internet		7	8	13	17	17
Internet usage						
% population who are regular internet users (using the internet at least once a week)	58	63	66	70	60	8
% population who are frequent internet users (using the internet every day or almost every day)	45	49	51	56	48	7
% population who have never used the internet	34	29	26	20	30	8
Take up of internet services (as % of population)						
Looking for information about goods and services	51	55	58	59	51	
Uploading self-created content			5	18	20	
Reading online newspapers/magazines	16	17	21	34	31	
Internet banking	28	35	39	46	32	
Playing or downloading games, images, films or music	20	23		33	26	
Seeking health information on injury, disease or nutrition	23	25	24	33	33	
Looking for a job or sending a job application	9	8	8	13	15	
Doing an online course		2	3	4	4	
Looking for information about education, training or course offers		13	16	18	24	
eGovernment indicators						
% basic public services for citizens fully available online	18	42		58	66	17
% basic public services for enterprises fully available online	88	88		88	86	9
% of population using eGovernment services	30	23	16	31	30	13
% of population using eGovernment services for returning filled in forms	7	8	5	10	13	16
% of enterprises using eGovernment services	59	51	69		71	
% of enterprises using eGovernment services for returning filled in forms	37	37	49		55	
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	6	3	7		11	
eCommerce						
% population ordering goods or services for private use	19	21	21	36	37	11
% population ordering goods or services from sellers from others EU countries			9	17	8	7
% population selling goods and services (e.g. via auctions)	7	8	10	17	10	5
% population ordering or buying online content	5	4	4	7	10	10
eCommerce as % of total turnover of enterprises	8	11			13	
% enterprises purchasing online	16	43	34		24	
% enterprises selling online	15	18	16		12	
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			58		41	27
Using applications for integrating internal business processes (large enterprises)			89		71	27
Exchanging automatically business documents with customers/suppliers			39		26	26
Sending/receiving e-invoices		31	36		23	27
Sharing information electronically with customers/suppliers on Supply Chain Management			35		15	27
Using analytical Customer Relation Management		17			17	27
Indicators on the ICT sector, ICT skills and R&D						
ICT sector share of total GDP	5.0	4.9			5.0	7
ICT sector share of total employment	2.9	3.0			2.7	9
ICT R&D expenditure by the business sector, as % of GDP	0.3	0.3			0.3	10
ICT R&D expenditure by the business sector, as % of total R&D expenditure	21.2	19.1			25.0	17
% of ICT exports on total exports		5.3	5.0			18
% of ICT imports on total imports		6.6	5.9			21
% of persons employed with ICT user skills.	18.5	18.7	18.9	19.2	18.4	14
% of persons employed with ICT specialist skills	2.6	2.8	2.7	2.7	3.2	21

3. Bulgaria

Bulgaria is still near the bottom of the rankings for most Information Society indicators compared to the EU-27, but in 2009 made consistent progress in all sectors. Multi-annual modernisation initiatives launched in previous years in eHealth, eGovernment, eCommerce, eEducation, eSafety and eInclusion began to deliver results in 2009. Modern IT infrastructure has been installed and ICT solutions are partly operational in both the public and private sectors, including government sites, portals, e-forms and e-paths for accessing online services and information.

Examples include: the National Healthcare Portal; the implementation of personal electronic records; the enforcement of the law on eGovernance; the launch of an electronic payment system for the State administration; the modernisation of ICT equipment in schools and municipalities; and the digitisation of a variety of public administrative services, such as vehicle registration, business regulation, the registry of corporate bodies, licences, standards, and public procurement. Bulgaria has a comprehensive long-term policy for digitisation in the field of cultural heritage and has recently launched a new project for the preservation of historical content (Human Record). In addition, a national strategy has been adopted for a unified approach to the development of broadband.

In parallel with the good progress made in the delivery of ICT infrastructures and solutions, Bulgaria aims to provide relevant, easily accessible, accurate and multilingual (other than Bulgarian) content to pave the way for the full introduction of the Information Society so as to deliver new, more effective and efficient services to citizens, businesses and administrations.

Broadband

Bulgaria is lagging behind in internet take-up. Fixed broadband penetration is on the increase, but the current growth rate is not enough to catch up with the rest of Europe. Current penetration is 13 %, the lowest in the EU. The low population penetration translates into both low household and enterprise penetration. There is a positive trend in the development of broadband speeds: Bulgaria is above the EU average in the percentage of broadband internet subscriptions with at least 2 Mb/s download speeds. This suggests that Bulgaria is leapfrogging the narrowband and slow broadband stages in connecting to the internet. In terms of wireless technologies, Bulgaria's performance is similar to that for fixed broadband.

Internet usage

Rates of internet usage have been gradually improving over the last few years. Nevertheless, internet take-up in Bulgaria is still very low, and a majority (53 %) 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 at EU level: for example looking up information on goods and services. Downloading/listening to/watching music and/or films is also a very popular activity. eCommerce is still an uncommon activity, with Bulgaria at the bottom of the EU rankings.

eGovernment

Bulgaria has made progress on most eGovernment indicators, but is still trailing in Europe, especially in the supply of eGovernment services and take-up by citizens.

Bulgaria has acknowledged this challenge, and is addressing it by concentrating all eGovernment and Information Society activities in the Ministry of Transport, Information Technologies and Communications. In addition, there is a National Programme for Accelerated Information Society Development (2008–2010) and a Law on eGovernance (2008). The focus is on developing central infrastructure.

In 2009, the availability of eGovernment services was low for citizens but quite high for enterprises (63 %). The rate of adoption of eGovernment services by citizens is also low. For enterprises this indicator is higher.

Bulgaria

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)				85.0	94.0	24
DSL coverage in rural areas (as % of total population)				33.0	79.7	25
Broadband penetration (as % of population)	4.5	7.6	11.2	13.0	24.8	27
Speed — % of broadband subscriptions above 2 Mbps				95.6		7
3G+ coverage (as % of total population)			50.0			27
% of households with an internet connection	17	19	25	30	65	27
% of households with a broadband connection	10	15	21	26	56	26
% of enterprises with a (fixed) broadband access	57	61	62	70	83	22
% of population using a mobile phone via UMTS (3G) to access the internet			1	1	4	24
% of population using a laptop via wireless connection away from home/work to access the internet		1	2	4	17	24
Internet usage						
% population who are regular internet users (using the internet at least once a week)	22	28	33	40	60	25
% population who are frequent internet users (using the internet every day or almost every day)	14	20	23	31	48	25
% population who have never used the internet	71	65	57	53	30	25
Take up of internet services (as % of population)						
Looking for information about goods and services	13	17	22	17	51	
Uploading self-created content			3	8	20	
Reading online newspapers/magazines	11	10	15	21	31	
Internet banking	1	2	2	2	32	
Playing or downloading games, images, films or music	12	16		24	26	
Seeking health information on injury, disease or nutrition	5	5	7	10	33	
Looking for a job or sending a job application	4	5	7	9	15	
Doing an online course		1	1	1	4	
Looking for information about education, training or course offers		9	10	12	24	
eGovernment indicators						
% basic public services for citizens fully available online		25		25	66	26
% basic public services for enterprises fully available online				63	86	25
% of population using eGovernment services	8	6	8	10	30	26
% of population using eGovernment services for returning filled in forms	2	3	3	5	13	25
% of enterprises using eGovernment services	46	45	58	60	71	25
% of enterprises using eGovernment services for returning filled in forms	23	29	43	47	55	21
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	17	7	8	7	11	22
eCommerce						
% population ordering goods or services for private use	2	3	3	5	37	26
% population ordering goods or services from sellers from others EU countries			1	1	8	26
% population selling goods and services (e.g. via auctions)	1	1	1	1	10	26
% population ordering or buying online content	1	1	1	2	10	22
eCommerce as % of total turnover of enterprises	0	1	1	1	13	22
% enterprises purchasing online	3	3	3	5	24	23
% enterprises selling online	2	1	2	3	12	25
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			35	34	41	20
Using applications for integrating internal business processes (large enterprises)			54	57	71	24
Exchanging automatically business documents with customers/suppliers			31	27	26	12
Sending/receiving e-invoices		9	26	28	23	9
Sharing information electronically with customers/suppliers on Supply Chain Management			14	14	15	15
Using analytical Customer Relation Management		9	9	9	17	24
Indicators on the ICT sector, ICT skills and R&D						
ICT sector share of total GDP	5.8	6.0			5.0	4
ICT sector share of total employment	1.7	1.7			2.7	17
ICT R&D expenditure by the business sector, as % of GDP	0.0	0.0			0.3	23
ICT R&D expenditure by the business sector, as % of total R&D expenditure	21.4	21.6			25.0	13
% of ICT exports on total exports		2.7	3.3			25
% of ICT imports on total imports		5.7	5.2			26
% of persons employed with ICT user skills.	11.4	11.5	11.7	12.6	18.4	24
% of persons employed with ICT specialist skills	2.7	2.6	2.7	2.5	3.2	24

4. Cyprus

Although Cyprus is still near the bottom of the rankings for most information society indicators compared to the EU-27, the important policy decisions taken in 2009, the progress being made in broadband penetration, the spread of ICT solutions in many sectors and a business environment with a good level of eSkills are laying the foundations for further development.

The progress of Cyprus in exploiting the opportunities offered by the information society is evidenced by 2009 developments, which range from the rationalisation and strengthening of political responsibility for information society matters to the improvements in the supply of public services offered through the internet to individuals and enterprises. Some examples are:

- the review of the National Information Society strategy, with the assignment of clear executive responsibility and the drafting of a Network and Information Security (NIS) policy;
- the promotion of inclusive eGovernment (in anticipation of a National eInclusion Strategy) aiming to improve public assistance and services for children, dependants, immigrants and prisoners;
- the expansion of eHealth services with the recent opening of the Integrated Health Care System and the Pharmaceutical Information System.

Overall, the various activities already being pursued, the development of eGovernment activities and a pro-ICT business environment, and the decision to expand broadband to remote regions will contribute to increasing internet penetration.

Broadband

The internet market has made great progress in Cyprus in recent years. In 2009, broadband penetration increased to 22.2 % and the gap with the EU average went down by 2.1 pp compared to 2008. Despite this progress, Cyprus still scores low in household internet penetration and higher-speed broadband lines. As for the business market, enterprise penetration went up to 87 %, higher than the EU average. This is a great achievement, as Cyprus has improved its ranking by 10 places on this measure. DSL coverage of rural areas remains a challenge, although it affects only 3 % of the population. Wireless technologies are still not widely used.

Internet usage

Cyprus exhibits below-average rates for both regular and frequent internet use, although significant progress was made in the last year, with a 10 pp increase observed in each case. In 2009, the rate of regular internet use increased to 45 % and the rate of frequent use to 34 %. Nevertheless, almost half of the population has never used the internet. The use of internet services is less common than in the majority of other EU countries and the take-up of most did not increase significantly in 2009, with the exception of uploading self-created content (+11 pp) and looking for information about goods and services. With the exception of cross-border activity, where Cyprus stands in the top ten, other indicators for eCommerce are still quite low. This could be explained by the narrowness of the national market.

eGovernment

Cyprus shows progress in eGovernment, especially in business use and the availability of eGovernment services, though performance is still below the EU average. eGovernment policy is currently focusing on improvements in back office and core central services to improve the basic infrastructure.

Some progress has been made in the provision of public services for enterprises, with take-up by enterprises reaching 72 %. However, both provision and take-up are relatively low where citizens are concerned.

Cyprus

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	69.7	79.6	93.2	96.0	94.0	11
DSL coverage in rural areas (as % of total population)			12.0	30.0	79.7	26
Broadband penetration (as % of population)	8.9	14.0	18.2	22.2	24.8	15
Speed — % of broadband subscriptions above 2 Mbps				25.3		23
3G+ coverage (as % of total population)			85.0			13
% of households with an internet connection	37	39	43	53	65	23
% of households with a broadband connection	12	20	33	47	56	21
% of enterprises with a (fixed) broadband access	55	69	79	87	83	9
% of population using a mobile phone via UMTS (3G) to access the internet		1	1	2	4	15
% of population using a laptop via wireless connection away from home/work to access the internet		7	3	4	17	23
Internet usage						
% population who are regular internet users (using the internet at least once a week)	29	35	35	45	60	22
% population who are frequent internet users (using the internet every day or almost every day)	19	23	24	34	48	22
% population who have never used the internet	62	56	54	48	30	23
Take up of internet services (as % of population)						
Looking for information about goods and services	27	32	32	39	51	
Uploading self-created content			6	17	20	
Reading online newspapers/magazines	20	22	23	27	31	
Internet banking	6	12	11	15	32	
Playing or downloading games, images, films or music	17	20		25	26	
Seeking health information on injury, disease or nutrition	11	14	12	16	33	
Looking for a job or sending a job application	5	5	4	5	15	
Doing an online course		1	1	1	4	
Looking for information about education, training or course offers		10	10	10	24	
eGovernment indicators						
% basic public services for citizens fully available online	25	33		33	66	21
% basic public services for enterprises fully available online	50	63		75	86	18
% of population using eGovernment services	13	20	16	22	30	20
% of population using eGovernment services for returning filled in forms	3	10	6	10	13	18
% of enterprises using eGovernment services	44	54	65	72	71	17
% of enterprises using eGovernment services for returning filled in forms	8	14	18	15	55	26
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)				0	11	25
eCommerce						
% population ordering goods or services for private use	7	10	9	16	37	20
% population ordering goods or services from sellers from others EU countries			6	12	8	9
% population selling goods and services (e.g. via auctions)	1	1	1	1	10	25
% population ordering or buying online content	1	2	2	2	10	21
eCommerce as % of total turnover of enterprises	2	1	1	1	13	23
% enterprises purchasing online	10	12	14	15	24	19
% enterprises selling online	6	7	7	7	12	18
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			46	44	41	13
Using applications for integrating internal business processes (large enterprises)			81	86	71	4
Exchanging automatically business documents with customers/suppliers			8	10	26	25
Sending/receiving e-invoices		10	7	8	23	24
Sharing information electronically with customers/suppliers on Supply Chain Management			8	9	15	25
Using analytical Customer Relation Management		14	14	16	17	12
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	0.0	0.0			0.3	21
ICT R&D expenditure by the business sector, as % of total R&D expenditure	40.5	41.4			25.0	4
% of ICT exports on total exports		4.7	4.5			20
% of ICT imports on total imports		6.1	5.5			24
% of persons employed with ICT user skills.	18.9	19.5	19.1	19.0	18.4	15
% of persons employed with ICT specialist skills	2.6	2.9	3.1	3.1	3.2	14

5. The Czech Republic

The Czech Republic still lags behind other EU countries in Information Society development and deployment, including high-speed internet connections. However, progress has been made, especially in the area of eGovernment, and the conditions are in place to catch up with more advanced countries. The Information Society has a high priority on the policy agenda of the Czech government as a vehicle for economic growth, openness and integration. The development of the Information Society is supported by several programmes: *ICT in enterprises*, *ICT and Strategic Services* and *IOP (Integrated Operational Programme)* target company modernisation and ICT product and service development, with a planned investment of around € 900 m.

Information systems have been introduced to increase effectiveness and transparency in public finances and in national health insurance management. Both 'Data Box' (a secure system for document exchange, in particular with public authorities) and the One-Stop Shop network of public administration contact points (Czech POINT) are already operational. The One-Stop Shop network is available throughout the country providing 4 938 physical contact points where citizens can access all public records and request excerpts. The availability of internet and broadband services is also being expanded. Mobile penetration is very high, and internet use is also widespread thanks to the proliferation of public access points.

Progress has also been made in decreasing the connectivity gap between peripheral regions and the capital city and through eAccessibility for disabled and senior citizens. Awareness and hotline networks have been set up in the country to raise public awareness of illegal and harmful content on the internet through the Safer Internet Plus programme. A further priority for the Czech Republic is developing the applications necessary for public service administration, health and education.

Broadband

In general, the Czech Republic scores relatively low on broadband internet indicators despite the high rural coverage of DSL. Broadband penetration went up by 2 pp to reach 19.1 % in 2009, still below the EU average of 24.8 %. However, all broadband lines are at least 2 Mbps. Some 54 % of households have an internet connection, the vast majority of which are broadband (91 %). Enterprise penetration is somewhat lower than the EU average, and there is a very low take-up of wireless internet technologies.

Internet usage

There are somewhat lower proportions of regular and frequent internet users in the population than in the EU on average, but internet use continued to grow in 2009. Nevertheless, the percentage of the population that has never used the internet remained more or less the same.

With regard to the take-up of internet services, the Czech Republic still ranks quite low. However, use of the internet for searching information about goods and services and reading online newspapers/magazines is above the EU average. Unfortunately, eCommerce still seems to be a relatively uncommon activity, with all indicators below the average.

eGovernment

The Czech Republic has a focused and simple eGovernment organisation within the Ministry of the Interior. It has an ambitious strategy and has improved its position on various information society indicators, including the availability of online services. Some 100 % of services for enterprises are available online. The Czech Republic supports a One-Stop Shop approach, which also facilitates communication for citizens. For the latter, however, Czech eGovernment performance remains under the EU average. This is possibly because the availability of public services is also quite low.

The Czech Republic

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	81.3	85.0	92.0	92.0	94.0	20
DSL coverage in rural areas (as % of total population)		75.0	85.0	85.0	79.7	13
Broadband penetration (as % of population)	10.6	14.6	17.1	19.1	24.8	19
Speed — % of broadband subscriptions above 2 Mbps				100.0		1
3G+ coverage (as % of total population)						
% of households with an internet connection	29	35	46	54	65	20
% of households with a broadband connection	17	28	36	49	56	20
% of enterprises with a (fixed) broadband access	69	77	79	78	83	19
% of population using a mobile phone via UMTS (3G) to access the internet	1	4	5	1	4	26
% of population using a laptop via wireless connection away from home/work to access the internet		3	7	3	17	26
Internet usage						
% population who are regular internet users (using the internet at least once a week)	36	42	51	54	60	19
% population who are frequent internet users (using the internet every day or almost every day)	18	24	30	34	48	23
% population who have never used the internet	49	46	33	33	30	15
Take up of internet services (as % of population)						
Looking for information about goods and services	32	37	45	50	51	
Uploading self-created content			2	5	20	
Reading online newspapers/magazines	19	22	33	43	31	
Internet banking	10	12	14	18	32	
Playing or downloading games, images, films or music	12	20		23	26	
Seeking health information on injury, disease or nutrition	10	11	14	20	33	
Looking for a job or sending a job application	4	4	5	8	15	
Doing an online course		1	2	1	4	
Looking for information about education, training or course offers		7		11	24	
eGovernment indicators						
% basic public services for citizens fully available online	8	25		33	66	21
% basic public services for enterprises fully available online	63	100		100	86	1
% of population using eGovernment services	17	16	14	24	30	18
% of population using eGovernment services for returning filled in forms	3	4	4	5	13	24
% of enterprises using eGovernment services	76	73	73	66	71	20
% of enterprises using eGovernment services for returning filled in forms	32	34	35	36	55	24
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	10	12	8	7	11	23
eCommerce						
% population ordering goods or services for private use	13	17	23	24	37	15
% population ordering goods or services from sellers from others EU countries			3	2	8	23
% population selling goods and services (e.g. via auctions)	5			4	10	16
% population ordering or buying online content	2	2	2	1	10	25
eCommerce as % of total turnover of enterprises	7	9	15	17	13	4
% enterprises purchasing online	17	22	26	27	24	8
% enterprises selling online	8	9	15	15	12	10
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			49	46	41	12
Using applications for integrating internal business processes (large enterprises)			85	85	71	5
Exchanging automatically business documents with customers/suppliers			15	15	26	23
Sending/receiving e-invoices		33	17	19	23	17
Sharing information electronically with customers/suppliers on Supply Chain Management			12	13	15	18
Using analytical Customer Relation Management		15	14	14	17	16
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	0.2	0.2			0.3	13
ICT R&D expenditure by the business sector, as % of total R&D expenditure	16.8	18.4			25.0	18
% of ICT exports on total exports		14.9	15.0			7
% of ICT imports on total imports		15.2	15.0			5
% of persons employed with ICT user skills.	17.4	17.9	18.5	18.8	18.4	16
% of persons employed with ICT specialist skills	4.1	4.5	4.7	4.7	3.2	2

6. Denmark

Denmark is among the EU countries with the widest distribution and most extensive use of information and communication technology. To ensure that Denmark maintains its top position, the Danish government has set five strategic objectives for the future: 1 — Denmark to have a world-class electronic communication infrastructure; 2 — Danes to have the qualifications necessary to utilise this infrastructure; 3 — Danes to feel secure and confident in using this infrastructure; 4 — Danes to use the infrastructure in practice because they find its content valuable and useful; 5 — Green IT to make an active contribution in Denmark to reducing environmental impact.

To this end, the government set up a national committee in March 2009 with the task of recommending initiatives for the further development of Denmark as a frontrunner in the field of ICT. In January 2010, the committee issued 40 recommendations to the Government on 'Denmark as a high-speed society'. The Danish government is furthermore planning investment in technology to promote new ways of working and organisational structures during the period from 2009 to 2015 (e.g. projects in the social and health sectors to free up resources for care and service provision to citizens).

Broadband

Denmark is the leader in DSL availability and in broadband population penetration. Broadband take-up is still increasing, reaching 37.8 % in 2009. The market is still not completely saturated, as 17 % of households still do not have an internet connection. 90 % of connected households have a broadband subscription, while 94 % of broadband connections are at least 2 Mbps. The enterprise broadband market is the only one where Denmark performs slightly below the EU average, with 18 % of enterprises having no broadband connection. Denmark is also one of the leading countries in wireless technologies. 10 % of individuals are connected via 3G mobile phones and 31 % via laptops. This achievement is even more remarkable given the high fixed broadband penetration.

Internet usage

Denmark is one of the frontrunners in terms of regular and frequent use of the internet, with 82 % and 72 % 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 11 %, is amongst the lowest in the EU.

Furthermore, almost all internet services are used by a larger percentage of the Danish population than on average in the EU, whether the most common ones, such as looking for information about goods and services, or the less commonly used ones, such as buying online content (where Denmark leads the way), downloading computer or video games, selling goods and services, and uploading self-created content. Other eCommerce indicators also score above average, with high percentages.

eGovernment

Denmark is a leading nation in eGovernment usage, especially by businesses. In 2009, the online availability of public services was 100 % for enterprises and around 75 % for citizens. eGovernment is organised according to delivery domains. There is a strong focus on improving the delivery of public services and thus on the interfaces and the ways people and business interact with government. The front office — in particular the citizens and business portals — is used to help improve back-office integration and the development of standards. Denmark's cross-government decision-making processes are highly inclusive, aiming to ensure more coherent policies and a more collaborative and efficient organisation of government.

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, the take-up of online public services in Denmark is one of the highest in the EU.

Denmark

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	100.0	100.0	100.0	100.0	94.0	1
DSL coverage in rural areas (as % of total population)	100.0	100.0	100.0	100.0	79.7	1
Broadband penetration (as % of population)	31.9	35.7	37.0	37.8	24.8	1
Speed — % of broadband subscriptions above 2 Mbps				93.7		8
3G+ coverage (as % of total population)			99.5			2
% of households with an internet connection	79	78	82	83	65	4
% of households with a broadband connection	63	70	74	76	56	3
% of enterprises with a (fixed) broadband access	83	80	80	80	83	17
% of population using a mobile phone via UMTS (3G) to access the internet	1	1	6	10	4	4
% of population using a laptop via wireless connection away from home/work to access the internet		25		31	17	2
Internet usage						
% population who are regular internet users (using the internet at least once a week)	78	76	80	82	60	4
% population who are frequent internet users (using the internet every day or almost every day)	65	66	71	72	48	3
% population who have never used the internet	10	12	12	11	30	3
Take up of internet services (as % of population)						
Looking for information about goods and services	68	68	73	74	51	
Uploading self-created content			14	33	20	
Reading online newspapers/magazines	46	47	52	64	31	
Internet banking	57	57	61	66	32	
Playing or downloading games, images, films or music	26	33		34	26	
Seeking health information on injury, disease or nutrition	28	38	36	46	33	
Looking for a job or sending a job application	20	26	23	27	15	
Doing an online course		4	3	4	4	
Looking for information about education, training or course offers		33	26	37	24	
eGovernment indicators						
% basic public services for citizens fully available online	42	50		75	66	11
% basic public services for enterprises fully available online	88	86		100	86	1
% of population using eGovernment services	43	58	44	67	30	1
% of population using eGovernment services for returning filled in forms	17	33	27	33	13	1
% of enterprises using eGovernment services	87	88	90	90	71	4
% of enterprises using eGovernment services for returning filled in forms	55	61	65	66	55	8
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	5	7	8	11	11	14
eCommerce						
% population ordering goods or services for private use	55	56	59	64	37	2
% population ordering goods or services from sellers from others EU countries			20	24	8	4
% population selling goods and services (e.g. via auctions)	17	22	19	25	10	1
% population ordering or buying online content	14	10	17	23	10	1
eCommerce as % of total turnover of enterprises	17	22			13	
% enterprises purchasing online	34	36	38	40	24	4
% enterprises selling online	34	33	20	19	12	4
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			57	58	41	3
Using applications for integrating internal business processes (large enterprises)			85	86	71	3
Exchanging automatically business documents with customers/suppliers			38	29	26	10
Sending/receiving e-invoices		37	43	38	23	3
Sharing information electronically with customers/suppliers on Supply Chain Management			22	19	15	8
Using analytical Customer Relation Management		17	19	20	17	6
Indicators on the ICT sector, ICT skills and R&D						
ICT sector share of total GDP	5.1	5.2			5.0	6
ICT sector share of total employment	3.7	3.6			2.7	4
ICT R&D expenditure by the business sector, as % of GDP	0.5	0.5			0.3	3
ICT R&D expenditure by the business sector, as % of total R&D expenditure	32.7	28.1			25.0	9
% of ICT exports on total exports		5.0	4.0			21
% of ICT imports on total imports		8.0	7.0			18
% of persons employed with ICT user skills.	23.4	23.2	22.6	23.7	18.4	5
% of persons employed with ICT specialist skills	3.9	4.0	4.3	4.2	3.2	5

7. Estonia

Estonia regards the development of an inclusive, secure, citizen-centred Information Society as key to economic growth and is determinedly pursuing the objectives set out in its national Information Society Strategy 2013. The country is the highest ranking country in central and Eastern Europe in terms of network readiness. It leads the way in eGovernment services and has built an advanced eGovernance infrastructure to provide complex services combining information from several government databases. It aims to deliver secure and user-friendly online services to citizens. New recent developments include:

- the delivery of electronic authentication and digital signing tools — ID card and Mobile ID — to 90 % of the population to provide secure access to a variety of eServices, such as banking transactions, tax declarations, digital prescriptions, internet voting, and others. These developments have been accompanied by large-scale computer and internet training with emphasis on the use of the national ID card for secure authentication and digital signing;
- the launch of the Patient Portal, through which patients can access their medical histories from anywhere and at any time, and the delivery of digital prescriptions;
- the launch of a broadband project called EstWin, the aim of which is to provide internet connections with speeds of up to 100 Mbps to all households and businesses across Estonia by 2015, the target for 2012 being to ensure that 98 % of households live within 1.5 kilometres from fibre network connection points;
- increasing use of the internet for voting.

Broadband

Estonia is above the EU average in broadband penetration, for both households and enterprises. DSL availability (coverage) is also somewhat above the EU average. Despite high connectivity, however, only 52 % of broadband subscriptions have speeds of at least 2 Mbps. Although the use of 3G mobile phones for accessing the internet has not yet taken off, wireless internet use on laptops is very widespread, with 28 % penetration (up from 16 % in 2008).

Internet usage

Estonia has somewhat higher proportions of regular and frequent internet users than the 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. Estonia records above-average use of most internet services, except for eCommerce. The most popular activities are internet banking, looking for information about goods and services online and reading online newspapers/magazines. Uploading self-created content has grown significantly in importance over the last year.

eGovernment

In eGovernment, Estonia performs above the EU average with high levels of online availability, user-friendliness and sophistication. In particular, there have been improvements on the supply side in services for both for citizens and enterprises. While 83 % of public services for citizens are available online, for enterprises the figure is 100 %. However take-up, even though increasing, is not as high. Both the provision and use of eGovernment services are more advanced in Estonia than the EU average. Take-up is 44 % among citizens and 79 % among businesses. The use of eGovernment services by citizens seems to have stagnated. Estonia's eGovernment policy is part of a wider Information Society policy. Its central actor is the Ministry of Economic Affairs and Communications, with a coordinating role for the Ministry of the Interior in local eGovernment development.

Estonia

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	90.0	85.0	93.9	94.0	94.0	15
DSL coverage in rural areas (as % of total population)		73.0	80.0	80.0	79.7	18
Broadband penetration (as % of population)	18.4	21.2	24.6	26.0	24.8	11
Speed — % of broadband subscriptions above 2 Mbps				51.6		20
3G+ coverage (as % of total population)			62.0			20
% of households with an internet connection	46	53	58	63	65	13
% of households with a broadband connection	37	48	54	62	56	10
% of enterprises with a (fixed) broadband access	76	78	88	86	83	10
% of population using a mobile phone via UMTS (3G) to access the internet	1	2	2	2	4	17
% of population using a laptop via wireless connection away from home/work to access the internet		12	16	28	17	4
Internet usage						
% population who are regular internet users (using the internet at least once a week)	56	59	62	67	60	9
% population who are frequent internet users (using the internet every day or almost every day)	40	43	45	54	48	9
% population who have never used the internet	34	32	26	26	30	12
Take up of internet services (as % of population)						
Looking for information about goods and services	44	48	53	54	51	
Uploading self-created content			21	30	20	
Reading online newspapers/magazines	50	50	54	63	31	
Internet banking	48	53	55	62	32	
Playing or downloading games, images, films or music	28	29		35	26	
Seeking health information on injury, disease or nutrition	18	26	25	32	33	
Looking for a job or sending a job application	17	13	15	23	15	
Doing an online course		7	5	6	4	
Looking for information about education, training or course offers		19	24	24	24	
eGovernment indicators						
% basic public services for citizens fully available online	64	58		83	66	8
% basic public services for enterprises fully available online	100	88		100	86	1
% of population using eGovernment services	29	30	34	44	30	6
% of population using eGovernment services for returning filled in forms	17	20	24	32	13	3
% of enterprises using eGovernment services	69	76	77	79	71	13
% of enterprises using eGovernment services for returning filled in forms	54	58	62	64	55	9
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	13	13	12	14	11	6
eCommerce						
% population ordering goods or services for private use	7	9	10	17	37	19
% population ordering goods or services from sellers from others EU countries			3	6	8	19
% population selling goods and services (e.g. via auctions)	3	5	5	5	10	14
% population ordering or buying online content	1	2	1	4	10	15
eCommerce as % of total turnover of enterprises					13	
% enterprises purchasing online	17	13	18	17	24	17
% enterprises selling online	14	7	11	11	12	13
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			42	43	41	15
Using applications for integrating internal business processes (large enterprises)			72	73	71	14
Exchanging automatically business documents with customers/suppliers			34	34	26	5
Sending/receiving e-invoices		25	39	40	23	2
Sharing information electronically with customers/suppliers on Supply Chain Management			13	13	15	17
Using analytical Customer Relation Management		10	9	10	17	22
Indicators on the ICT sector, ICT skills and R&D						
ICT sector share of total GDP	4.6	4.6			5.0	10
ICT sector share of total employment	3.0	3.2			2.7	7
ICT R&D expenditure by the business sector, as % of GDP	0.2	0.2			0.3	11
ICT R&D expenditure by the business sector, as % of total R&D expenditure	36.1	36.0			25.0	7
% of ICT exports on total exports		6.5	6.3			16
% of ICT imports on total imports		7.6	7.6			16
% of persons employed with ICT user skills.	17.8	19.3	19.7	20.6	18.4	11
% of persons employed with ICT specialist skills	2.5	2.6	2.9	3.2	3.2	9

8. Finland

Finland is among the best-performing countries in Europe for most of the i2010 indicators. It continues to place innovation and ICT policies at the heart of its economy, aiming to improve environment quality, international competitiveness and citizens' wellbeing. Finland is one of the leading countries in broadband provision. Wireless and mobile connections have increased significantly and become faster, particularly in sparsely populated areas. In 2008, Finland set very ambitious targets in its National Broadband Strategy. By 2010 all households, businesses and public administration bodies were to have access to the internet and eServices with download speeds of at least 1 Mbps. By the end of 2015 there is to be 99 % coverage at 100 Mbps for households, businesses and public administration. In 2009, to further accelerate information society development and the spread of electronic public services, the government launched new developments and set new short- and medium-term goals. They include:

- re-arranging public information systems in line with an Electronic Public Services and Democracy Programme. Finland is to have a networked administration in which services are available and easy to find through multiple channels, providing support for the life situations of citizens and for the various stages in a company's life cycle;
- introducing electronic identification, digital signature, invoicing and information security to support electronic public services. The measures require coordinated cooperation between the public administration, message transmitters, i.e. banks, operators and other service providers, companies and consumers;
- developing ICT use in schools: ICT and media equipment will be piloted for teaching and learning in different Finnish schools to devise a cost-effective operating model for deploying ICT in education.

Broadband

DSL coverage in Finland stands above the EU average, but a small part of the population is still not covered. Internet penetration increased last year for both households and enterprises. Enterprise connectivity (94 %) is the highest in the EU, while household broadband penetration is fourth in the ranking. There was a remarkable 8 pp increase in household broadband penetration last year. Almost all connected households use broadband, with narrowband connections accounting for only 5 % of all subscriptions. The percentage of broadband subscriptions with at least 2 Mbps is one of the few indicators where Finland scores below average. As for wireless internet technologies, the penetration of 3G internet on mobile phones is twice as high as the EU average, while use on laptops is somewhat below the EU average.

Internet usage

With almost four fifths of the population using the internet on a regular basis, mostly via high-speed broadband connections, Finland ranks among the best countries for internet use in the EU. This is clearly reflected in the use of internet services, where Finland is near the top of the rankings on almost all measured indicators. In particular, there is no other country in the EU where a larger proportion of the population uses the internet to look for health information, take courses, and read a newspaper. eCommerce is also more well-developed in Finland than in other EU countries, with 54 % of the population ordering goods and services online in 2009.

eGovernment

Finland is one of the top performers on most eGovernment benchmarks. It has considerably improved online availability, especially for enterprises (from 50 % to 88 %) and leads in eGovernment usage and user-friendliness. It ranks first for the percentage of enterprises using eGovernment. Finland has a truly citizen-centric vision of eGovernment and an inclusive approach to eGovernment strategy formulation, involving experts from all layers of government and non-government actors and experts. It has deliberately sought to concentrate its eGovernment efforts (IT deployment and administrative transformation) under one ministry with the support of a powerful CIO function.

Finland

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	91.8	96.0	95.7	96.0	94.0	11
DSL coverage in rural areas (as % of total population)	82.0	91.0	90.0	90.0	79.7	9
Broadband penetration (as % of population)	27.1	30.7	30.7	29.4	24.8	8
Speed — % of broadband subscriptions above 2 Mbps				61.4		19
3G+ coverage (as % of total population)			75.0			16
% of households with an internet connection	65	69	72	78	65	6
% of households with a broadband connection	53	63	66	74	56	4
% of enterprises with a (fixed) broadband access	89	91	92	94	83	1
% of population using a mobile phone via UMTS (3G) to access the internet	2	2	4	8	4	7
% of population using a laptop via wireless connection away from home/work to access the internet		8	12	18	17	11
Internet usage						
% population who are regular internet users (using the internet at least once a week)	71	75	78	79	60	5
% population who are frequent internet users (using the internet every day or almost every day)	56	62	66	68	48	5
% population who have never used the internet	18	17	13	15	30	5
Take up of internet services (as % of population)						
Looking for information about goods and services	67	68	73	73	51	
Uploading self-created content			9	18	20	
Reading online newspapers/magazines	46	50	57	64	31	
Internet banking	63	66	72	72	32	
Playing or downloading games, images, films or music	33	34		38	26	
Seeking health information on injury, disease or nutrition	44	47	51	56	33	
Looking for a job or sending a job application	26	26	26	24	15	
Doing an online course		13	14	13	4	
Looking for information about education, training or course offers		36	36	31	24	
eGovernment indicators						
% basic public services for citizens fully available online	60	80		90	66	7
% basic public services for enterprises fully available online	63	50		88	86	9
% of population using eGovernment services	47	50	53	53	30	5
% of population using eGovernment services for returning filled in forms	15	17	18	23	13	5
% of enterprises using eGovernment services	93	94	95	96	71	1
% of enterprises using eGovernment services for returning filled in forms	78	78	81	83	55	2
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)					11	
eCommerce						
% population ordering goods or services for private use	44	48	51	54	37	7
% population ordering goods or services from sellers from others EU countries			15	18	8	6
% population selling goods and services (e.g. via auctions)	14	13	14	13	10	9
% population ordering or buying online content	6	11	13	10	10	7
eCommerce as % of total turnover of enterprises	14	15	16	18	13	3
% enterprises purchasing online	23	19		26	24	9
% enterprises selling online	14	15	13	15	12	9
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			49	49	41	10
Using applications for integrating internal business processes (large enterprises)			74	71	71	16
Exchanging automatically business documents with customers/suppliers			28	21	26	19
Sending/receiving e-invoices		27	25	24	23	12
Sharing information electronically with customers/suppliers on Supply Chain Management			20	19	15	11
Using analytical Customer Relation Management		26	25	25	17	3
Indicators on the ICT sector, ICT skills and R&D						
ICT sector share of total GDP	8.2	9.1			5.0	1
ICT sector share of total employment	4.6	4.5			2.7	2
ICT R&D expenditure by the business sector, as % of GDP	1.5	1.6			0.3	1
ICT R&D expenditure by the business sector, as % of total R&D expenditure	62.6	62.9			25.0	1
% of ICT exports on total exports		14.7	18.4			4
% of ICT imports on total imports		13.1	11.7			7
% of persons employed with ICT user skills.	20.5	20.5	20.2	20.4	18.4	12
% of persons employed with ICT specialist skills	4.3	4.3	4.7	4.4	3.2	4

9. France

Information Society development in France is above average overall, but the country scores unevenly on different indicators: very high in broadband penetration and eGovernment, while disappointing in others such as digital skills and business. France could do more in adopting new ICT technologies and deriving more benefit from existing investment. In 2009, as part of measures to stimulate the economy, the government decided to accelerate implementation of its national plan 'France numérique 2012' launched in October 2008, and to accelerate the deployment of fibre under a national programme based on a recent law to combat the digital divide. Major achievements in 2009 were the following:

- broadband for all: the number of high-speed connections increased with respect to 2008, thus bringing closer one of the main goals of the national plan, which is to provide broadband access to 100 % of the population by 2010 at a reasonable price, by exploiting the wide coverage provided by satellite solutions;
- deployment of optical fibre: the Government launched several actions to enable the extensive deployment of optical fibre in France with the aim of connecting 4 million households by 2012. The objective is for 70 % of population to be connected to high-speed broadband by 2020 and 100 % by 2025;
- mobile broadband: the granting of licences for the available frequencies started in 2009 and the fourth mobile licence was issued in January 2010. This will lead to the availability of commercial mobile broadband services by 2012;
- ICT in schools: in 2009 almost 100 % of schools and colleges had an internet connection and one thousand had videoconference equipment for learning foreign languages. All new schools were required to have an ICT infrastructure in place;
- initiatives were taken to promote the development of RFID and near-field communication services through awareness-raising campaigns and coordination among economic actors, users and stakeholders.

Broadband

France is one of the few countries with 100 % DSL coverage. Broadband penetration is still on the increase, rising to over 30 % in 2009, which is well above the EU average. Despite the high population penetration, it ranks only 12th in household broadband penetration, a ratio that did not improve over 2009. At the same time, enterprise penetration stands at 93 %, which is the fourth best in the EU. Wireless internet technologies have not taken off yet: only 2 % of the population are using the internet on their 3G mobile phones, and the use of wireless internet on laptops is also below the EU average.

Internet usage

In France, the proportions of both regular and frequent internet users have been rising in recent years and are currently slightly above 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, the use of various internet services by French citizens is also above the EU average. The most popular activities are internet banking and looking up information about goods and services, as in most other countries. The least popular activity is doing online courses. eCommerce activity is around the EU average.

eGovernment

France has improved the online availability of eGovernment services. Usage still remains average compared to other EU Member States, especially among businesses. eGovernment has become a pivotal part of State reform under the authority of the French President. France has reorganised and concentrated efforts within a new Directorate-General (with a CIO function) to address modernisation of the public administration, the deployment of ICT in government, and eGovernment.

France is in the top third of EU countries in terms of both the availability and take-up of eGovernment services. As with most Member States, they are more developed for enterprises than for citizens.

France

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	98.4	98.5	100.0	100.0	94.0	1
DSL coverage in rural areas (as % of total population)	96.5	96.7	100.0	100.0	79.7	1
Broadband penetration (as % of population)	20.4	23.3	24.8	30.3	24.8	6
Speed — % of broadband subscriptions above 2 Mbps						
3G+ coverage (as % of total population)			72.0			18
% of households with an internet connection	41	49	62	63	65	14
% of households with a broadband connection	30	43	57	57	56	12
% of enterprises with a (fixed) broadband access	86	89	92	93	83	4
% of population using a mobile phone via UMTS (3G) to access the internet		1	1	2	4	22
% of population using a laptop via wireless connection away from home/work to access the internet		7	10	14	17	15
Internet usage						
% population who are regular internet users (using the internet at least once a week)	39	57	63	65	60	12
% population who are frequent internet users (using the internet every day or almost every day)	26	41	47	50	48	10
% population who have never used the internet	46	32	26	26	30	11
Take up of internet services (as % of population)						
Looking for information about goods and services	36	55	57	60	51	
Uploading self-created content			17	20	20	
Reading online newspapers/magazines	9	18	22	24	31	
Internet banking	18	32	40	42	32	
Playing or downloading games, images, films or music	9	22		26	26	
Seeking health information on injury, disease or nutrition	13	29	39	37	33	
Looking for a job or sending a job application	6	13	17	16	15	
Doing an online course		2	4	7	4	
Looking for information about education, training or course offers		21	22	24	24	
eGovernment indicators						
% basic public services for citizens fully available online	58	58		75	66	11
% basic public services for enterprises fully available online	75	88		88	86	9
% of population using eGovernment services	26	41	43	39	30	8
% of population using eGovernment services for returning filled in forms	12	18	25	21	13	6
% of enterprises using eGovernment services	66	69	73	75	71	16
% of enterprises using eGovernment services for returning filled in forms	51	59	67	67	55	6
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	11	9	13	13	11	8
eCommerce						
% population ordering goods or services for private use	22	35	40	45	37	8
% population ordering goods or services from sellers from others EU countries			11	12	8	10
% population selling goods and services (e.g. via auctions)		7	10	12	10	10
% population ordering or buying online content	7	15	16	15	10	4
eCommerce as % of total turnover of enterprises			12	14	13	8
% enterprises purchasing online			18	21	24	11
% enterprises selling online			11	12	12	11
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			46	48	41	11
Using applications for integrating internal business processes (large enterprises)			81	80	71	10
Exchanging automatically business documents with customers/suppliers			29	30	26	9
Sending/receiving e-invoices		10	20	21	23	15
Sharing information electronically with customers/suppliers on Supply Chain Management			12	11	15	21
Using analytical Customer Relation Management		9	14	15	17	15
Indicators on the ICT sector, ICT skills and R&D						
ICT sector share of total GDP	4.4	4.4			5.0	11
ICT sector share of total employment	3.1	3.2			2.7	8
ICT R&D expenditure by the business sector, as % of GDP	0.3	0.3			0.3	7
ICT R&D expenditure by the business sector, as % of total R&D expenditure	26.3	25.5			25.0	10
% of ICT exports on total exports		5.2	4.6			19
% of ICT imports on total imports		7.6	7.0			19
% of persons employed with ICT user skills.	16.8	17.6	17.4	17.2	18.4	20
% of persons employed with ICT specialist skills	3.3	2.6	3.1	3.0	3.2	15

10. Germany

In Information Society terms, Germany generally performs better than the average. However, it is not among the ICT forerunners in the EU. There is room for improvement especially in eBusiness and eGovernment. For broadband internet, there is both a high coverage and a relatively high take-up. However, service quality is under the EU average as far as 2 Mbps download speeds are concerned, which are still limited. Germany ranks high in selling and ordering goods and services on the internet. As for eGovernment, the business sector scores low in the take-up of services. In eBusiness, the picture is mixed: little use is made of ICT applications for integrating business processes, but online invoicing and the online exchange of business documents with suppliers and customers are widespread.

Information Society policies are being pursued in line with the iD2010 programme and the High-Tech Strategy. For 2009 and 2010, a budget of € 500 million has been set aside under the IT Investment Programme to modernise administration and to stimulate investment in ICT. Four key areas are defined: IT security, green IT, IT organisation and innovation.

Broadband

Germany improved its rankings on most of the broadband indicators last year, with the result that the broadband market grew faster than the EU average. DSL coverage is close to 100 % nationwide and 90 % in rural areas. Broadband penetration increased significantly (by 2.9 pp) to 30.4 % in 2009, which is well above the EU average (24.8 %). Both household and enterprise broadband penetration went up considerably, by 10 pp and 5 pp, respectively. The large increase in the residential market (households) reflects a migration from narrowband connections. Wireless internet technologies are getting more popular. Laptop use via wireless access has reached 24 % as opposed to the EU average of 17 %. At the same time, internet use via 3G mobile phones is still below the average.

Internet usage

Germany performs relatively well in terms of the proportions of regular and frequent internet users in the population. However, it is not one of the most connected countries. Nonetheless, only 19 % of German citizens have never used the internet, compared to 30 % for the EU as a whole. The take-up of most internet services is above the EU average, with the exception of reading online newspapers and doing online courses. The eCommerce profile is similar to that of most other countries and is around the average for the EU.

eGovernment

eGovernment availability in Germany (particularly among businesses) has stagnated. In contrast, eGovernment usage seems to have increased, at least in 2009, especially for enterprises. Germany has a very comprehensive eGovernment programme, which is moving towards the new Web 2.0 paradigm for eParticipation and administrative innovation, including cutting bureaucracy and putting the internet at the core of public service delivery. At the same time, the focus is on managing the challenges of existing legacy systems and integrating different levels of government. Recently, the governance and management of eGovernment and public ICT policies have been consolidated into a single federal CIO function at state secretary level and an IT Council for the coordinated roll-out of eGovernment and horizontal ICT policies across all levels of government. The fragmentation inherent in Germany's federal structure also has advantages for piloting services and testing new solutions in different states.

The online availability of public services exceeds the EU-27 average for enterprises but for citizens is just below with 64 %, compared to an average of 66 %. However, take-up by enterprises is lagging in comparison with the rest of the EU. The use of eProcurement is average.

Germany

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	92.6	95.7	96.6	97.0	94.0	9
DSL coverage in rural areas (as % of total population)	58.5	87.5	89.7	91.0	79.7	7
Broadband penetration (as % of population)	18.1	23.8	27.5	30.4	24.8	5
Speed — % of broadband subscriptions above 2 Mbps				85.4		12
3G+ coverage (as % of total population)			84.6			14
% of households with an internet connection	67	71	75	79	65	5
% of households with a broadband connection	34	50	55	65	56	7
% of enterprises with a (fixed) broadband access	73	80	84	89	83	6
% of population using a mobile phone via UMTS (3G) to access the internet	1	2	2	3	4	13
% of population using a laptop via wireless connection away from home/work to access the internet		14	18	24	17	7
Internet usage						
% population who are regular internet users (using the internet at least once a week)	59	64	68	71	60	7
% population who are frequent internet users (using the internet every day or almost every day)	40	46	51	55	48	8
% population who have never used the internet	26	23	20	19	30	7
Take up of internet services (as % of population)						
Looking for information about goods and services	60	63	66	69	51	
Uploading self-created content			14	23	20	
Reading online newspapers/magazines	19	21	21	27	31	
Internet banking	32	35	38	41	32	
Playing or downloading games, images, films or music	18	21			26	
Seeking health information on injury, disease or nutrition	34	41	41	48	33	
Looking for a job or sending a job application	17	17	16	18	15	
Doing an online course		2	2	3	4	
Looking for information about education, training or course offers		24	24	28	24	
eGovernment indicators						
% basic public services for citizens fully available online	27	64		64	66	14
% basic public services for enterprises fully available online	75	88		88	86	9
% of population using eGovernment services	32	43	33	37	30	9
% of population using eGovernment services for returning filled in forms	9	17	10	12	13	13
% of enterprises using eGovernment services	49	56	56	65	71	22
% of enterprises using eGovernment services for returning filled in forms	37	43	45	52	55	17
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	11	12	10	12	11	12
eCommerce						
% population ordering goods or services for private use	49	52	53	56	37	6
% population ordering goods or services from sellers from others EU countries			7	9	8	13
% population selling goods and services (e.g. via auctions)	20	21	18	20	10	2
% population ordering or buying online content	24	19	16		10	
eCommerce as % of total turnover of enterprises	14	11		16	13	5
% enterprises purchasing online	48	52		43	24	3
% enterprises selling online	18	24		18	12	5
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			33	33	41	21
Using applications for integrating internal business processes (large enterprises)			68	70	71	18
Exchanging automatically business documents with customers/suppliers			35	40	26	2
Sending/receiving e-invoices		19	27	32	23	6
Sharing information electronically with customers/suppliers on Supply Chain Management			12	14	15	13
Using analytical Customer Relation Management		30	26	26	17	2
Indicators on the ICT sector, ICT skills and R&D						
ICT sector share of total GDP	4.7	4.7			5.0	9
ICT sector share of total employment	2.6	2.7			2.7	12
ICT R&D expenditure by the business sector, as % of GDP	0.4	0.4			0.3	4
ICT R&D expenditure by the business sector, as % of total R&D expenditure	22.3	21.0			25.0	14
% of ICT exports on total exports		7.3	6.6			14
% of ICT imports on total imports		9.6	8.8			12
% of persons employed with ICT user skills.	18.9	18.5	18.7	18.7	18.4	17
% of persons employed with ICT specialist skills	3.3	3.2	3.3	3.3	3.2	7

11. Greece

Since the introduction of its new Digital Strategy four years ago and the transposition of the European electronic communications framework within Greek legislation, Greece has made significant progress in the ICT field, in particular in the deployment of broadband technology, which has consistently shown very high growth rates.

Nevertheless, broadband penetration in Greece is far below the EU average, and the Information Society, in all the sectors, is lagging behind the average for EU countries. The Greek government believes that the deployment and usage of ICT applications, including in education, health, financial services, agriculture and emergency systems, has to be based on the latest technology, taking into account convergence, capacity building, security and impact on the environment. Efforts to bridge the digital divide — for all sectors of society and the economy — have maximum priority on the political agenda to ensure the prosperity and competitiveness of the country.

New initiatives were taken in 2009 to extend connectivity and accelerate the uptake of new technologies, especially by SMEs and the public administration: the introduction of 770 broadband access points in more than 400 enterprises in the tourism sector; actions to support small and very small enterprises; and 12 new action areas under the 'Digital Convergence' programme (including digital convergence and eSecurity for enterprises in the tourism sector) targeting businesses, citizens and the public administration.

In parallel with the introduction of optical fibre, due to be completed within seven years, the 'ΔΟΡ.Υ' programme was launched to enable the use of satellite broadcasting and to install terminals for free high-speed internet connections throughout the country. Furthermore, WiFi and WiMax antennas have been installed at key locations.

Broadband

Greece's broadband performance has improved significantly in the last five years. This is mainly due to the implementation of the regulatory framework for electronic communications, which has encouraged infrastructure-based competition through effective local loop unbundling, and the 'Broadband Action Plan', using the Structural Funds to stimulate broadband investment and extend coverage in Greek regions. Nevertheless, Greece is still lagging behind the EU average. Broadband penetration is 17 %, which represents a large increase over 2008 (3.6 pp), but is still well below the EU average. The same applies to household penetration, where Greece has the third lowest rate. In terms of enterprise broadband access, Greece is above the EU average thanks to a remarkable increase of 10 pp in 2009. The wireless broadband market is still in its early stages.

Internet usage

In Greece, more than a third of the population uses the internet regularly and 27 % are frequent users. Some 53 % have never used the internet. The country also consistently ranks among those with the lowest use of various internet services. Most internet users engage in looking for information on goods and services and reading online newspapers/magazines. Downloading/listening to/watching music and/or films and seeking health information are also popular activities among Greek internet users. eCommerce is not well developed in Greece.

eGovernment

Greece is prioritising its investment in information technologies in order to become more competitive. eGovernment is part of this strategy, though it comes under another ministry (Interior), suggesting that eGovernment is also seen as an instrument for government reform. Greece's recent efforts have led to stable and relatively high eGovernment usage among businesses.

The availability of eGovernment services, for both citizens and enterprises, 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, take-up by enterprises is high at 81 %, 10 pp above the EU average.

Greece

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	18.0	86.3	88.0	91.0	94.0	21
DSL coverage in rural areas (as % of total population)	10.0	50.0	55.0	60.0	79.7	21
Broadband penetration (as % of population)	4.4	9.1	13.4	17.0	24.8	23
Speed — % of broadband subscriptions above 2 Mbps				100.0		1
3G+ coverage (as % of total population)			89.0			10
% of households with an internet connection	23	25	31	38	65	25
% of households with a broadband connection	4	7	22	33	56	25
% of enterprises with a (fixed) broadband access	58	72	74	84	83	13
% of population using a mobile phone via UMTS (3G) to access the internet	0	1	1	1	4	23
% of population using a laptop via wireless connection away from home/work to access the internet		1	3	3	17	25
Internet usage						
% population who are regular internet users (using the internet at least once a week)	23	28	33	38	60	26
% population who are frequent internet users (using the internet every day or almost every day)	13	19	23	27	48	26
% population who have never used the internet	65	62	56	53	30	26
Take up of internet services (as % of population)						
Looking for information about goods and services	23	28	31	33	51	
Uploading self-created content			4	9	20	
Reading online newspapers/magazines	14	16	19	21	31	
Internet banking	2	4	5	5	32	
Playing or downloading games, images, films or music	11	15		19	26	
Seeking health information on injury, disease or nutrition	6	8	10	15	33	
Looking for a job or sending a job application	4	5	5	6	15	
Doing an online course		2	2	2	4	
Looking for information about education, training or course offers		12	13	12	24	
eGovernment indicators						
% basic public services for citizens fully available online	17	33		33	66	21
% basic public services for enterprises fully available online	50	63		63	86	25
% of population using eGovernment services	9	12	10	12	30	25
% of population using eGovernment services for returning filled in forms	2	5	4	4	13	26
% of enterprises using eGovernment services	84	82	83	81	71	11
% of enterprises using eGovernment services for returning filled in forms	76	77	66	61	55	11
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	11	10		10	11	16
eCommerce						
% population ordering goods or services for private use	5	8	9	10	37	24
% population ordering goods or services from sellers from others EU countries			3	4	8	20
% population selling goods and services (e.g. via auctions)	0			1	10	27
% population ordering or buying online content	2	1	1	1	10	26
eCommerce as % of total turnover of enterprises	3	2	3		13	
% enterprises purchasing online	11	8	10		24	
% enterprises selling online	7	6	7	6	12	20
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			46	38	41	19
Using applications for integrating internal business processes (large enterprises)			72	61	71	21
Exchanging automatically business documents with customers/suppliers			22	18	26	22
Sending/receiving e-invoices		10	15	12	23	22
Sharing information electronically with customers/suppliers on Supply Chain Management			21	12	15	20
Using analytical Customer Relation Management		15	17	16	17	13
Indicators on the ICT sector, ICT skills and R&D						
ICT sector share of total GDP		2.7			5.0	16
ICT sector share of total employment		1.4			2.7	20
ICT R&D expenditure by the business sector, as % of GDP	0.1	0.1			0.3	20
ICT R&D expenditure by the business sector, as % of total R&D expenditure	35.7	36.2			25.0	6
% of ICT exports on total exports		2.0	2.1			27
% of ICT imports on total imports		5.8	5.5			23
% of persons employed with ICT user skills.	13.0	12.7	13.0	12.9	18.4	23
% of persons employed with ICT specialist skills	2.1	2.2	2.0	2.0	3.2	26

12. Hungary

ICT — representing about 6 % of the total Hungarian economy — is one of its most dynamic sectors. Broadband internet is widely available, mainly in urban areas. Despite the fact that actual internet penetration is still relatively low, the percentage of internet users has already reached the EU average level. As for internet usage categories, a sharp upward trend can be observed for the past few years. Hungary is close to the average, or in a number of cases already above it. Steps are being taken to enhance safe and inclusive internet usage, to improve innovation in the sector, and to facilitate the penetration of eBusiness.

The main object of the Digital Literacy Action Plan and Broadband Action Plan is to foster the growth of the digitally literate population and the development of infrastructure and eContent in Hungary. Some projects, e.g. the 'eHungary' Programme with an eConsultants service and 'NETready 2007/2000', aim to develop the Hungarian Information Society and increase the number of internet users.

The Hungarian Information Society is based around three main pillars: improving the ICT skills of the labour market, targeting SMEs, and increasing the number of ICT experts.

In addition, a two-year programme 'ePublic Administration 2010' is being implemented to extend the use of ICT in the public sector and public services.

Broadband

Broadband penetration is lower than the EU average, but has increased considerably (from 16.3 % in 2008 to 18.7 % in 2009). Hungary ranks 21st on this measure in the EU. Both household and enterprise penetration improved last year. As a positive point, over 90 % of connected households have a broadband subscription. Wireless internet use on laptops is increasing, with penetration twice as high as a year ago, though at only 8% it is still less than half the EU average.

Internet usage

Internet use has expanded in Hungary in recent years and the percentages of regular and frequent internet users are more or less equal to the EU averages. The use of a number of internet services is also similar to the EU average. However, some services show greater differences. On the one hand, an above-average percentage of the population are reading newspapers, uploading self-created content, seeking health information and downloading/listening to/watching music and/or films. On the other hand, a below-average proportion of the population buy goods and services online and do their banking over the internet.

eGovernment

Hungary has progressed on most Information Society and eGovernment indicators, though it is still behind the EU average on all but the sophistication of services for citizens. While usage by citizens has remained at 25 % since 2007, enterprises have made advances. The Hungarian government has recently consolidated the number of committees and departments involved to concentrate its eGovernment efforts in the Prime Minister's Office, making it a key element of administrative reform.

For citizens, both the availability and use of eGovernment services are around the EU average. For enterprises, however, the rates are lower, especially for availability.

Hungary

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	89.0	91.0	93.7	95.0	94.0	14
DSL coverage in rural areas (as % of total population)	77.0	80.0	87.4	89.0	79.7	11
Broadband penetration (as % of population)	9.9	14.2	16.3	18.7	24.8	21
Speed — % of broadband subscriptions above 2 Mbps						
3G+ coverage (as % of total population)			73.0			17
% of households with an internet connection	32	38	48	55	65	19
% of households with a broadband connection	22	33	42	51	56	17
% of enterprises with a (fixed) broadband access	61	70	72	76	83	21
% of population using a mobile phone via UMTS (3G) to access the internet	1	1	2	2	4	20
% of population using a laptop via wireless connection away from home/work to access the internet		2	4	8	17	22
Internet usage						
% population who are regular internet users (using the internet at least once a week)	42	49	56	57	60	16
% population who are frequent internet users (using the internet every day or almost every day)	29	37	43	46	48	15
% population who have never used the internet	52	46	37	36	30	18
Take up of internet services (as % of population)						
Looking for information about goods and services	35	43	49	48	51	
Uploading self-created content			17	29	20	
Reading online newspapers/magazines	25	28	33	36	31	
Internet banking	8	12	13	16	32	
Playing or downloading games, images, films or music	22	27		29	26	
Seeking health information on injury, disease or nutrition	17	23	29	36	33	
Looking for a job or sending a job application	12	13	14	18	15	
Doing an online course		2	2	2	4	
Looking for information about education, training or course offers		18	17	19	24	
eGovernment indicators						
% basic public services for citizens fully available online	50	50		64	66	14
% basic public services for enterprises fully available online	50	50		63	86	25
% of population using eGovernment services	17	25	25	25	30	16
% of population using eGovernment services for returning filled in forms	5	13	11	11	13	15
% of enterprises using eGovernment services	45	55	60	68	71	19
% of enterprises using eGovernment services for returning filled in forms	28	44	50	58	55	14
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	8	8	9	12	11	9
eCommerce						
% population ordering goods or services for private use	7	11	14	16	37	21
% population ordering goods or services from sellers from others EU countries			2	2	8	24
% population selling goods and services (e.g. via auctions)	3	4	5	5	10	15
% population ordering or buying online content	2	3	3	3	10	18
eCommerce as % of total turnover of enterprises	7	6	15	15	13	7
% enterprises purchasing online	11	7	7	15	24	18
% enterprises selling online	9	4	4	6	12	19
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			27	30	41	23
Using applications for integrating internal business processes (large enterprises)			67	71	71	17
Exchanging automatically business documents with customers/suppliers			19	21	26	17
Sending/receiving e-invoices		4	5	7	23	25
Sharing information electronically with customers/suppliers on Supply Chain Management			14	10	15	22
Using analytical Customer Relation Management		5	5	6	17	25
Indicators on the ICT sector, ICT skills and R&D						
ICT sector share of total GDP	6.4	5.8			5.0	5
ICT sector share of total employment	3.7	3.7			2.7	3
ICT R&D expenditure by the business sector, as % of GDP	0.1	0.1			0.3	19
ICT R&D expenditure by the business sector, as % of total R&D expenditure	13.2	14.8			25.0	22
% of ICT exports on total exports		21.5	21.4			2
% of ICT imports on total imports		18.7	16.9			2
% of persons employed with ICT user skills.	19.9	19.8	20.9	21.2	18.4	9
% of persons employed with ICT specialist skills	2.9	2.7	2.9	2.8	3.2	20

13. Ireland

Ireland's Information Society performance shows a mixed picture, with some indicators (like eGovernment and eCommerce) above the EU average and others (like internet access for citizens and businesses) below or close to the EU average. The government is strongly committed to pursuing technological innovation as a driver for Ireland's 'smart economy' and social prosperity and to further advancing Ireland towards a knowledge society.

In 2009, a number of priority areas were identified and policy frameworks announced. They include the development of next-generation broadband, which is supported by the government through targeted actions, such as the *one-stop shop* for service providers to provide access to state-owned infrastructure, the *Kelvin* transatlantic submarine telecoms cable to improve international connectivity, the *National Broadband Scheme* to deliver affordable broadband to residences and businesses in rural Ireland and the *Broadband to schools* initiative, which is being expanded to roll out 100 Mbps to post-primary schools.

Moreover, moves towards a low-carbon economy were announced by the 'Technology Actions to Support the Smart Economy' report in July 2009, which identifies priorities such as smart communications networks, energy-efficient data centres, and smart electricity networks.

Broadband

In 2009, population penetration for fixed broadband reached 22.2 %, a 2 pp increase, corresponding to 14th position in the EU. However, the mobile broadband market is well developed. Internet take-up by households has gone up to 67 %, slightly above the EU average. Despite significant growth (from 43 % in 2008 to 54 % in 2009) household broadband penetration is still slightly below the EU average of 56 %. For enterprises, penetration stands at 80 % compared with the average of 83 %. However, there is widespread take-up of wireless internet access on laptops, with 27 % of the population using such a service (the fifth largest figure in the EU).

Internet usage

Internet usage by Irish citizens is close to the EU average: 60 % of the population use the internet on a regular basis and 40 % are frequent users. The proportion of those who have never used the internet is also around a third. The take-up of services, on the other hand, is generally lower than for the EU as a whole, except for looking for information about goods and services, which at 54 % is somewhat larger. eCommerce is not a very common activity, with the exception of buying goods from other EU countries, which exceeds the EU average by 12 pp.

eGovernment

Ireland's eGovernment performance has seen considerable improvements, notably in online availability and usage by businesses, with some challenges remaining in the use of eGovernment by citizens. eGovernment in Ireland is addressed by a comprehensive programme of public service transformation. Ireland also leads on the eProcurement indicators, with 29 %. The Minister for Finance assumed political responsibility for eGovernment policy and coordination in 2008. His department manages these processes, ensures the effective involvement of all relevant public bodies, and provides the government with regular progress reports and strategy proposals.

Ireland

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	85.6	89.2	90.5	92.4	94.0	19
DSL coverage in rural areas (as % of total population)	64.0	73.3	77.0	82.0	79.7	17
Broadband penetration (as % of population)	12.3	17.5	20.2	22.2	24.8	14
Speed — % of broadband subscriptions above 2 Mbps				68.9		16
3G+ coverage (as % of total population)			87.0			11
% of households with an internet connection	50	57	63	67	65	10
% of households with a broadband connection	13	31	43	54	56	14
% of enterprises with a (fixed) broadband access	61	68	83	80	83	16
% of population using a mobile phone via UMTS (3G) to access the internet	1	3	2	2	4	16
% of population using a laptop via wireless connection away from home/work to access the internet		11	18	27	17	5
Internet usage						
% population who are regular internet users (using the internet at least once a week)	44	51	57	60	60	14
% population who are frequent internet users (using the internet every day or almost every day)	25	32	39	40	48	18
% population who have never used the internet	42	35	32	30	30	13
Take up of internet services (as % of population)						
Looking for information about goods and services	42	44	46	54	51	
Uploading self-created content			8	13	20	
Reading online newspapers/magazines	8	10	17	19	31	
Internet banking	21	24	28	30	32	
Playing or downloading games, images, films or music	11	13		19	26	
Seeking health information on injury, disease or nutrition	8	12	19	24	33	
Looking for a job or sending a job application	6	7	9	14	15	
Doing an online course		3	3	5	4	
Looking for information about education, training or course offers		23	23	27	24	
eGovernment indicators						
% basic public services for citizens fully available online	30	40		80	66	10
% basic public services for enterprises fully available online	75	63		88	86	9
% of population using eGovernment services	26	32	27	28	30	15
% of population using eGovernment services for returning filled in forms	14	19	18	19	13	7
% of enterprises using eGovernment services	84	89	91	89	71	6
% of enterprises using eGovernment services for returning filled in forms	56	69	69	66	55	7
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	21	22	26	29	11	1
eCommerce						
% population ordering goods or services for private use	28	33	36	37	37	10
% population ordering goods or services from sellers from others EU countries			17	20	8	5
% population selling goods and services (e.g. via auctions)	4	3	3	5	10	12
% population ordering or buying online content	7	4	7	8	10	9
eCommerce as % of total turnover of enterprises	17	19	21	29	13	1
% enterprises purchasing online	53	55	55	49	24	1
% enterprises selling online	23	27	26	21	12	2
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			63	60	41	1
Using applications for integrating internal business processes (large enterprises)			86	88	71	2
Exchanging automatically business documents with customers/suppliers			24	23	26	16
Sending/receiving e-invoices		26	22	23	23	14
Sharing information electronically with customers/suppliers on Supply Chain Management			11	10	15	23
Using analytical Customer Relation Management		23	24	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	0.4	0.4			0.3	5
ICT R&D expenditure by the business sector, as % of total R&D expenditure	49.5	42.1			25.0	3
% of ICT exports on total exports		27.3	26.3			1
% of ICT imports on total imports		10.2	9.0			11
% of persons employed with ICT user skills.	18.9	18.9	19.2	19.9	18.4	13
% of persons employed with ICT specialist skills	2.5	2.4	2.3	2.6	3.2	23

14. Italy

Italy has made visible progress in recent years in communication infrastructure (e.g. mobile) and in some sectors of eGovernment. It is, however, lagging behind in using and exploiting the full potential of the Information Society. This is noticeable in the low use of the internet among the population, although Italian enterprises, despite their small size, have made remarkable progress in using ICT as a business tool. The public administration provides online services, but interaction with citizens could still be improved. ICT for teaching and learning is one of the sectors where the government is investing, thus stimulating innovation in the education system and opening up a market for digital education.

The government intends to tackle the Italian digital gap at a systemic level, through a comprehensive national plan to address — over a fixed timeframe — both supply and demand in all sectors, with the public sector showing the way. It aims to:

- modernise the public administration, with *eGovernment* 2012, aiming to modernise the relationship between the public administration and citizens and enhance sectoral policies such as 'Digital School & Universities', eHealth, or eJustice, leveraging ICT to make them transparent, effective, efficient and user-centred;
- promote innovation and overcome cultural and technical barriers, with *i-Economy/i-Society*, which aims to improve the dissemination of innovation, public/private cross-fertilisation, exploitation of excellence, and transfer of technologies;
- close the digital divide (12 % of the population has no or insufficient connectivity), with the *Piano Nazionale Banda Larga*, which will provide at least 2 Mbps across the country.

Broadband

Broadband population penetration is lower than the EU average, while DSL coverage is somewhat above. In 2009, the upward trend in broadband penetration slowed down: the increase was 1.6 pp, compared to 2 pp in the previous year. Only 53 % of households have an internet connection, but 74 % of the connections are broadband, which is a significant improvement compared to the previous year's 66 %. For enterprises, the situation is much better: penetration is 84 %, above the EU average of 83 %. In wireless broadband, Italy's performance is around the average for the EU. On the other hand, Italy has a well-established mobile market with encouraging developments in mobile broadband.

Internet usage

The percentage of frequent internet users is close to the European average while the percentages of low users or no users at all are relatively high. However, the numbers of people online are gradually increasing. Concerning the take-up of internet services, the most popular activities are also the most common at EU level. For looking up information about education, training or courses, Italians approach the European average. The use of eCommerce by individuals is still very low, although train eTicketing is becoming quite widespread.

eGovernment

Overall, Italy remains an average performer on most eGovernment indicators. The availability of public services for citizens and enterprises has been constant since 2007, at 58 % for individuals and 88 % for enterprises. Take-up is relatively good for enterprises but quite low for citizens, at around 17 %. Italy has embarked on a comprehensive and ambitious strategy of administrative reform, putting eGovernment at its core. eGovernment is explicitly seen as a way to improve the efficiency and client-friendliness of government, to strengthen coherence between all levels of government, and to develop shared services. In setting its strategies, Italy has aligned with EU policy frameworks such as i2010. A typical feature of its eGovernment approach is its decision to give eGovernment solid legal backing to ensure compliance. Italy is an active contributor to EU projects and programmes in this area.

Italy

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	89.0	94.0	95.3	96.0	94.0	11
DSL coverage in rural areas (as % of total population)	50.5	81.7	82.0	85.0	79.7	13
Broadband penetration (as % of population)	14.5	17.1	19.0	20.6	24.8	17
Speed — % of broadband subscriptions above 2 Mbps				76.8		15
3G+ coverage (as % of total population)			92.0			7
% of households with an internet connection	40	43	47	53	65	22
% of households with a broadband connection	16	25	31	39	56	24
% of enterprises with a (fixed) broadband access	70	76	81	84	83	14
% of population using a mobile phone via UMTS (3G) to access the internet	2	3	3	4	4	12
% of population using a laptop via wireless connection away from home/work to access the internet		7	10	15	17	14
Internet usage						
% population who are regular internet users (using the internet at least once a week)	31	34	37	42	60	24
% population who are frequent internet users (using the internet every day or almost every day)	29	31	35	40	48	19
% population who have never used the internet	59	54	50	45	30	22
Take up of internet services (as % of population)						
Looking for information about goods and services	23	27	30	33	51	
Uploading self-created content			7	17	20	
Reading online newspapers/magazines	13	17	17	23	31	
Internet banking	9	12	13	16	32	
Playing or downloading games, images, films or music	11	14		17	26	
Seeking health information on injury, disease or nutrition	12	16	16	21	33	
Looking for a job or sending a job application	6	7	7	9	15	
Doing an online course		2	2	3	4	
Looking for information about education, training or course offers		13	16	19	24	
eGovernment indicators						
% basic public services for citizens fully available online	36	58		58	66	17
% basic public services for enterprises fully available online	88	88		88	86	9
% of population using eGovernment services	16	17	15	17	30	24
% of population using eGovernment services for returning filled in forms	5	5	5	5	13	23
% of enterprises using eGovernment services	87	84	82	83	71	10
% of enterprises using eGovernment services for returning filled in forms	49	35	42	48	55	20
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	7	7	9	9	11	18
eCommerce						
% population ordering goods or services for private use	9	10	11	12	37	23
% population ordering goods or services from sellers from others EU countries			3	4	8	21
% population selling goods and services (e.g. via auctions)	3	4	4	4	10	17
% population ordering or buying online content	1	2	2	3	10	19
eCommerce as % of total turnover of enterprises	2	2			13	
% enterprises purchasing online	10	10	12	14	24	20
% enterprises selling online	3	2	3	4	12	24
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			49	44	41	14
Using applications for integrating internal business processes (large enterprises)			82	78	71	12
Exchanging automatically business documents with customers/suppliers			27	33	26	6
Sending/receiving e-invoices		34	29	35	23	4
Sharing information electronically with customers/suppliers on Supply Chain Management			21	23	15	6
Using analytical Customer Relation Management		15	14	13	17	18
Indicators on the ICT sector, ICT skills and R&D						
ICT sector share of total GDP	3.9	3.9			5.0	13
ICT sector share of total employment	2.6	2.6			2.7	13
ICT R&D expenditure by the business sector, as % of GDP	0.1	0.1			0.3	16
ICT R&D expenditure by the business sector, as % of total R&D expenditure	22.0	20.3			25.0	15
% of ICT exports on total exports		2.6	2.2			26
% of ICT imports on total imports		6.3	5.5			25
% of persons employed with ICT user skills.	18.9	19.4	18.9	17.9	18.4	18
% of persons employed with ICT specialist skills	2.9	2.8	2.9	3.1	3.2	11

15. Latvia

The Information Society in Latvia is at an early stage of development but is making significant improvements to bridge the gap with the EU average.

Latvia's telecom market has been the recipient of much foreign capital, and has weathered the economic turmoil relatively well. Broadband services are widely available and account for almost all internet subscriptions. Competing infrastructure based on cable, fibre-to-the-home, and wireless broadband is also available. A healthy digital TV market is evident, with content accessible via well-entrenched cable TV operators, satellite and broadband TV (IPTV).

eGovernment services, with access via a central portal, are increasingly used by businesses and pushed by public administration to improve efficiency, convenience, and accessibility. Similar initiatives extend to the health and education sectors.

Since July 2009, as part of its European digital library project, Europeana, the National Library of Latvia has started using ICT and making digital copies of its original material and will develop eServices to provide remote access to information in digital format on the internet with full-text search.

Broadband

Total DSL coverage in Latvia stands only slightly lower than the EU average, although broadband coverage in rural areas remains an issue. Coverage remained stable in 2009, where broadband penetration went up to 19.3 % compared with the EU average of 24.8 %. Broadband connectivity showed the most significant improvement (10 pp.), reducing the gap with the EU average. A critical area in Latvia is low broadband penetration among businesses. Only 62 % are connected, and this figure did not grow in 2009. Wireless internet is at an early stage of development.

Internet usage

Rates of internet use and non-use in Latvia are close to the EU average. Take-up of internet services is also relatively high. Participation in the more popular activities such as looking for information about goods and services is close to the EU average and for a number of other services even higher. In particular, Latvia records particularly large above-average numbers using the internet for reading online newspapers (+15 pp), internet banking (+10 pp), uploading self-created content (+14 pp), and doing online courses (+3 pp). In contrast, the use of eCommerce by individuals is underdeveloped.

eGovernment

Latvia has seen eGovernment use rise among both businesses and citizens, though with relatively low overall use. Online availability has doubled since 2008. Although it is still below the EU average, it seems to be closing the gap. To deal with these challenges, Latvia has reorganised its eGovernment efforts to increase focus and concentrate resources within a clear and inclusive organisational framework.

Latvia

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	72.0	87.0	88.0	89.0	94.0	22
DSL coverage in rural areas (as % of total population)	37.0	65.0	68.0	67.0	79.7	20
Broadband penetration (as % of population)	10.5	15.0	17.4	19.3	24.8	18
Speed — % of broadband subscriptions above 2 Mbps				81.9		13
3G+ coverage (as % of total population)			47.6			24
% of households with an internet connection	42	51	53	58	65	18
% of households with a broadband connection	23	32	40	50	56	18
% of enterprises with a (fixed) broadband access	59	57	62	62	83	23
% of population using a mobile phone via UMTS (3G) to access the internet	0	1	1	1	4	25
% of population using a laptop via wireless connection away from home/work to access the internet		3	10	9	17	20
Internet usage						
% population who are regular internet users (using the internet at least once a week)	46	52	57	61	60	13
% population who are frequent internet users (using the internet every day or almost every day)	31	37	42	47	48	14
% population who have never used the internet	45	39	34	31	30	14
Take up of internet services (as % of population)						
Looking for information about goods and services	36	39	49	50	51	
Uploading self-created content			19	34	20	
Reading online newspapers/magazines	27	18	33	46	31	
Internet banking	22	28	39	42	32	
Playing or downloading games, images, films or music	24	27		38	26	
Seeking health information on injury, disease or nutrition	12	11	24	29	33	
Looking for a job or sending a job application	11	9	16	25	15	
Doing an online course		6	8	7	4	
Looking for information about education, training or course offers		16	24	23	24	
eGovernment indicators						
% basic public services for citizens fully available online	8	25		58	66	17
% basic public services for enterprises fully available online	13	38		75	86	19
% of population using eGovernment services	25	18	16	23	30	19
% of population using eGovernment services for returning filled in forms	6	6	6	6	13	21
% of enterprises using eGovernment services	40	45	55	64	71	23
% of enterprises using eGovernment services for returning filled in forms	21	26	39	51	55	18
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)		6	8	10	11	15
eCommerce						
% population ordering goods or services for private use	8	11	16	19	37	18
% population ordering goods or services from sellers from others EU countries			5	7	8	16
% population selling goods and services (e.g. via auctions)	2	2		4	10	20
% population ordering or buying online content	2	2	1	2	10	23
eCommerce as % of total turnover of enterprises	1	2	7	5	13	20
% enterprises purchasing online	3	5	9	8	24	22
% enterprises selling online	2	2	6	4	12	23
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			36	42	41	18
Using applications for integrating internal business processes (large enterprises)			60	65	71	19
Exchanging automatically business documents with customers/suppliers			19	27	26	11
Sending/receiving e-invoices		25	20	32	23	7
Sharing information electronically with customers/suppliers on Supply Chain Management			20	23	15	5
Using analytical Customer Relation Management		10	9	11	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			2.7	16
ICT R&D expenditure by the business sector, as % of GDP	0.0	0.0			0.3	27
ICT R&D expenditure by the business sector, as % of total R&D expenditure	4.5	7.6			25.0	27
% of ICT exports on total exports		4.0	5.0			17
% of ICT imports on total imports		6.9	6.9			20
% of persons employed with ICT user skills.	19.0	20.8	21.6	23.7	18.4	4
% of persons employed with ICT specialist skills	3.3	3.3	3.2	2.9	3.2	18

16. Lithuania

Developments in the Information Society in Lithuania are rather promising. The aim of building a knowledge-based society is pursued with determination by the government, which monitors it closely through regular surveying and benchmarking of public services and best practice exercises. Performance indicators have increased in most sectors: computer and network applications in businesses and in the public administration, the electronic availability of public and administrative services to business and citizens, fixed and mobile penetration, and broadband coverage in rural areas. However, the country still has room for improvement compared with the leading European countries in developing interactive services provided by public administrations, increasing the interoperability of information systems, investing further in skills and education, and consolidating the current achievements.

In 2009, the country invested further in developing the network of public internet access points (PIAPs) and the infrastructure necessary for electronic personal identification (eID). A new eID model has been introduced to identify citizens in the national information system.

Secure electronic infrastructure has been put in place for public administrations to provide interactive electronic services. There has been progress in developing the interoperability of the information systems of public administrations through an exchange platform to organise and manage data exchange.

Lithuania is working on an update plan for Information and Knowledge Society Development in Lithuania for the period 2009–2015.

Broadband

DSL coverage is slightly below the average. The growth in broadband penetration slowed down last year, with Lithuania recording 18.9 % and 20th position in the EU. The situation is somewhat better for household connectivity. Currently 60 % of households have an internet connection, and 50 % have broadband internet. Some 63 % of broadband connections are at least 2 Mbps. The connectivity of enterprises is very low (58 % as opposed to 83 % in the EU-27), and showed only marginal progress in 2009. Wireless internet technologies are emerging: laptop use via a wireless connection outside the home or office more than doubled last year.

Internet usage

Regular and frequent use of the internet in Lithuania is getting closer to the EU average. However, at 38 %, Lithuania has an above-average proportion of the population that has never used the internet. The take-up of internet services has increased significantly over the past few years. The most popular activities are reading online newspapers, internet banking and downloading/listening to/watching music and/or films. Take-up of eCommerce by individuals lies well below the EU average.

eGovernment

In eGovernment, online availability is approaching the EU average. Business usage is higher, whereas use by individuals is lower than the average. eGovernment policy and implementation is the responsibility of the Ministry of the Interior, as an instrument of administrative reform, and has focused on improving back-office functions. The online availability of public services for citizens has doubled in the last two years, bringing Lithuania almost up to the EU average. Take-up by citizens is below the EU average and even saw a slight decline last year. Availability is higher for business services, but still below average, although take-up by enterprises exceeds the EU average by 20 pp.

Lithuania

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	83.0	87.9	88.4	88.5	94.0	23
DSL coverage in rural areas (as % of total population)	58.0	67.5	68.5	68.5	79.7	19
Broadband penetration (as % of population)	10.6	13.7	17.5	18.9	24.8	20
Speed — % of broadband subscriptions above 2 Mbps				63.2		18
3G+ coverage (as % of total population)			58.9			22
% of households with an internet connection	35	44	51	60	65	16
% of households with a broadband connection	19	34	43	50	56	19
% of enterprises with a (fixed) broadband access	57	53	56	58	83	25
% of population using a mobile phone via UMTS (3G) to access the internet	0	0	1	2	4	18
% of population using a laptop via wireless connection away from home/work to access the internet		2	3	8	17	21
Internet usage						
% population who are regular internet users (using the internet at least once a week)	38	45	50	55	60	18
% population who are frequent internet users (using the internet every day or almost every day)	23	30	38	43	48	17
% population who have never used the internet	54	49	43	38	30	19
Take up of internet services (as % of population)						
Looking for information about goods and services	30	36	37	44	51	
Uploading self-created content			8	25	20	
Reading online newspapers/magazines	30	32	43	49	31	
Internet banking	15	21	27	32	32	
Playing or downloading games, images, films or music	24	27		35	26	
Seeking health information on injury, disease or nutrition	15	19	21	29	33	
Looking for a job or sending a job application	9	10	10	15	15	
Doing an online course		5	4	8	4	
Looking for information about education, training or course offers		18	18	22	24	
eGovernment indicators						
% basic public services for citizens fully available online	25	25		50	66	20
% basic public services for enterprises fully available online	63	50		75	86	19
% of population using eGovernment services	13	18	20	19	30	22
% of population using eGovernment services for returning filled in forms	6	11	13	13	13	12
% of enterprises using eGovernment services	76	76	86	91	71	3
% of enterprises using eGovernment services for returning filled in forms	56	60	75	85	55	1
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	13	16	20	23	11	2
eCommerce						
% population ordering goods or services for private use	4	6	6	8	37	25
% population ordering goods or services from sellers from others EU countries			1	3	8	22
% population selling goods and services (e.g. via auctions)	2	1	1	2	10	22
% population ordering or buying online content	2	2	2	3	10	20
eCommerce as % of total turnover of enterprises	5	5	8	9	13	16
% enterprises purchasing online	17	18	25	21	24	12
% enterprises selling online	13	14	22	18	12	6
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			23	24	41	26
Using applications for integrating internal business processes (large enterprises)			55	53	71	26
Exchanging automatically business documents with customers/suppliers			33	21	26	18
Sending/receiving e-invoices		15	35	41	23	1
Sharing information electronically with customers/suppliers on Supply Chain Management			29	28	15	4
Using analytical Customer Relation Management		9	8	9	17	23
Indicators on the ICT sector, ICT skills and R&D						
ICT sector share of total GDP		2.7			5.0	17
ICT sector share of total employment		1.6			2.7	19
ICT R&D expenditure by the business sector, as % of GDP	0.0	0.0			0.3	22
ICT R&D expenditure by the business sector, as % of total R&D expenditure	16.5	15.3			25.0	21
% of ICT exports on total exports		4.3	3.7			23
% of ICT imports on total imports		6.4	4.7			27
% of persons employed with ICT user skills.	19.4	21.2	23.7	23.9	18.4	3
% of persons employed with ICT specialist skills	1.4	1.5	1.8	1.8	3.2	27

17. Luxembourg

The Information Society in Luxembourg is well advanced: most of the indicators are above the EU average and the government is consistently pursuing its objectives of ensuring the sustained deployment of ICT, developing infrastructures and promoting quality and security, thus placing the country among the frontrunners in the EU.

The wide deployment of eGovernment services is supported by a high-quality security infrastructure providing authentication and accreditation to enable a variety of banking and private applications requiring trust and security. The active role of ILNAS (*Institut Luxembourgeois de la Normalisation, de l'Accréditation, de la Sécurité et qualité des produits*) in this context should be mentioned.

High-speed and mobile networks have been developed further by extending 3G (to 90 % of the population), expanding WIFI, investing in high-capacity international connectivity, further deploying optical fibre to improve broadband internet service delivery, and increasing the number and capacity of host centres. The switch to digital terrestrial television was completed in 2007 and the frequencies freed up will be used for new wireless services.

Broadband

Luxembourg is one of the leading countries on several broadband indicators. It has a 100 % DSL coverage, and a broadband penetration of 31.4 % (the third highest in the EU). Some 87 % of households are connected to the internet, while 71 % have a broadband connection. Despite the high penetration figures, the market is still expanding at a higher rate than the EU average. Enterprise connectivity stands at 89 %, which is also higher than the EU average (83 %). Luxembourg has by far the highest take-up of wireless internet via laptops (44 % penetration), and ranks second in internet use on 3G mobile phones.

Internet usage

Luxembourg performs well in terms of the proportion of its population using the internet. Some 83 % of citizens are regular internet users, most accessing the internet almost every day, and only 11 % have never used the internet. The use of various internet services is also high in comparison to other EU Member States, above average for all but one activity: looking for a job or sending a job application. Luxembourg leads on two indexes: uploading self-created content and looking for information about education, training or courses. Moreover, the majority of internet users engage in eCommerce to order goods and services online. Internet users in Luxembourg are also more willing to pay for online audiovisual content.

eGovernment

Luxembourg is the leading country in Europe on Information Society indicators such as broadband and internet access and on eGovernment indicators for usage by businesses and citizens. However, online availability and sophistication are around the EU-27+ average, although rates are steadily increasing. On the other hand, the user-friendliness score is excellent. Luxembourg's comprehensive programme for supporting eGovernment and administrative reform, along with recent organisational changes, will address back-office improvements and focus on the development of specific services.

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

Luxembourg

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	100.0	100.0	100.0	100.0	94.0	1
DSL coverage in rural areas (as % of total population)	100.0	100.0	100.0	100.0	79.7	1
Broadband penetration (as % of population)	21.5	25.4	28.8	32.1	24.8	3
Speed — % of broadband subscriptions above 2 Mbps				100.0		3
3G+ coverage (as % of total population)			95.0			4
% of households with an internet connection	70	75	80	87	65	2
% of households with a broadband connection	44	58	61	71	56	5
% of enterprises with a (fixed) broadband access	76	81	87	89	83	7
% of population using a mobile phone via UMTS (3G) to access the internet	1	4	4	11	4	2
% of population using a laptop via wireless connection away from home/work to access the internet		31	31	44	17	1
Internet usage						
% population who are regular internet users (using the internet at least once a week)	65	72	77	83	60	3
% population who are frequent internet users (using the internet every day or almost every day)	47	56	65	71	48	4
% population who have never used the internet	27	20	16	11	30	4
Take up of internet services (as % of population)						
Looking for information about goods and services	64	68	69	75	51	
Uploading self-created content			15	38	20	
Reading online newspapers/magazines	29	42	41	55	31	
Internet banking	41	46	48	54	32	
Playing or downloading games, images, films or music	26	33		33	26	
Seeking health information on injury, disease or nutrition	27	48	44	54	33	
Looking for a job or sending a job application	11	14	12	13	15	
Doing an online course		3	5	6	4	
Looking for information about education, training or course offers		33	37	38	24	
eGovernment indicators						
% basic public services for citizens fully available online	8	33		64	66	14
% basic public services for enterprises fully available online	50	50		75	86	18
% of population using eGovernment services	46	52	48	54	30	4
% of population using eGovernment services for returning filled in forms	17	21	16	16	13	10
% of enterprises using eGovernment services	83	85	90	89	71	7
% of enterprises using eGovernment services for returning filled in forms	32	35	41	42	55	22
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	12	5	7	13	11	7
eCommerce						
% population ordering goods or services for private use	44	47	49	58	37	5
% population ordering goods or services from sellers from others EU countries			43	51	8	1
% population selling goods and services (e.g. via auctions)	5	12	12	15	10	8
% population ordering or buying online content	12	14	12	17	10	3
eCommerce as % of total turnover of enterprises					13	
% enterprises purchasing online	30	34	23	23	24	10
% enterprises selling online	11	13	10	9	12	17
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			49	43	41	17
Using applications for integrating internal business processes (large enterprises)			79	64	71	20
Exchanging automatically business documents with customers/suppliers			35	26	26	13
Sending/receiving e-invoices		23	24	20	23	16
Sharing information electronically with customers/suppliers on Supply Chain Management			23	21	15	7
Using analytical Customer Relation Management		13	17	17	17	11
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	18
ICT R&D expenditure by the business sector, as % of total R&D expenditure	7.6	8.9			25.0	26
% of ICT exports on total exports		12.0	13.1			8
% of ICT imports on total imports		12.1	12.3			6
% of persons employed with ICT user skills.	27.2	27.7	27.6	32.6	18.4	1
% of persons employed with ICT specialist skills	3.2	3.4	4.8	4.7	3.2	3

18. Malta

Malta is fairly advanced in ICT deployment, and compares well with a number of other countries on a wide range of indicators, in particular eGovernment and eBusiness. The government's vision to establish the island as a centre of excellence in ICT within the Euro-Mediterranean region is supported by a strong commitment, sustained efforts and focused programmes to further exploit the country's abilities in ICT, to improve its competitiveness and to tackle social inequalities.

Concerning connectivity, Malta has seen a considerable growth in internet access and usage in recent years, reaching the average for the EU-27. Computer usage has increased and more households have access to the internet. To upgrade infrastructures and international connectivity in particular, four international submarine cables were laid in 2009 and others are expected as result of a recently launched incentive scheme.

eGovernment is already well advanced and a number of services are available through the Government Portal, which also acts as a central repository and point-of-entry for public information and electronic services. The Strategic Plan 2009–2012 will deliver a new, state-of-the-art eGovernment platform designed to put all public services online by 2012. A series of projects along these lines were launched in 2009.

To cope with the digital divide, several measures have been undertaken: Blueskies subsidises household internet connection, the SmartStart and PC4NGO schemes support PC acquisition by disadvantaged groups, and there are fiscal measures ('The Computer for €0.99c/day') to help buy computers. A number of community centres have been established to offer access to broadband and various ICT training courses. Several Wi-Fi public internet access points are also freely available in public open spaces.

Broadband

Malta is above the EU average in broadband penetration, both in terms of households and enterprises. Total DSL coverage stands at 99 %. 64 % of households are connected to the internet, 98 % of which have a broadband connection. Enterprise broadband penetration is the third highest in the EU. Wireless internet markets are emerging. There was remarkable progress last year in laptop use, with penetration increasing from 4 % to 14 % (the EU average is 17 %).

Internet usage

Rates of regular and frequent internet use have been growing strongly in Malta over the past few years and are now not far off the EU average. Nevertheless, 40 % of the population has never used the internet. Take-up of internet services is close to the EU average, except for uploading self-created content and selling online, which are less-developed activities. eCommerce uptake by individuals is quite good and buying from other EU countries is popular, as could be expected in a small country.

eGovernment

Malta has an ambitious and comprehensive strategy for reforming government and the economy. It has shown significant progress on Information Society indictors, and is performing above the EU average. Its eGovernment performance has been remarkable in achieving full online availability, for both citizens and enterprises, and high sophistication and user-experience scores. This drive is only partly reflected in eGovernment usage by businesses, while take-up by citizens has stalled slightly below the EU average. While an above-average proportion of enterprises use online public services (79 %, compared to an EU average of 71 %), use by citizens is relatively low. Malta's eGovernment policy is only one out of seven Information Society policy areas that all fall under the responsibility of the Ministry for Infrastructure, Transport and Communication (MITC) and its executive Agency MITA. Service delivery is through trusted third parties.

Malta

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	99.0	99.0	99.0	99.0	94.0	7
DSL coverage in rural areas (as % of total population)				n.a.	79.7	
Broadband penetration (as % of population)	12.5	16.9	23.9	26.8	24.8	10
Speed — % of broadband subscriptions above 2 Mbps				97.5		5
3G+ coverage (as % of total population)			100.0			1
% of households with an internet connection	53	54	59	64	65	11
% of households with a broadband connection	41	44	55	63	56	9
% of enterprises with a (fixed) broadband access	83	89	89	93	83	3
% of population using a mobile phone via UMTS (3G) to access the internet	0	0	2	2	4	21
% of population using a laptop via wireless connection away from home/work to access the internet		4	4	14	17	16
Internet usage						
% population who are regular internet users (using the internet at least once a week)	36	43	46	55	60	17
% population who are frequent internet users (using the internet every day or almost every day)	26	34	36	45	48	16
% population who have never used the internet	58	51	49	40	30	21
Take up of internet services (as % of population)						
Looking for information about goods and services	26	34	42	48	51	
Uploading self-created content			5	9	20	
Reading online newspapers/magazines	17	20	27	32	31	
Internet banking	16	22	25	32	32	
Playing or downloading games, images, films or music	17	19		28	26	
Seeking health information on injury, disease or nutrition	18	20	23	30	33	
Looking for a job or sending a job application	8	10	10	14	15	
Doing an online course		3	2	4	4	
Looking for information about education, training or course offers		20	22	26	24	
eGovernment indicators						
% basic public services for citizens fully available online	83	92		100	66	1
% basic public services for enterprises fully available online	63	100		100	86	1
% of population using eGovernment services	17	25	20	24	30	17
% of population using eGovernment services for returning filled in forms	4	9	7	10	13	17
% of enterprises using eGovernment services	67	77	74	79	71	14
% of enterprises using eGovernment services for returning filled in forms	35	49	46	51	55	19
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	9	11	7	11	11	13
eCommerce						
% population ordering goods or services for private use	14	20	22	34	37	12
% population ordering goods or services from sellers from others EU countries			17	29	8	2
% population selling goods and services (e.g. via auctions)	3	7	5	4	10	19
% population ordering or buying online content	5	7	5	6	10	11
eCommerce as % of total turnover of enterprises			22	12	13	12
% enterprises purchasing online	25	27	13	19	24	15
% enterprises selling online	14	16	13	12	12	12
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			58	57	41	5
Using applications for integrating internal business processes (large enterprises)			72	83	71	7
Exchanging automatically business documents with customers/suppliers			28	32	26	8
Sending/receiving e-invoices		24	25	27	23	10
Sharing information electronically with customers/suppliers on Supply Chain Management			19	19	15	9
Using analytical Customer Relation Management		22	19	20	17	7
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	0.2	0.2			0.3	12
ICT R&D expenditure by the business sector, as % of total R&D expenditure	37.2	48.2			25.0	2
% of ICT exports on total exports		23.5	20.5			3
% of ICT imports on total imports		18.8	15.9			3
% of persons employed with ICT user skills.	20.8	21.2	21.8	22.8	18.4	6
% of persons employed with ICT specialist skills	2.9	3.4	3.2	3.1	3.2	12

19. The Netherlands

The Netherlands continues to be at the forefront of progress in the Information Society and achieves good scores on most of the relevant indicators. As in previous years, the government focused in 2009 on strengthening innovation and knowledge intensiveness because of the crucial importance of these factors for the growth of the Dutch economy.

ICT in education is strongly promoted: there is one computer for every six pupils, the number of schools with broadband internet access over optical fibre is increasing rapidly, a great deal of research is done on new, innovative ICT applications for education, and the development and use of open digital resources is being promoted, for instance as part of the free school books initiative.

eGovernment services — already widely developed — are being further boosted by the National Implementation Programme (NUP) for Better Services and eGovernment (signed in December 2008), which sets out agreements between the national government, provinces, municipalities and water boards to make targeted use of the potential already offered by the eGovernment infrastructure for providing better services to society.

A key portal was launched in 2009 for businesses to ask the government about legislation, subsidies, and permits 24 hours a day, 7 days a week. In 2010, it will be possible to apply for subsidies and permits directly via the website.

Broadband

The Netherlands is one of the world leaders in broadband, and now stands second in the EU with 37.7 % penetration. DSL coverage is virtually complete. The Netherlands has the highest connectivity of households in the EU (90 %), while broadband household penetration is higher only in Denmark. Where enterprise connectivity is concerned, there has not been any significant change since 2007, with penetration standing at 87 %, slightly above the EU average of 83 %. Wireless internet is well established, although the Netherlands is not among the best-performing countries in this area.

Internet usage

Good connectivity has translated into a high proportion of internet users and growth in the use of advanced services. Some 86 % of Dutch citizens access the internet at least weekly, while 73 % do so almost daily, well above the EU-27 average. Furthermore, only 10 % of the population has never used the internet, as compared to 30 % for the EU as a whole. The Netherlands is also leading the way in the take-up of internet services, with well above-average rates of use for all indicators. The majority of internet users buy goods and services online and other indicators of eCommerce use by individuals are above average.

eGovernment

The Netherlands' eGovernment performance shows a more mixed picture, with close to average online availability, sophistication and user-friendliness scores and high rates of business and individual use of eGovernment. The Netherlands is a mature Information Society with traditionally high internet use and broadband penetration; thus providing a strong environment for the deployment of eGovernment. eGovernment is part of the country's wider ICT strategy with a focus on delivering new services in a more efficient way and reducing administrative burden by investing in shared facilitating services and infrastructure. eGovernment is mostly the responsibility of the Ministry of the Interior, with a number of advisory and coordination forums and two executive agencies. The Netherlands is an active contributor to EU projects.

The Netherlands

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	99.0	99.0	99.0	99.0	94.0	7
DSL coverage in rural areas (as % of total population)	99.0	99.0	99.0	99.0	79.7	6
Broadband penetration (as % of population)	31.8	34.2	36.2	37.7	24.8	2
Speed — % of broadband subscriptions above 2 Mbps						
3G+ coverage (as % of total population)			98.7			3
% of households with an internet connection	80	83	86	90	65	1
% of households with a broadband connection	66	74	74	77	56	2
% of enterprises with a (fixed) broadband access	82	87	86	87	83	8
% of population using a mobile phone via UMTS (3G) to access the internet	1	4	4	6	4	9
% of population using a laptop via wireless connection away from home/work to access the internet		12	16	18	17	10
Internet usage						
% population who are regular internet users (using the internet at least once a week)	76	81	83	86	60	1
% population who are frequent internet users (using the internet every day or almost every day)	61	66	67	73	48	2
% population who have never used the internet	16	13	11	10	30	2
Take up of internet services (as % of population)						
Looking for information about goods and services	73	76	76	79	51	
Uploading self-created content			19	26	20	
Reading online newspapers/magazines	36	40	43	46	31	
Internet banking	59	65	69	73	32	
Playing or downloading games, images, films or music	42	45		49	26	
Seeking health information on injury, disease or nutrition	45	45	46	50	33	
Looking for a job or sending a job application	19	19	17	17	15	
Doing an online course		3	4	5	4	
Looking for information about education, training or course offers		28	28	28	24	
eGovernment indicators						
% basic public services for citizens fully available online	36	55		82	66	9
% basic public services for enterprises fully available online	75	75		75	86	19
% of population using eGovernment services	52	55	54	55	30	3
% of population using eGovernment services for returning filled in forms	30	33	32	33	13	2
% of enterprises using eGovernment services	70	81	85	83	71	9
% of enterprises using eGovernment services for returning filled in forms	61	73	75	74	55	4
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	5	6	6	7	11	21
eCommerce						
% population ordering goods or services for private use	48	55	56	63	37	4
% population ordering goods or services from sellers from others EU countries			10	12	8	8
% population selling goods and services (e.g. via auctions)	18	20	23	18	10	4
% population ordering or buying online content	8	11	30	13	10	5
eCommerce as % of total turnover of enterprises			14	13	13	10
% enterprises purchasing online	32	36	40	37	24	5
% enterprises selling online	23	26	27	22	12	1
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			69	57	41	4
Using applications for integrating internal business processes (large enterprises)			83	80	71	9
Exchanging automatically business documents with customers/suppliers			34	41	26	1
Sending/receiving e-invoices		11	29	34	23	5
Sharing information electronically with customers/suppliers on Supply Chain Management			13	14	15	16
Using analytical Customer Relation Management		14	20	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	3.4	3.4			2.7	6
ICT R&D expenditure by the business sector, as % of GDP	0.3	0.3			0.3	8
ICT R&D expenditure by the business sector, as % of total R&D expenditure	33.6	30.3			25.0	8
% of ICT exports on total exports		18.4	16.6			6
% of ICT imports on total imports		19.4	17.8			1
% of persons employed with ICT user skills.	19.8	19.7	20.3	20.1	18.4	6
% of persons employed with ICT specialist skills	3.9	3.9	4.0	4.0	3.2	12

20. Poland

The Information Society in Poland is still lagging behind, with scores on the majority of indicators at the bottom of the EU rankings. However, Poland is taking active steps through a national ICT strategy: 'Strategy for Information Society Development till 2013'. In 2009, progress was made in a variety of domains:

- the telecom law was updated;
- procedures were simplified for businesses to get funding for ICT investment;
- a strategy for education was devised to mainstream ICT skills in the learning process;
- the government started drafting legislation to support investment in services and broadband infrastructure.

Broadband

Poland is lagging behind on all broadband internet indicators. Total DSL coverage is relatively low, which partly explains the low broadband penetration (13.5 %, the third lowest in the EU). Nevertheless, household connectivity went up from 48 % to 59 % in 2009. Some 86 % of connected households have a broadband subscription as opposed to 79 % a year ago. Enterprise connectivity is one of the lowest in the EU, and there was not much progress in 2009. Wireless internet markets are catching up, although they are still below the EU average.

Internet usage

While growing steadily over the past few years, rates of regular and frequent internet use in Poland are still relatively low compared to the EU average. Furthermore, there are as many people who have never used the internet (39 %) as there are frequent users. Correspondingly, rates of internet service use are also relatively low. While the use of eCommerce by individuals is below the EU average, almost a quarter of the population now order goods and services over the internet.

eGovernment

Poland has made progress on most Information Society indicators, but is still at the low end of the rankings in the EU. The picture is similar for eGovernment. While the online availability and sophistication of services for businesses is relatively high, with a significant increase since 2007, services for citizens tend to lag behind. Usage by citizens is still too low in comparison with the EU average, while use by businesses has almost reached the EU average, even though it fell by 3 pp the last year. Responsibility for eGovernment is concentrated in the Ministry of the Interior and is part of a wider Information Society strategy. eGovernment policy focuses on improving basic infrastructure across all levels of government.

Poland

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	67.1	64.0	69.6	74.5	94.0	26
DSL coverage in rural areas (as % of total population)	54.8	42.5	42.5	52.0	79.7	23
Broadband penetration (as % of population)	5.2	8.4	11.8	13.5	24.8	25
Speed — % of broadband subscriptions above 2 Mbps				33.6		22
3G+ coverage (as % of total population)			19.2			25
% of households with an internet connection	36	41	48	59	65	17
% of households with a broadband connection	22	30	38	51	56	16
% of enterprises with a (fixed) broadband access	46	53	59	58	83	24
% of population using a mobile phone via UMTS (3G) to access the internet	0	1	1	2	4	19
% of population using a laptop via wireless connection away from home/work to access the internet		3	6	10	17	19
Internet usage						
% population who are regular internet users (using the internet at least once a week)	34	39	44	52	60	21
% population who are frequent internet users (using the internet every day or almost every day)	22	27	32	39	48	21
% population who have never used the internet	52	48	44	39	30	20
Take up of internet services (as % of population)						
Looking for information about goods and services	25	27	33	29	51	
Uploading self-created content			7	11	20	
Reading online newspapers/magazines	16	15	19	18	31	
Internet banking	9	13	17	21	32	
Playing or downloading games, images, films or music	16	17		20	26	
Seeking health information on injury, disease or nutrition	11	13	19	22	33	
Looking for a job or sending a job application	7	7	8	9	15	
Doing an online course			2	1	4	
Looking for information about education, training or course offers		10	13	12	24	
eGovernment indicators						
% basic public services for citizens fully available online	8	17		27	66	25
% basic public services for enterprises fully available online	38	38		88	86	9
% of population using eGovernment services		15	16	18	30	23
% of population using eGovernment services for returning filled in forms		4	5	5	13	22
% of enterprises using eGovernment services	61	64	68	61	71	24
% of enterprises using eGovernment services for returning filled in forms	56	56	60	57	55	15
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	7	8	6	7	11	24
eCommerce						
% population ordering goods or services for private use	12	16	18	23	37	16
% population ordering goods or services from sellers from others EU countries				2	8	25
% population selling goods and services (e.g. via auctions)	5	5	7	6	10	11
% population ordering or buying online content	6	6	5	5	10	13
eCommerce as % of total turnover of enterprises	6	6	9	7	13	17
% enterprises purchasing online	16	13	11		24	25
% enterprises selling online	9	9	8	5	12	22
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			24	25	41	25
Using applications for integrating internal business processes (large enterprises)			58	60	71	22
Exchanging automatically business documents with customers/suppliers			26	25	26	14
Sending/receiving e-invoices		8	11	12	23	20
Sharing information electronically with customers/suppliers on Supply Chain Management			14	13	15	19
Using analytical Customer Relation Management		12	12	14	17	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	0.0	0.0			0.3	25
ICT R&D expenditure by the business sector, as % of total R&D expenditure	13.2	13.0			25.0	24
% of ICT exports on total exports		5.7	6.7			12
% of ICT imports on total imports		9.0	9.5			10
% of persons employed with ICT user skills.	15.0	15.1	15.5	16.2	18.4	26
% of persons employed with ICT specialist skills	2.8	2.8	2.8	2.8	3.2	22

21. Portugal

Portugal continues to progress in Information Society development, in particular in the areas of eGovernment, eBusiness and eCommerce.

2009 saw important developments in the area of eScience and eEducation: the RCTS (Science, Technology and Society Network) was connected to the European network Geant2 at 10 Gbps, with its own fibre optic connections reaching about 80 % of the country's higher education institutions (measured by the number of students enrolled). As a result, Portugal now has one of the most advanced European research and education networks, integrating advanced eScience services such as:

- the Online Scientific Library — the 'Web of Knowledge' — and the Portuguese Scientific Open Access Repository, which brings together the entire country's open-access repositories in the science field within a national system for integrated research;
- an integrated national Virtual Campus with broadband wireless access from over 5 000 access points providing academic services and teaching content;
- video broadcasting and recording of scientific meetings;
- high-definition videoconferencing for higher education institutions;
- voice over IP, which provides cost-free telephone communications across the entire public higher education system.

In addition, the number of computers and internet connections in basic and secondary education has been increased and all primary and secondary public schools have a broadband connection.

Developments in network infrastructure include the construction of open multi-operator networks with over 1 200 km of optical fibre cable, also in rural areas.

Broadband

Despite the high availability of DSL, fixed broadband penetration is relatively low in Portugal (18.6 %), standing in 22nd place in the EU. Nevertheless, 98 % of connections are at least 2 Mbps. Household connectivity went up only by 2 pp in 2009, and stands at 48 %. A positive development here is that 96 % of connected households have a broadband connection. Despite the low figures for fixed broadband among households, fixed broadband penetration among enterprises has made significant progress since 2006, and exceeded the EU average in 2009. Wireless internet markets are developing at a high rate: both laptop and 3G mobile phone use are above average and Portugal is one of the leading countries in mobile broadband.

Internet usage

Portugal has one of the lowest rates of regular and frequent internet use in the EU, and half of the population has never used the internet. Overall usage of online services is also relatively low. The main exception is use of the internet for seeking information about education and training, which at 27 % of the population is well above the EU average of 24 %. Take-up of eCommerce by individuals is underdeveloped and is only growing very slowly, though if other electronic means such as ATMs are taken into account, the percentage of eCommerce users is higher.

eGovernment

Portugal has made substantial efforts to provide all public services online. As a result, it is one of the leading countries in Europe. However, this success in the supply of electronic services stands in contrast with the low usage of eGovernment by citizens (though the percentage of the population returning completed forms through eGovernment services is the 9th highest in the EU). On the other hand, usage by enterprises stands above the EU average. This is likely to be due to the high share of the population without a completed secondary education. Portugal's broad drive to improve competitiveness through ICT deployment and administrative simplification is poised to improve this situation.

Portugal

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	94.0	95.0	95.0	96.2	94.0	10
DSL coverage in rural areas (as % of total population)	84.0	86.0	86.0	89.0	79.7	11
Broadband penetration (as % of population)	13.9	15.1	16.5	18.6	24.8	22
Speed — % of broadband subscriptions above 2 Mbps				98.2		4
3G+ coverage (as % of total population)			60.0			20
% of households with an internet connection	35	40	46	48	65	24
% of households with a broadband connection	24	30	39	46	56	22
% of enterprises with a (fixed) broadband access	66	76	81	85	83	12
% of population using a mobile phone via UMTS (3G) to access the internet	1	3	5	6	4	10
% of population using a laptop via wireless connection away from home/work to access the internet		8	16	23	17	8
Internet usage						
% population who are regular internet users (using the internet at least once a week)	31	35	38	42	60	23
% population who are frequent internet users (using the internet every day or almost every day)	22	27	29	33	48	24
% population who have never used the internet	60	56	54	50	30	24
Take up of internet services (as % of population)						
Looking for information about goods and services	30	33	34	40	51	
Uploading self-created content			7	12	20	
Reading online newspapers/magazines	16	15	20	28	31	
Internet banking	10	12	14	17	32	
Playing or downloading games, images, films or music	16	21		20	26	
Seeking health information on injury, disease or nutrition	14	18	22	28	33	
Looking for a job or sending a job application	5	6	8	10	15	
Doing an online course		1	2	2	4	
Looking for information about education, training or course offers		15	23	27	24	
eGovernment indicators						
% basic public services for citizens fully available online	42	83		100	66	1
% basic public services for enterprises fully available online	88	100		100	86	1
% of population using eGovernment services	17	19	18	21	30	21
% of population using eGovernment services for returning filled in forms	11	13	13	16	13	9
% of enterprises using eGovernment services	60	72	75	77	71	15
% of enterprises using eGovernment services for returning filled in forms	54	66	68	70	55	5
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	10	9	14	17	11	3
eCommerce						
% population ordering goods or services for private use	7	9	10	13	37	22
% population ordering goods or services from sellers from others EU countries			4	6	8	18
% population selling goods and services (e.g. via auctions)	1			1	10	23
% population ordering or buying online content	1	1	3	3	10	17
eCommerce as % of total turnover of enterprises	8	7	12	12	13	11
% enterprises purchasing online	14	12	20	19	24	14
% enterprises selling online	7	9	19	16	12	8
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			53	55	41	6
Using applications for integrating internal business processes (large enterprises)			82	82	71	8
Exchanging automatically business documents with customers/suppliers			39	32	26	7
Sending/receiving e-invoices		14	24	23	23	13
Sharing information electronically with customers/suppliers on Supply Chain Management			31	31	15	2
Using analytical Customer Relation Management		15	16	15	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	0.1	0.2			0.3	14
ICT R&D expenditure by the business sector, as % of total R&D expenditure	24.8	24.3			25.0	12
% of ICT exports on total exports		7.2	6.6			15
% of ICT imports on total imports		9.2	8.5			13
% of persons employed with ICT user skills.	12.2	11.6	11.9	12.4	18.4	25
% of persons employed with ICT specialist skills	2.7	2.8	2.7	2.9	3.2	19

22. Romania

Romania is still lagging behind in the implementation of the Information Society. However, developments in eGovernment and eCommerce are continuing.

Progress has been made in universal service provision for the inhabitants of isolated communities: in 2009, 215 telecentres were installed. A total of 626 telecentres were installed in remote villages during the period 2005–2009. This has given around 380 000 people access to telephone, internet and fax services and allowed them to make calls to the national emergency number 112.

In April 2009, the 'Government strategy on broadband electronic communications in Romania for the period 2009–2015' was adopted. The strategy includes measures to ensure access to broadband services, provide relevant content and establish the preconditions necessary for information, education and security.

Broadband

Romania is one of the most underdeveloped markets in the EU where fixed broadband is concerned. Penetration is growing only slowly, and stands at 13 %, which is the second lowest in the EU. In order to resolve this problem, the Romanian government has launched a National Strategy for Broadband Development with the aim of increasing the household penetration rate to 40 % by 2010 and up to 80 % by 2015. Broadband coverage is still limited, particularly in rural areas, translating into low take-up of broadband by both households and enterprises. On the other hand, 87 % of all broadband subscriptions are fast (at least 2 Mb/s). Nonetheless, only 38 % of households have an internet connection, and only 24 % a broadband connection. These unsatisfactory penetration and usage rates are mainly due the significant share of the rural population (45 % of the Romanian population), which is characterised by low income and low PC penetration. Wireless internet take-up is also very low.

Internet usage

Low connectivity is reflected in low rates of internet usage. Despite a gradual increase over the past few years, Romania has the lowest rates of regular and frequent internet use in the EU. In addition, a majority of Romanian citizens (61 %) have never used the internet. On the whole, most internet services are used to a significantly lesser degree than on average in the EU, including eCommerce.

eGovernment

Romania has shown some progress on Information Society indicators, such as internet access and broadband availability. Where eGovernment is concerned, the online availability of public services has increased, but usage by business is stalling and take-up by citizens remains limited. A positive development is the use of eProcurement, 1 pp above the average.

Romania's eGovernment strategy forms part of a wider Information Society policy with the aim of modernising Romania's administration and the economy. The Romanian government has a separate ministry for ICT in administration and has recently reviewed its policy and organisation to increase the speed and effectiveness of eGovernment deployment.

Romania

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)			67.6	74.0	94.0	27
DSL coverage in rural areas (as % of total population)			34.0	45.0	79.7	24
Broadband penetration (as % of population)	5.0	9.0	11.7	13.0	24.8	26
Speed — % of broadband subscriptions above 2 Mbps						25
3G+ coverage (as % of total population)			30.0			24
% of households with an internet connection	14	22	30	38	65	26
% of households with a broadband connection	5	8	13	24	56	27
% of enterprises with a (fixed) broadband access	31	37	44	41	83	26
% of population using a mobile phone via UMTS (3G) to access the internet	0	0	1	0	4	
% of population using a laptop via wireless connection away from home/work to access the internet		1	2	2	17	27
Internet usage						
% population who are regular internet users (using the internet at least once a week)	18	22	26	31	60	27
% population who are frequent internet users (using the internet every day or almost every day)	9	12	15	19	48	27
% population who have never used the internet	74	69	64	62	30	27
Take up of internet services (as % of population)						
Looking for information about goods and services	10	12	17	12	51	
Uploading self-created content			5	14	20	
Reading online newspapers/magazines	7	9	14	21	31	
Internet banking	1	2	2	2	32	
Playing or downloading games, images, films or music	11	12		21	26	
Seeking health information on injury, disease or nutrition	5	6	11	16	33	
Looking for a job or sending a job application	3	3	3	5	15	
Doing an online course		1	1	3	4	
Looking for information about education, training or course offers		8	11	14	24	
eGovernment indicators						
% basic public services for citizens fully available online		8		25	66	26
% basic public services for enterprises fully available online		75		75	86	19
% of population using eGovernment services	3	5	9	6	30	27
% of population using eGovernment services for returning filled in forms	1	2	3	3	13	27
% of enterprises using eGovernment services	39	42	39	41	71	26
% of enterprises using eGovernment services for returning filled in forms	13	20	23	25	55	25
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	6	8	10	12	11	10
eCommerce						
% population ordering goods or services for private use	1	3	4	2	37	27
% population ordering goods or services from sellers from others EU countries			1	1	8	27
% population selling goods and services (e.g. via auctions)	0	1	1	1	10	24
% population ordering or buying online content	1	2	3	1	10	24
eCommerce as % of total turnover of enterprises	1	2	2	2	13	21
% enterprises purchasing online		8	4	5	24	24
% enterprises selling online	2	3	3	3	12	26
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			28	31	41	22
Using applications for integrating internal business processes (large enterprises)			53	55	71	25
Exchanging automatically business documents with customers/suppliers			18	18	26	21
Sending/receiving e-invoices		15	11	12	23	21
Sharing information electronically with customers/suppliers on Supply Chain Management			7	10	15	24
Using analytical Customer Relation Management		14		13	17	19
Indicators on the ICT sector, ICT skills and R&D						
ICT sector share of total GDP	3.6				5.0	
ICT sector share of total employment	1.5	1.7			2.7	18
ICT R&D expenditure by the business sector, as % of GDP	0.0	0.0			0.3	24
ICT R&D expenditure by the business sector, as % of total R&D expenditure	11.6	13.2			25.0	23
% of ICT exports on total exports		5.4	7.0			11
% of ICT imports on total imports		8.2	8.4			14
% of persons employed with ICT user skills.	8.7	9.1	9.6	9.5	18.4	27
% of persons employed with ICT specialist skills	2.4	2.5	2.5	2.4	3.2	25

23. Slovakia

The Information Society in Slovakia is progressing well, though is lagging in some important areas. There has been a significant expansion in the number of households connected to the internet through mobile networks, which increases population access to the internet. Overall coverage in Slovakia, nevertheless, remains low and the lack of quality electronic services affects rural areas in particular.

An important step towards building electronic government services in Slovakia is the National Strategy for the Informatisation of the Public Administration, which is the basic strategic document in the field of general government information systems. This is complemented by the National Strategy for Information Security, which aims to create the conditions for strengthening information security and personal data protection.

To develop a high-quality communications infrastructure, the Government approved in May 2009 the National Policy for Electronic Communication for 2009–2013. This national policy sets out the strategy for the development of electronic communication networks and services in Slovakia, in particular harmonisation of the regulatory framework, the development of competition, use of the frequency spectrum, privacy protection and security, crisis management and critical infrastructure, international cooperation and the development of innovative services.

Important progress has been made in the expansion of eProcurement and in raising equipment levels, ICT skills among teachers and innovative content in schools.

Broadband

Broadband penetration has made substantial progress, growing by 36 % last year (from 10.9 % to 14.8 %), meaning that Slovakia is starting to catch up. However, it still has the fourth lowest rate in the EU. Slovakia is close to the EU average in household connectivity, but broadband represents only 68 % of total connections. Enterprise connectivity has not progressed much since 2007, and remains below the EU average. Wireless internet technologies are relatively well advanced, especially 3G phone use for accessing the internet, which is the third best in the EU.

Internet usage

Despite the absence of widespread broadband networks, there are somewhat more regular and frequent internet users in Slovakia than on average in the EU. At 22 %, Slovakia also has a lower proportion of the population who have never used the internet. The picture with regard to the take-up of internet services is rather mixed. While the proportion of the population using services such as looking for information about goods and services, reading online newspapers/magazines, looking for a job or sending a job application, and downloading, listening to/watching music and/or films is close to the average or slightly above, the proportion of the population using other services is relatively low. Take-up of eCommerce by individuals is also below average.

eGovernment

Slovakia experiences high eGovernment use by businesses and average use by citizens. In particular, Slovakian enterprises have one of the second highest rates of eGovernment take-up in the EU.

Online availability and sophistication levels remain low for citizens but are now above the average for enterprises. Slovakia's eGovernment policy is part of a wider Information Society strategy, which focuses on the deployment of ICT ('informatisation of society') in government and society as a whole and on improving the back-office infrastructure of the public administration.

Slovakia

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	65.7	73.9	77.9	82.0	94.0	25
DSL coverage in rural areas (as % of total population)	29.5	38.5	43.5	54.0	79.7	22
Broadband penetration (as % of population)	5.2	8.8	10.9	14.8	24.8	24
Speed — % of broadband subscriptions above 2 Mbps				81.2		14
3G+ coverage (as % of total population)			62.3			18
% of households with an internet connection	27	46	58	62	65	15
% of households with a broadband connection	11	27	35	42	56	23
% of enterprises with a (fixed) broadband access	61	76	79	78	83	18
% of population using a mobile phone via UMTS (3G) to access the internet	0	3	5	10	4	3
% of population using a laptop via wireless connection away from home/work to access the internet		4	9	16	17	13
Internet usage						
% population who are regular internet users (using the internet at least once a week)	43	51	62	66	60	11
% population who are frequent internet users (using the internet every day or almost every day)	26	33	44	49	48	11
% population who have never used the internet	41	35	25	22	30	9
Take up of internet services (as % of population)						
Looking for information about goods and services	33	39	49	50	51	
Uploading self-created content			4	7	20	
Reading online newspapers/magazines	25	25	34	35	31	
Internet banking	13	15	24	26	32	
Playing or downloading games, images, films or music	18	23		31	26	
Seeking health information on injury, disease or nutrition	14	16	25	30	33	
Looking for a job or sending a job application	10	11	13	16	15	
Doing an online course		1	1	1	4	
Looking for information about education, training or course offers		5	11	11	24	
eGovernment indicators						
% basic public services for citizens fully available online	8	17		33	66	21
% basic public services for enterprises fully available online	38	63		88	86	9
% of population using eGovernment services	32	24	30	31	30	12
% of population using eGovernment services for returning filled in forms	7	8	12	13	13	11
% of enterprises using eGovernment services	77	85	88	92	71	2
% of enterprises using eGovernment services for returning filled in forms	45	56	51	59	55	12
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	4	6	7	8	11	19
eCommerce						
% population ordering goods or services for private use	11	16	23	28	37	13
% population ordering goods or services from sellers from others EU countries			5	8	8	15
% population selling goods and services (e.g. via auctions)	2	2	5	3	10	21
% population ordering or buying online content	5	6	6	9	10	8
eCommerce as % of total turnover of enterprises		3	8	12	13	13
% enterprises purchasing online		8	9	12	24	21
% enterprises selling online		5	5	6	12	21
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			45	51	41	8
Using applications for integrating internal business processes (large enterprises)			76	72	71	15
Exchanging automatically business documents with customers/suppliers			36	40	26	3
Sending/receiving e-invoices		14	23	31	23	8
Sharing information electronically with customers/suppliers on Supply Chain Management			20	29	15	3
Using analytical Customer Relation Management		11	13	19	17	9
Indicators on the ICT sector, ICT skills and R&D						
ICT sector share of total GDP	4.7	4.8			5.0	8
ICT sector share of total employment	2.7	2.9			2.7	10
ICT R&D expenditure by the business sector, as % of GDP	0.0	0.0			0.3	26
ICT R&D expenditure by the business sector, as % of total R&D expenditure	8.9	10.1			25.0	25
% of ICT exports on total exports		14.9	17.1			5
% of ICT imports on total imports		15.3	15.3			4
% of persons employed with ICT user skills.	15.4	15.6	15.9	16.8	18.4	21
% of persons employed with ICT specialist skills	3.3	3.5	3.2	3.1	3.2	13

24. Slovenia

The Information Society has been making consistent progress in Slovenia. Around 60 innovative eContent projects have been financed to strengthen the use of online content and ICT in public services, SMEs, households and NGOs.

As part of the package of public sector reforms, the digitisation of public administration procedures and services (public works contracts, archives, justice, healthcare, social services, etc.) is progressing steadily. In addition, the modernisation and rationalisation of the civil service is continuing (also as part of the anti-crisis measures), and changes will be made to the training and development of civil servants.

Concerning eGovernment for businesses, the e-VEM portal for companies, launched in 2008, was brought fully online in 2009. The main purpose of the portal is to provide information support for future entrepreneurs and enable them start their businesses within the shortest time possible.

In the field of eLearning, and in accordance with the principle of lifelong learning, progress has been made in the area of ICT skills among the population, also for employment and job preservation.

Broadband

Total DSL coverage is slightly lower, but rural coverage is higher than the EU average in Slovenia. The growth in broadband penetration slowed down last year, and stands at 22.9 % compared with the EU average of 24.8 %. Household and enterprise connectivity is very close to the EU average. As for connection speeds, despite the progress made, there is still room for improvement, as only a minority of broadband subscribers have speeds of at least 2 Mb/s. Wireless broadband development shows a mixed picture, with a relative large market for 3G internet via mobile phones but a low take-up of wireless internet on laptops.

Internet usage

There are slightly fewer regular and frequent internet users in Slovenia than on average in the EU. Similarly, a somewhat larger proportion of the population has never used the internet. Most indicators measuring the take-up of internet services are also around the EU average, including most eCommerce indicators.

eGovernment

Slovenia has excelled in bringing public services fully online, giving it a leading position in the benchmark for citizens. Business uptake of eGovernment is also high, while use by citizens is around the EU average. eGovernment is the responsibility of the Ministry of Public Administration, with the focus on back-office reform and infrastructure. Currently the strategy is being refocused to improve user satisfaction.

Slovenia

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	88.2	92.2	92.2	93.0	94.0	17
DSL coverage in rural areas (as % of total population)	78.5	85.5	82.6	85.0	79.7	13
Broadband penetration (as % of population)	14.0	17.3	21.0	22.9	24.8	12
Speed — % of broadband subscriptions above 2 Mbps				36.1		21
3G+ coverage (as % of total population)						
% of households with an internet connection	54	58	59	64	65	12
% of households with a broadband connection	34	44	50	56	56	13
% of enterprises with a (fixed) broadband access	75	79	84	85	83	11
% of population using a mobile phone via UMTS (3G) to access the internet	3	5	6	9	4	6
% of population using a laptop via wireless connection away from home/work to access the internet		6	8	11	17	18
Internet usage						
% population who are regular internet users (using the internet at least once a week)	47	49	52	58	60	15
% population who are frequent internet users (using the internet every day or almost every day)	36	38	40	47	48	13
% population who have never used the internet	43	39	40	33	30	16
Take up of internet services (as % of population)						
Looking for information about goods and services	42	47	48	49	51	
Uploading self-created content			10	23	20	
Reading online newspapers/magazines	24	23	34	34	31	
Internet banking	16	19	21	24	32	
Playing or downloading games, images, films or music	21	25		27	26	
Seeking health information on injury, disease or nutrition	22	26	27	32	33	
Looking for a job or sending a job application	9	11	10	12	15	
Doing an online course		2	3	3	4	
Looking for information about education, training or course offers		18	22	21	24	
eGovernment indicators						
% basic public services for citizens fully available online	58	92		100	66	1
% basic public services for enterprises fully available online	75	88		88	86	9
% of population using eGovernment services	30	30	31	32	30	11
% of population using eGovernment services for returning filled in forms	6	6	7	8	13	20
% of enterprises using eGovernment services	75	83	88	89	71	5
% of enterprises using eGovernment services for returning filled in forms	49	61	69	75	55	3
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	4	5	11	9	11	17
eCommerce						
% population ordering goods or services for private use	13	16	18	24	37	14
% population ordering goods or services from sellers from others EU countries			6	9	8	14
% population selling goods and services (e.g. via auctions)	8	9	17	19	10	3
% population ordering or buying online content	4	2	2	3	10	16
eCommerce as % of total turnover of enterprises	9	9		13	13	9
% enterprises purchasing online	18	21	15	20	24	13
% enterprises selling online	11		8	11	12	14
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			47	43	41	16
Using applications for integrating internal business processes (large enterprises)			75	78	71	11
Exchanging automatically business documents with customers/suppliers			26	24	26	15
Sending/receiving e-invoices		7	8	9	23	23
Sharing information electronically with customers/suppliers on Supply Chain Management			27	19	15	10
Using analytical Customer Relation Management		14	9	12	17	20
Indicators on the ICT sector, ICT skills and R&D						
ICT sector share of total GDP		4.1			5.0	12
ICT sector share of total employment		2.7			2.7	11
ICT R&D expenditure by the business sector, as % of GDP	0.2	0.1			0.3	15
ICT R&D expenditure by the business sector, as % of total R&D expenditure	16.7	17.1			25.0	19
% of ICT exports on total exports		2.4	3.5			24
% of ICT imports on total imports		5.2	5.8			22
% of persons employed with ICT user skills.	19.0	19.1	20.6	21.6	18.4	7
% of persons employed with ICT specialist skills	2.9	2.9	2.9	3.0	3.2	16

25. Spain

Deployment of the Information Society in Spain is progressing, but there is still room for improvement. The Avanza Plan is bringing about a change of mentality among Spanish citizens and businesses, so that ICT is increasingly being seen as crucial for development.

The Avanza Plan — with more than € 12 bn being spent over 5 years — has produced visible results:

- Internet usage by individuals has increased markedly along with the number of Spanish companies having a broadband connection;
- 99 % of schools have been equipped with ICT resources;
- third-generation mobile telephony (UMTS) has more than three million users;
- in eHealth: 97 % of primary care physicians have electronic access to the records of their patients; ICT infrastructure has been upgraded in more than 6 000 medical centres;
- in eGovernment: over 11 million citizens have received electronic ID cards to access about 2 500 public services at national, regional and local levels.

Furthermore, Spain is well advanced in the development of Digital Terrestrial Television (DTT) with coverage reaching 98.35 % of the population.

In order to consolidate and advance the deployment of ICT in the various sectors, the Government has extended the Avanza Plan until 2015: the Avanza2 Plan will focus more on stimulating demand and will concentrate resources on a limited number of actions to strengthen their effectiveness.

Broadband

DSL coverage in Spain is close to the average, but broadband penetration remains well below average. There was little progress in 2009. The connectivity of households is lower than average as well, both for broadband and total internet connections. Enterprises on the other hand are better connected: Spain ranks second in the EU. Some 89 % of broadband subscriptions have speeds of at least 2 Mbps. Spain also scores well in wireless connectivity indicators: the take-up of 3G internet on mobile phones is the fifth highest in the EU, while wireless internet use on laptops is around the EU average (17 %).

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, with both in 20th place. Also, 36 % of the population has never used the internet. Take-up of internet services is mixed. While some services record below-average rates, above-average rates are found for services such as reading online newspaper/magazines, downloading/listening to/watching music and/or films, doing online courses, and looking for information about education, training or courses.

eGovernment

Spain has demonstrated consistent progress on most Information Society and eGovernment indicators. However, internet and broadband access and use remain low, possibly affecting eGovernment usage by citizens and, in particular, by businesses. However, supply-side indicators show that Spain is now performing above the EU average in user-friendliness, availability and sophistication of online services. eGovernment policy forms part of Spain's Information Society policy, which is aligned with the EU's i2010 policy. An accompanying legal act provides the basis for administrative reform. Spain is also an active contributor to EU projects.

Spain

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	90.0	91.0	93.0	93.0	94.0	17
DSL coverage in rural areas (as % of total population)	86.0	88.0	89.7	90.0	79.7	9
Broadband penetration (as % of population)	15.2	18.3	20.2	21.5	24.8	16
Speed — % of broadband subscriptions above 2 Mbps				89.3		10
3G+ coverage (as % of total population)			80.2			15
% of households with an internet connection	39	45	51	54	65	21
% of households with a broadband connection	29	39	45	51	56	15
% of enterprises with a (fixed) broadband access	87	90	92	94	83	2
% of population using a mobile phone via UMTS (3G) to access the internet		5	6	9	4	5
% of population using a laptop via wireless connection away from home/work to access the internet		10	12	17	17	12
Internet usage						
% population who are regular internet users (using the internet at least once a week)	39	44	49	54	60	20
% population who are frequent internet users (using the internet every day or almost every day)	25	30	34	39	48	20
% population who have never used the internet	47	43	38	36	30	17
Take up of internet services (as % of population)						
Looking for information about goods and services	38	42	46	47	51	
Uploading self-created content			8	19	20	
Reading online newspapers/magazines		24	27	38	31	
Internet banking	15	16	20	24	32	
Playing or downloading games, images, films or music	23	25		30	26	
Seeking health information on injury, disease or nutrition	19	21	25	32	33	
Looking for a job or sending a job application		10	12	16	15	
Doing an online course		5	6	7	4	
Looking for information about education, training or course offers		22	27	32	24	
eGovernment indicators						
% basic public services for citizens fully available online	33	58		75	66	11
% basic public services for enterprises fully available online	88	88		88	86	9
% of population using eGovernment services	25	26	29	30	30	14
% of population using eGovernment services for returning filled in forms	7	8	9	8	13	19
% of enterprises using eGovernment services	58	58	64	65	71	21
% of enterprises using eGovernment services for returning filled in forms	38	38	45	46	55	22
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	2	3	5	8	11	20
eCommerce						
% population ordering goods or services for private use	15	18	20	23	37	17
% population ordering goods or services from sellers from others EU countries			5	7	8	17
% population selling goods and services (e.g. via auctions)	3	3	4	4	10	18
% population ordering or buying online content		3	3	5	10	14
eCommerce as % of total turnover of enterprises	7	9	8	10	13	15
% enterprises purchasing online	15	16	19	18	24	16
% enterprises selling online	8	8	10	10	12	15
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			40	52	41	7
Using applications for integrating internal business processes (large enterprises)			74	77	71	13
Exchanging automatically business documents with customers/suppliers			13	12	26	24
Sending/receiving e-invoices		9	12	17	23	18
Sharing information electronically with customers/suppliers on Supply Chain Management			20	14	15	14
Using analytical Customer Relation Management		15	17	18	17	10
Indicators on the ICT sector, ICT skills and R&D						
ICT sector share of total GDP	3.8	3.9			5.0	13
ICT sector share of total employment	2.0	2.0			2.7	15
ICT R&D expenditure by the business sector, as % of GDP	0.1	0.1			0.3	17
ICT R&D expenditure by the business sector, as % of total R&D expenditure	16.9	17.0			25.0	20
% of ICT exports on total exports		3.7	3.7			22
% of ICT imports on total imports		7.8	8.1			15
% of persons employed with ICT user skills.	15.5	15.6	16.5	16.3	18.4	22
% of persons employed with ICT specialist skills	2.7	3.0	3.1	2.9	3.2	17

26. Sweden

Sweden is among the best-performing ICT countries in Europe, making consistent progress towards a sustainable and fully inclusive information society. Public confidence in ICT and policy coordination are seen by the Government as essential conditions for full achievement of this goal.

A broadband strategy adopted in November 2009 aims to secure Sweden's position as a leading ICT nation. The overall objective is to provide 90 % of all households and businesses with access to broadband at a minimum speed of 100 Mbps by 2020. Initiatives to achieve this target include ensuring good conditions for competition, devising a revised model for spectrum management and promoting investment in broadband in more remote areas. The Government has launched broadband measures under the Rural Development Programme 2007–2013 and supports infrastructure sharing for ICT when expanding or renewing other infrastructure (e.g. including empty ducts when burying electricity cable). The municipalities' planning responsibilities have been clarified by strengthening the focus on electronic communications in the Planning and Building Act. A Broadband Forum ensures collaboration and dialogue on broadband deployment. The Swedish Post and Telecom Agency has also been tasked with investigating how suitable frequency bands for electronic communications can be used to increase availability in areas that lack access to broadband or have broadband of a low capacity and quality. The level of internet access under the universal service obligation will also be upgraded.

The further development of eGovernment (decided in January 2008) is pursued through a concerted effort by public authorities to ensure open standards and principles for the utilisation of IT and electronic communication, which will ultimately benefit both individuals and businesses and facilitate cooperation between public authorities.

Broadband

Sweden is one the leading countries in broadband, with the fourth highest rate in the EU (31.2 %). There is almost full DSL coverage. In 2009, mobile broadband services were rolled out on a large scale and the number of subscriptions to mobile broadband connections increased sharply. This results in third place in terms of household internet penetration, while Sweden leads the EU in broadband take-up by households, with a rate of 79 %. Enterprises are also well connected (89 % have fixed broadband, although this figure has stayed the same since 2006). Sweden is also a frontrunner in wireless internet technologies, with 14 % penetration among individuals for 3G internet use on mobile phones and 29 % for wireless internet on laptops outside the home or office.

Internet usage

Given its high connectivity, Sweden ranks first and second in terms of the proportion of regular and frequent internet users. Correspondingly, the country has the lowest share of people that have never used the internet: only 7 %.

High connectivity is also reflected in the take-up of online services. Sweden records above-average rates for most activities, including eCommerce, and rates are very high for the most popular activities such as looking for information about goods and services, ordering goods and services, and reading online newspapers and magazines.

eGovernment

Sweden is among the best performers on most eGovernment benchmarks. It has made significant progress in online availability and sophistication. In particular, there is full availability for enterprises, even though eGovernment use by businesses has stalled and the user-friendliness of services is around the EU average. The same holds for the take-up of eGovernment services by citizens and businesses. Sweden has recently reorganised its eGovernment provision to streamline it, improve coordination and underpin its priorities. This is intended to revitalise stalling levels of eGovernment use by citizens and businesses, to match the steady rise in broadband and internet use.

Sweden

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	95.3	97.8	97.9	100.0	94.0	1
DSL coverage in rural areas (as % of total population)	84.0	90.0	90.0	91.0	79.7	7
Broadband penetration (as % of population)	25.9	31.0	31.2	31.5	24.8	4
Speed — % of broadband subscriptions above 2 Mbps				65.7		17
3G+ coverage (as % of total population)			94.0			5
% of households with an internet connection	77	79	84	86	65	3
% of households with a broadband connection	51	67	71	79	56	1
% of enterprises with a (fixed) broadband access	89	87	89	89	83	5
% of population using a mobile phone via UMTS (3G) to access the internet	5	9	9	14	4	1
% of population using a laptop via wireless connection away from home/work to access the internet		15	22	29	17	3
Internet usage						
% population who are regular internet users (using the internet at least once a week)	80	75	83	86	60	2
% population who are frequent internet users (using the internet every day or almost every day)	61	58	69	73	48	1
% population who have never used the internet	10	15	9	7	30	1
Take up of internet services (as % of population)						
Looking for information about goods and services	74	70	75	77	51	
Uploading self-created content			15	21	20	
Reading online newspapers/magazines	41	43	45	50	31	
Internet banking	57	57	65	71	32	
Playing or downloading games, images, films or music	34	35			26	
Seeking health information on injury, disease or nutrition	28	25	32	36	33	
Looking for a job or sending a job application	24	18	22	22	15	
Doing an online course		3	3	4	4	
Looking for information about education, training or course offers		21	24	28	24	
eGovernment indicators						
% basic public services for citizens fully available online	64	75		92	66	6
% basic public services for enterprises fully available online	88	75		100	86	1
% of population using eGovernment services		53	52	57	30	2
% of population using eGovernment services for returning filled in forms		24	26	31	13	4
% of enterprises using eGovernment services	80	79	78	86	71	8
% of enterprises using eGovernment services for returning filled in forms	53	55	58	61	55	10
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	12	11	11	15	11	5
eCommerce						
% population ordering goods or services for private use	55	53	53	63	37	3
% population ordering goods or services from sellers from others EU countries			9	10	8	12
% population selling goods and services (e.g. via auctions)	14	13	15	16	10	6
% population ordering or buying online content	9	12	8	10	10	6
eCommerce as % of total turnover of enterprises	14	14	13	19	13	2
% enterprises purchasing online	44	48	50	48	24	2
% enterprises selling online	24	27	19	21	12	3
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			47	49	41	9
Using applications for integrating internal business processes (large enterprises)			79	83	71	6
Exchanging automatically business documents with customers/suppliers			25	34	26	4
Sending/receiving e-invoices		18	17	25	23	11
Sharing information electronically with customers/suppliers on Supply Chain Management			27	31	15	1
Using analytical Customer Relation Management		22	23	24	17	5
Indicators on the ICT sector, ICT skills and R&D						
ICT sector share of total GDP	6.9	6.5			5.0	3
ICT sector share of total employment	4.8	4.8			2.7	1
ICT R&D expenditure by the business sector, as % of GDP	1.0	1.0			0.3	2
ICT R&D expenditure by the business sector, as % of total R&D expenditure	36.8	37.8			25.0	5
% of ICT exports on total exports		10.6	11.1			9
% of ICT imports on total imports		11.2	10.5			8
% of persons employed with ICT user skills.	19.5	19.6	20.1	20.8	18.4	10
% of persons employed with ICT specialist skills	4.9	4.9	5.1	5.2	3.2	1

27. United Kingdom

The United Kingdom retains its position as one of the leading European countries in the Information Society, with most indicators above the EU average. In June 2009, the government set out a strategic vision (Digital Britain) for ensuring that the UK is at the leading edge of the global digital economy. This vision concerns digital networks, content and participation and the promotion of digital public services, and recognises the importance of digital communications and technologies in driving productivity growth in the UK. The Digital Britain measures include:

- a three-year National Plan to increase Digital Participation. There are 12.5 million people offline; the target is to get 7.5 million new people online by March 2014;
- universal access to today's broadband services by 2012;
- digital radio upgrade by the end of 2015, subject to migration criteria being met;
- mobile spectrum liberalisation, enhancing 3G coverage and accelerating Next Generation mobile services;
- robust legal and regulatory framework to combat online infringement of copyright;
- support for public service content partnerships;
- consultation on funding options for national, regional and local news.

Alongside the economic aspects of Digital Britain, the government has worked to ensure that the social and equality aspects of the digital agenda develop and that individuals have access to the benefits of the digital economy. The government has published the National Plan for Digital Participation and has committed an additional £ 30 m to UK Online Centres and £ 12 m to the work of the Consortium for Digital Participation to assist that process. The government is also providing £ 300 m to supply a free laptop and a one-year broadband connection to low-income families whose children meet several conditions.

Broadband

The UK is not among the leading countries in terms of broadband, but for most indicators it scores higher than the EU average. There is almost full DSL coverage, and broadband penetration is just below 30 %. Some 77 % of households are connected to the internet and 69 % via broadband. Household penetration went up last year. Enterprise broadband connectivity stands at 82 %, slightly below the EU average. Wireless technologies are relatively widespread and above the average, with 3G internet penetration on mobile phones more than doubling in 2009.

Internet usage

The UK ranks sixth in terms of the percentage of regular and frequent internet users among the population and also records some of the highest take-up rates for various internet services. All rates are above average, including for eCommerce. In particular, ordering goods or services for private use (66 % of the population) exceeds the EU average by 29 pp and the proportion buying online content is the second highest in the EU. Cross-border eCommerce is in line with the EU average.

eGovernment

The UK is one of the leading countries in terms of the online availability of services with full availability of all basic services for both citizens and enterprises. After a decline in 2008 in the percentage of the population using eGovernment services, the UK improved its position in 2009 and it is now again above the average. The perfomance has been less satisfying for enterprises which show a usage figure still lower than in most EU countries.

United Kingdom

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	99.5	99.6	99.8	100.0	94.0	1
DSL coverage in rural areas (as % of total population)	95.0	96.1	99.4	99.6	79.7	5
Broadband penetration (as % of population)	21.7	25.7	28.4	29.8	24.8	7
Speed — % of broadband subscriptions above 2 Mbps				96.9		6
3G+ coverage (as % of total population)			91.0			8
% of households with an internet connection	63	67	71	77	65	7
% of households with a broadband connection	44	57	62	69	56	6
% of enterprises with a (fixed) broadband access	78	87	88	82	83	15
% of population using a mobile phone via UMTS (3G) to access the internet	2	2	3	7	4	8
% of population using a laptop via wireless connection away from home/work to access the internet		13	18	21	17	9
Internet usage						
% population who are regular internet users (using the internet at least once a week)	57	65	70	76	60	6
% population who are frequent internet users (using the internet every day or almost every day)	39	48	53	60	48	6
% population who have never used the internet	29	22	19	15	30	6
Take up of internet services (as % of population)						
Looking for information about goods and services	55	62	64	64	51	
Uploading self-created content			19	33	20	
Reading online newspapers/magazines	23	22	37	43	31	
Internet banking	28	32	38	45	32	
Playing or downloading games, images, films or music	24	26		36	26	
Seeking health information on injury, disease or nutrition	18	20	26	34	33	
Looking for a job or sending a job application	16	15	20	25	15	
Doing an online course		5	5	7	4	
Looking for information about education, training or course offers		26	24	30	24	
eGovernment indicators						
% basic public services for citizens fully available online	80	91		100	66	1
% basic public services for enterprises fully available online	57	88		100	86	1
% of population using eGovernment services		38	32	35	30	10
% of population using eGovernment services for returning filled in forms		18	12	17	13	8
% of enterprises using eGovernment services	52	54	64	68	71	18
% of enterprises using eGovernment services for returning filled in forms	38	40	51	57	55	16
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	12	10	9	12	11	11
eCommerce						
% population ordering goods or services for private use	45	53	57	66	37	1
% population ordering goods or services from sellers from others EU countries			7	11	8	11
% population selling goods and services (e.g. via auctions)	12	13	15	15	10	7
% population ordering or buying online content	11	12	11	19	10	2
eCommerce as % of total turnover of enterprises	17	19	21	16	13	6
% enterprises purchasing online				29	24	7
% enterprises selling online				16	12	7
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			27	29	41	24
Using applications for integrating internal business processes (large enterprises)			51	57	71	23
Exchanging automatically business documents with customers/suppliers		11	8		26	
Sending/receiving e-invoices	15	11	9	5	23	26
Sharing information electronically with customers/suppliers on Supply Chain Management			7	7	15	26
Using analytical Customer Relation Management	13	14	15	6	17	26
Indicators on the ICT sector, ICT skills and R&D						
ICT sector share of total GDP	6.4	6.7			5.0	2
ICT sector share of total employment	3.5	3.6			2.7	5
ICT R&D expenditure by the business sector, as % of GDP	0.3	0.3			0.3	9
ICT R&D expenditure by the business sector, as % of total R&D expenditure	25.8	24.5			25.0	11
% of ICT exports on total exports		7.7	7.0			10
% of ICT imports on total imports		10.4	9.5			9
% of persons employed with ICT user skills.	24.7	24.9	24.4	25.0	18.4	2
% of persons employed with ICT specialist skills	3.2	3.2	3.2	3.3	3.2	8

28. Iceland

Broadband

Iceland has a high DSL coverage, in rural areas as well. Household connectivity is especially high too: a remarkable 90 % of households have internet access, of which 97 % through broadband connections. Virtually all enterprises have broadband internet access, more than in any of the EU countries. Furthermore, wireless technologies are widely used: 28 % of the population access the internet through laptops using a wireless connection.

Internet usage

Iceland also outperforms all the EU-27 countries in terms of regular and frequent internet users, and in terms of non-use of the internet. Some 90 % of the Icelandic population are regular internet users, better than the 86 % in Sweden (the best performer in the EU), while 82 % are frequent users, exceeding Denmark's 72 % (the best performer in the EU). Only 6 % 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 significantly exceeded. eCommerce indicators are similar to the EU average.

eGovernment

Iceland sees high eGovernment use by businesses and individuals. However, the online availability of services and the level of sophistication are lower than the EU average. These are two of the very few indicators where Iceland is not one of the best-performing countries in the European Economic Area.

Iceland

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	92.0	92.0	94.8	95.0	94.0	
DSL coverage in rural areas (as % of total population)	79.0	79.0	86.0	86.0	79.7	
Broadband penetration (as % of population)					24.8	
Speed — % of broadband subscriptions above 2 Mbps						
3G+ coverage (as % of total population)			74.6			
% of households with an internet connection	83	84	88	90	65	
% of households with a broadband connection	72	76	83	87	56	
% of enterprises with a (fixed) broadband access	95		99		83	
% of population using a mobile phone via UMTS (3G) to access the internet	1	1	3	9	4	
% of population using a laptop via wireless connection away from home/work to access the internet		29	28	28	17	
Internet usage						
% population who are regular internet users (using the internet at least once a week)	84	86	88	90	60	
% population who are frequent internet users (using the internet every day or almost every day)	71	74	78	82	48	
% population who have never used the internet	9	8	8	6	30	
Take up of internet services (as % of population)						
Looking for information about goods and services	76	78	78	80	51	
Uploading self-created content			20	43	20	
Reading online newspapers/magazines	67	67	69	72	31	
Internet banking	67	72	68	72	32	
Playing or downloading games, images, films or music	34	36		42	26	
Seeking health information on injury, disease or nutrition	40	44	39	37	33	
Looking for a job or sending a job application	17	16	14	17	15	
Doing an online course		9	13	10	4	
Looking for information about education, training or course offers		33	42	41	24	
eGovernment indicators						
% basic public services for citizens fully available online	36	42		50	66	
% basic public services for enterprises fully available online	63	63		63	86	
% of population using eGovernment services	61	59	63	75	30	
% of population using eGovernment services for returning filled in forms	27	19	20	50	13	
% of enterprises using eGovernment services	95		91		71	
% of enterprises using eGovernment services for returning filled in forms	81		87		55	
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	16		11		11	
eCommerce						
% population ordering goods or services for private use	50	50	47	44	37	
% population ordering goods or services from sellers from others EU countries			20	20	8	
% population selling goods and services (e.g. via auctions)	8	12		13	10	
% population ordering or buying online content	22	18	14	19	10	
eCommerce as % of total turnover of enterprises	8				13	
% enterprises purchasing online	38		35			
% enterprises selling online	22		21			
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			46		41	
Using applications for integrating internal business processes (large enterprises)			78		71	
Exchanging automatically business documents with customers/suppliers			18		26	
Sending/receiving e-invoices			20		23	
Sharing information electronically with customers/suppliers on Supply Chain Management			10		15	
Using analytical Customer Relation Management			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					0.3	
ICT R&D expenditure by the business sector, as % of total R&D expenditure					25.0	
% of ICT exports on total exports						
% of ICT imports on total imports						
% of persons employed with ICT user skills.	18.4	19.5	21.2	21.5	18.4	
% of persons employed with ICT specialist skills	3.0	3.2	3.0	3.6	3.2	

29. Norway

Broadband

Norway is one of the most advanced countries for internet connectivity, with high broadband penetration and excellent DSL coverage. Moreover, both 3G and wireless laptop connections are used much more widely than on average in the EU. Some 86 % of households have internet subscriptions, 91 % of which are broadband connections. Broadband penetration among enterprises reached 90 % in 2009. As for wireless broadband, only Luxembourg in the EU has a higher penetration of laptop-based wireless connections than Norway.

Internet usage

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

Rates of regular and frequent internet use exceed even those of the top-scoring EU countries (Sweden and Denmark, respectively). Moreover, the share of people who have never used the internet before is lower than in Sweden, the EU's best-performing country on this indicator.

The take-up of nearly all internet services is significantly higher than on average in the EU. The most popular activities are looking up information about goods and services, internet banking, reading online newspapers and ordering goods and services online. Here, rates exceed the EU average by between 30 and 45 pp. The use of other services is also for the most part significantly higher. However, uploading self-created content, selling goods and services and doing online courses are only marginally above the EU average.

eGovernment

Norway is a leading Information Society country, with a strong record in implementing ICT in the public sector, particularly in the use of eGovernment by citizens. There has also been progress in usage by businesses and the online availability of eGovernment. In Norway, eGovernment is part of a wider Information Society policy, with a focus on providing services to citizens and developing the required back-office infrastructure.

Norway

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)	91.0	95.8	95.8	96.7	94.0	
DSL coverage in rural areas (as % of total population)	86.0	94.0	94.0	95.9	79.7	
Broadband penetration (as % of population)	24.3	29.1	33.5		24.8	
Speed — % of broadband subscriptions above 2 Mbps						
3G+ coverage (as % of total population)			87.0			
% of households with an internet connection	69	78	84	86	65	
% of households with a broadband connection	57	67	73	78	56	
% of enterprises with a (fixed) broadband access	86	85	86	90	83	
% of population using a mobile phone via UMTS (3G) to access the internet	0	4	7	10	4	
% of population using a laptop via wireless connection away from home/work to access the internet		21	28	42	17	
Internet usage						
% population who are regular internet users (using the internet at least once a week)	77	81	86	88	60	
% population who are frequent internet users (using the internet every day or almost every day)	59	66	72	76	48	
% population who have never used the internet	17	11	8	6	30	
Take up of internet services (as % of population)						
Looking for information about goods and services	74	76	80	83	51	
Uploading self-created content			12	24	20	
Reading online newspapers/magazines	65		73	76	31	
Internet banking	67	71	75	77	32	
Playing or downloading games, images, films or music	37	35		39	26	
Seeking health information on injury, disease or nutrition	34	37	41	40	33	
Looking for a job or sending a job application	22	22	22	22	15	
Doing an online course		4	6	5	4	
Looking for information about education, training or course offers		31	32	33	24	
eGovernment indicators						
% basic public services for citizens fully available online	60	80		75	66	
% basic public services for enterprises fully available online	88	75		88	86	
% of population using eGovernment services	57	60	62	65	30	
% of population using eGovernment services for returning filled in forms	28	26	27	31	13	
% of enterprises using eGovernment services	74	71	76	83	71	
% of enterprises using eGovernment services for returning filled in forms	62	61	63	71	55	
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)	15	15	16	21	11	
eCommerce						
% population ordering goods or services for private use	61	63	63	70	37	
% population ordering goods or services from sellers from others EU countries			20	26	8	
% population selling goods and services (e.g. via auctions)	10	8	11	11	10	
% population ordering or buying online content	16	14	16	27	10	
eCommerce as % of total turnover of enterprises	14	18	22	21	13	
% enterprises purchasing online	49	48	44	54	24	
% enterprises selling online	28	32	30	29	12	
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			60	62	41	
Using applications for integrating internal business processes (large enterprises)			81	80	71	
Exchanging automatically business documents with customers/suppliers			37	37	26	
Sending/receiving e-invoices		29	31	32	23	
Sharing information electronically with customers/suppliers on Supply Chain Management			22	26	15	
Using analytical Customer Relation Management		18	21	22	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					0.3	
ICT R&D expenditure by the business sector, as % of total R&D expenditure					25.0	
% of ICT exports on total exports						
% of ICT imports on total imports						
% of persons employed with ICT user skills.	19.7	19.0	19.2	19.6	18.4	
% of persons employed with ICT specialist skills	4.7	5.0	4.5	4.7	3.2	

30. Croatia

Broadband

In general, Croatia performs below the EU average on broadband indicators. Only 50 % of households are connected to the internet. As regards household broadband penetration, Croatia now stands at 39 % following a significant growth of 12 pp in 2009.

Internet usage

In Croatia, there are fewer regular and frequent internet users compared to the average in Europe. Almost half of 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 engage in these activities far less than on average in the EU. This also applies to eCommerce.

eGovernment

Croatia is making up for a late start in eGovernment, and has not yet reached a state of maturity. It has made considerable efforts to increase the availability of online services and to deliver these in a user-friendly manner. eGovernment in Croatia used to be part of the general ICT strategy, eCroatia. In 2009, it gained more prominence after a dedicated eGovernment strategy was adopted. The strategy focuses primarily on putting in place back-office building blocks for the development and effective delivery of eGovernment services. eGovernment activities are strongly aligned with the EU's policies, inspired by Croatia's bid for EU membership.

The gap with the EU is still very wide, especially for use by citizens. In 2009, the availability of services for enterprises scored 63 %, below the average.

Croatia

Broadband	2006	2007	2008	2009	EU-27	ranking
Total DSL coverage (as % of total population)					94.0	
DSL coverage in rural areas (as % of total population)					79.7	
Broadband penetration (as % of population)					24.8	
Speed — % of broadband subscriptions above 2 Mbps						
3G+ coverage (as % of total population)						
% of households with an internet connection		41	45	50	65	
% of households with a broadband connection		23	27	39	56	
% of enterprises with a (fixed) broadband access		80	88	72	83	
% of population using a mobile phone via UMTS (3G) to access the internet		1	2	1	4	
% of population using a laptop via wireless connection away from home/work to access the internet		5	9	6	17	
Internet usage						
% population who are regular internet users (using the internet at least once a week)		32	39	44	60	
% population who are frequent internet users (using the internet every day or almost every day)		21	27	37	48	
% population who have never used the internet		56	54	47	30	
Take up of internet services (as % of population)						
Looking for information about goods and services		30	33	33	51	
Uploading self-created content			6	21	20	
Reading online newspapers/magazines		17	28	36	31	
Internet banking		9	13	16	32	
Playing or downloading games, images, films or music		17		22	26	
Seeking health information on injury, disease or nutrition		15	20	26	33	
Looking for a job or sending a job application		8	11	14	15	
Doing an online course		1	1	2	4	
Looking for information about education, training or course offers		13	18	20	24	
eGovernment indicators						
% basic public services for citizens fully available online				17	66	
% basic public services for enterprises fully available online				63	86	
% of population using eGovernment services		14	12	13	30	
% of population using eGovernment services for returning filled in forms		5	3	5	13	
% of enterprises using eGovernment services		51	57	61	71	
% of enterprises using eGovernment services for returning filled in forms		33	37	38	55	
% of enterprises using eGovernment services to submit a proposal in a public electronic tender system (eProcurement)		20	17	13	11	
eCommerce						
% population ordering goods or services for private use		7	7	10	37	
% population ordering goods or services from sellers from others EU countries			2	3	8	
% population selling goods and services (e.g. via auctions)		2	4	6	10	
% population ordering or buying online content		2	2	3	10	
eCommerce as % of total turnover of enterprises		3	4	14	13	
% enterprises purchasing online		19	22	23	24	
% enterprises selling online		11	16	23	12	
eBusiness (as % of enterprises)						
Using applications for integrating internal business processes (all enterprises)			45	40	41	
Using applications for integrating internal business processes (large enterprises)			68	68	71	
Exchanging automatically business documents with customers/suppliers			32	29	26	
Sending/receiving e-invoices		19	25	24	23	
Sharing information electronically with customers/suppliers on Supply Chain Management			36	44	15	
Using analytical Customer Relation Management		10	11	9	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					0.3	
ICT R&D expenditure by the business sector, as % of total R&D expenditure					25.0	
% of ICT exports on total exports						
% of ICT imports on total imports						
% of persons employed with ICT user skills.					18.4	
% of persons employed with ICT specialist skills					3.2	

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