

## Digital performance of Romania

### Broadband markets

At the end of 2013, fixed broadband covered 90% of homes in Romania (97% in the EU). In rural areas, fixed broadband covered 78% of homes. At the same time, Next Generation Access capable of providing at least 30 Mbps download was available to 66% of homes (62% in the EU).

56% of the households had a broadband subscription at the end of 2013, considerably lower than the EU average (76%) but 6 percentage points higher than at the end of 2012. The share of high speed connections (providing at least 30 Mbps) was considerably higher than the EU average (55% compared to 21% in the EU). Ultra-fast connections (providing at least 100 Mbps) accounted for 25% of all subscriptions (5% in the EU).

On the mobile side, 4th generation (LTE) was available to 25% of population (compared to 24% in 2012). The take-up rate (subscription per 100 people) of mobile broadband was 41%, below the EU average of 62%.

Indicator (including breakdown and unit)	Romania value		EU28 value
	2012	2013	2013
<b>Fixed broadband coverage</b> - Total (in % of total population)	90	90	97
<b>Rural fixed broadband coverage</b> – Total (in % of rural population)	75	78	90
<b>NGA broadband coverage</b> - Total (in % of households)	64	66	62
<b>Households with a broadband subscription</b> - All households (in % of households)	50	56	76
<b>Share of subscriptions with at least 30Mbps</b> - (% of subscriptions)	47	55	21
<b>Share of subscriptions with at least 100Mbps</b> - (% of subscriptions)	19	25	5
<b>4G Mobile broadband coverage</b> - (as a % of total population)	24	25	59
<b>Mobile broadband take-up</b> - Total (in Subscriptions per 100 people)	36	41	62

### Internet usage

In 2013, 45% of Romanians reported using the internet at least weekly (regular users), well below the EU average of 72%. Romania exhibited lower rates of daily use of the internet (frequent users), with 32% of the population reporting going online every day, compared to an EU average of 62%. In 2013, 42% of the population had still never used the internet; lower than in 2012 and significantly higher than the EU average of 20%.

Indicator (including breakdown and unit)	Romania value		EU28 value
	2012	2013	2013
<b>Internet users going on-line weekly</b> (Regular internet users - All individuals, in % of individuals)	43	45	72
<b>Internet users on a daily basis</b> (Frequent internet users - All individuals, in % of individuals)	29	32	62
<b>Individuals who have never used the internet</b> - All individuals (in % of individuals)	48	42	20

## Digital skills

Results obtained from a newly developed Digital Skills Indicator<sup>1</sup> show that, in 2012, 85% of Romanians had low or no digital skills, compared to 47% for the EU average. Disadvantaged people (i.e. individuals who are aged 55-74, low educated and/or unemployed, retired or inactive) in Romania are less highly digitally skilled than is average in the EU. Within the workforce, skills are higher; 83% of the workforce has low or no digital skills. On average in the EU, the figure is 39%. At 38% in 2013, figures for households without internet access reporting lack of skills as a reason for no access are basically the same as the EU average of 37%. According to a broad definition, the share of ICT specialists in total employment in Romania was 1.3% in 2012; below the EU average of 2.8%.<sup>2</sup>

Indicator (including breakdown and unit)	Romania value		EU28 value	
	2012	2013	2012	2013
Individuals with low or no digital skills (in % of individuals)	85	-	47	-
Disadvantaged people with low or no digital skills (in % of disadvantaged people)	94	-	64	-
Labour force with low or no digital skills (in % of labour force)	83	-	39	-
Households reporting lack of skills as a reason for having no Internet access (in % of households without internet access)	35	38	35	37
Persons Employed with ICT Specialist Skills (broad definition) - Total (in % of persons employed)	1.3	-	2.8	-

## eCommerce

In 2013, 8% of Romanians had purchased goods or services online within the previous 12 months, which means that take-up of e-Commerce was well below the EU average of 47%. Romania exhibited much worse rates of cross-border e-Commerce, with 1% of the population having bought online from other EU countries in the previous 12 months, compared to an EU average of 12%. In 2013, 13% of large enterprises were selling on-line, more than in 2012 and significantly fewer than the EU average of 35%. SMEs were less active with 9% of SMEs selling online, fewer than the EU average of 14%.

<sup>1</sup> The Digital Skills Indicator is a composite indicator of digital skills based on the IPTS Digital Competence Framework and using data collected through the Eurostat survey on Internet use in households and by individuals. The indicator has been developed as part of the work towards action 62 of the Digital Agenda to propose EU-wide indicators of digital competence. [http://ec.europa.eu/information\\_society/newsroom/cf/dae/document.cfm?action=display&doc\\_id=5406](http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?action=display&doc_id=5406)

<sup>2</sup> Broad definition taken from JRC (IPTS) "The evolution of EU ICT employment 2000-2012" Technical report (forthcoming): ISCO codes 25 and 35, plus ICT graduates in certain adjacent ISCO codes.

Indicator (including breakdown and unit)	Romania value		EU28 value
	2012	2013	2013
<b>Ordering goods or services online</b> - All individuals (in % of individuals)	5	8	47
<b>Cross-border e-Commerce</b> - All individuals (in % of individuals)	1	1	12
<b>Enterprises selling online</b> - Large enterprises (in % of enterprises)	10	13	35
<b>Enterprises selling online</b> - SMEs (10-249 persons employed) (in % of enterprises)	5	9	14

## eGovernment

In 2013, 5% of Romanians made use of the internet for eGovernment services, a sharp decrease from 31% in 2012 and much below the EU average of 41%. 2% of citizens sent filled-in forms, down from 4% in 2012, and much below the EU average. On the supply-side, the newly introduced User-centric eGovernment Indicator<sup>3</sup> was at 45 in 2012-2013, much below the EU average of 70, and the Transparent eGovernment Indicator<sup>4</sup> was at 17, much below the EU average of 49.

Indicator (including breakdown and unit)	Romania value		EU28 value
	2012	2013	2013
<b>Citizens' use of eGovernment services, last 12 months</b> - All individuals (in % of individuals)	31	5	41
<b>Citizens sending filled forms to eGov services, last 12 months</b> - All individuals (in % of individuals)	4	2	21
<b>User-centric eGovernment Indicator</b> - ( 0-100 range)	45		70 <sup>5</sup>
<b>Transparent eGovernment Indicator</b> - (0-100 range)	17		49 <sup>6</sup>

<sup>3</sup> The User-Centric eGovernment Indicator is a composite indicator measuring the availability of eGovernment services, their connectedness and their user-friendliness for seven areas of government services through a user journey approach using the concept of life event (well defined user need).

<sup>4</sup> The Transparent eGovernment Indicator is a composite indicator measuring the online transparency of governments on the different aspects of online service delivery, treatment of citizens' personal data and activities of the public administrations. The indicator has been measured over seven areas of government services through a user journey approach using the concept of life event (well defined user need).

<sup>5</sup> The indicator is measured over a two-year period, figures refer to 2012-2013

<sup>6</sup> See note above

## eHealth

In 2013, 35% of Romanian hospitals had a broadband connection >50Mbps, below the EU average of 36%. 28% of hospitals exchange clinical information with external healthcare providers or professionals, which is well below the EU average of 55%. For General Practitioners, the rate is 16%, much lower than the EU average of 28%. 6% of hospitals provide patients access to the totality or part of their medical records, which is lower than the EU average (9%).

Indicator (including breakdown and unit) for acute <sup>7</sup> hospitals	Romania value		EU28+2 <sup>8</sup> value
	2010	2013	2013
Broadband connection > 50Mbps (in % of hospitals)	26	35	36
Exchange of clinical care information with external health care providers (in % of hospitals)	25	28	55
Online access (partial or total) to electronic records by patients (in % of hospitals)	5	6	9
Indicator (including breakdown and unit) for General Practitioners (GPs)	2007	2013	EU28+3 <sup>9</sup> value
Use of a computer during consultation with the patient (in % of GPs)	23	97	97
Exchange of medical patient data with other health care providers or professionals (in % of GPs)	2	16	28
Electronic storage of individual medical patient data - (in % of GPs)	43	65	83

## Research and Development (R&D) in ICT

In 2010, Business Expenditure in R&D (BERD) by the ICT sector in Romania amounts to €29mn, about the same as the year before. BERD by the ICT sector represents 13% of total BERD, below the EU average of 17%, indicating relatively less of a research focus on ICT. Total BERD is 0.2% of GDP, below the EU average of 1.2%. In 2012, Public funding in R&D (GBAORD) in the ICT sector amounts to €16mn representing 5.5% to total GBAORD, below the EU average of 6.6%.

Indicator (including breakdown and unit)	Romania value				EU27/28 value			
	2009	2010	2011	2012	2009	2010	2011	2012
ICT BERD – Million €	35	29	-	-	25368	25993	-	-
ICT BERD - % of Total BERD	16	13	-	-	17	17	-	-
Total BERD - % GDP	0.2	0.2	-	-	1.2	1.2	-	-
ICT GBAORD – Million €	21	19	20	16	5958	6044	6118	5962
ICT GBAORD - % of Total GBAORD	6	5.4	5.7	5.5	6.5	6.5	6.6	6.6

<sup>7</sup> Hospitals intended for short-term medical or surgical treatment and care

<sup>8</sup> Iceland and Norway

<sup>9</sup> Iceland, Norway and Turkey

## Participation to the EU-funded Seventh Framework Programme for Research (FP7) in ICT

Over the period 2007-2013<sup>10</sup> the EU co-funded projects in Romania in the ICT domain (FP7 Cooperation ICT Theme and e-infrastructures within Capacities) for a cumulated total of €23 million. Overall 66 Romanian organisations participated in 117 projects (so represented in 5% of all projects) and coordinated 1 project.

In 2013 participation from higher education/research organizations was at 58% of funding, below the EU average (66%). Industrial participation was at 41%, higher than the EU average (29%), with 33% of total funding going to large enterprises and 8% to SMEs.

Participation (in terms of share of total funding) is higher in the following Strategic Objectives: Future Networks and Internet, Software, Services and internet connected objects and ICT for Health.

Indicator	Romania value		EU28 value
	2012	2013	2013
Participations	14	17	3,493
Total EU funding to FP7 ICT projects – All organisations (Million €)	3.1	2.8	1,350
N. of organisations	13	13	1,780
New entries – All organisations (% of organisations)	50%	62%	41%
N. of SME participations - Total	1	1	679
N. of SME participations - % of total participations	7%	6%	19%
<b>Funding by organisation type - % of EU funding</b>			
SMEs	8%	8%	16%
Higher education/research organisations (HES/REC)	63%	58%	66%
Large enterprises	27%	33%	13%
Other organizations	3%	1%	4%

<sup>10</sup> Data for the period 2007 – 2013 (it considers grants signed up to December 2013).

### Top 50 Romanian organisations by funding, 2007 - 2013 (cumulated figures)

#	Organisation	Type	EU funding (€)	% of RO total cumulated EU funding
1	UNIVERSITATEA POLITEHNICA DIN BUCURESTI	HES/REC	3,923,595	16.9%
2	UNIVERSITATEA TEHNICA CLUJ-NAPOCA	HES/REC	2,826,655	12.2%
3	SIEMENS SRL	LARGE	1,451,892	6.2%
4	INSTITUTUL E-AUSTRIA TIMISOARA	HES/REC	1,430,493	6.2%
5	INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE IN INFORMATICA - ICI BUCURESTI	HES/REC	1,302,437	5.6%
6	INSTITUTUL NATIONAL DE CERCETAREDEZVOLTARE PENTRU MICROTEHNOLOGIE	HES/REC	1,149,126	4.9%
7	UNIVERSITATEA DE VEST DIN TIMISOARA	HES/REC	523,353	2.3%
8	BLUE POINT IT SOLUTIONS SRL	SME	483,236	2.1%
9	INFO WORLD SRL	LARGE	474,331	2.0%
10	MIRA TELECOM SRL	LARGE	442,620	1.9%
11	COMPUTER SHARING BUCURESTI SRL	LARGE	411,628	1.8%
12	TEAMNET INTERNATIONAL SA	LARGE	401,450	1.7%
13	HONEYWELL ROMANIA SRL	SME	346,755	1.5%
14	SIVECO ROMANIA SA	LARGE	335,965	1.4%
15	ROMSOFT SRL	SME	331,716	1.4%
16	SIEMENS PROGRAM AND SYSTEM ENGINEERING SRL	LARGE	313,846	1.4%
17	UNIVERSITATEA POLITEHNICA DIN TIMISOARA	HES/REC	301,440	1.3%
18	SC IPA SA	HES/REC	296,835	1.3%
19	INSTITUTUL DE CERCETARI ELECTROTEHNICE	LARGE	295,186	1.3%
20	UNIVERSITATEA ALEXANDRU IOAN CUZA	HES/REC	278,412	1.2%
21	IDEEA ADVERTISING SRL	SME	274,356	1.2%
22	INTRAROM S.A.	SME	273,940	1.2%
23	UNIVERSITATEA TRANSILVANIA DIN BRASOV	HES/REC	272,680	1.2%
24	INSTITUTUL DE CERCETARI PENTRU INTELIGENTIA ARTIFICIALA	HES/REC	266,746	1.1%
25	WIRTEK S.R.L.	LARGE	262,371	1.1%
26	UNIVERSITATEA ROMANO-AMERICANA ASOCIATIE	HES/REC	240,900	1.0%
27	UNIVERSITY STEFAN CEL MARE SUCEAVA	HES/REC	227,200	1.0%
28	ROPARDO SRL	LARGE	225,600	1.0%
29	UNIVERSITATEA DIN CRAIOVA	HES/REC	220,200	0.9%
30	UNIVERSITATEA DE MEDICINA SI FARMACIE 'CAROL DAVILA' DIN BUCURESTI	HES/REC	211,930	0.9%
31	INCLUSION ALLIANCE FOR EUROPE GEIE	LARGE	200,224	0.9%
32	INSTITUTUL NATIONAL DE CERCETARE DEZVOLTARE PENTRU FIZICA LASERILOR PLASMEI SI RADIATIEI	HES/REC	191,850	0.8%

33	SOFTGRESS S.R.L.	LARGE	183,195	0.8%
34	UNIVERSITATEA BABES BOLYAI	HES/REC	176,912	0.8%
35	UNIVERSITATEA DIN BUCURESTI	HES/REC	164,813	0.7%
36	LANGUAGE WEAVER SRL	SME	151,746	0.7%
37	CS ROMANIA SA	LARGE	143,016	0.6%
38	UNIVERSITATEA LUCIAN BLAGA DIN SIBIU	HES/REC	136,200	0.6%
39	INSTITUTUL NATIONAL DE CERCETARE -DEZVOLTARE PENTRU FIZICA SI INGINERIE NUCLEARA "HORIA HULUBEI" (IFIN-HH)	HES/REC	134,166	0.6%
40	MY SOFT SRL	LARGE	131,766	0.6%
41	UTI GRUP SA	LARGE	130,600	0.6%
42	UNIVERSITATEA DIN PITESTI	HES/REC	127,600	0.5%
43	Fundatia Medis	NIL	122,400	0.5%
44	OMEGA INTERNATIONAL TRANSPORT & LOGISTICS SRL	LARGE	120,681	0.5%
45	ENERGOECO SRL	LARGE	111,184	0.5%
46	GEUMACS CONSULTING SRL	LARGE	108,542	0.5%
47	MINISTERUL APARARII NATIONALE	NIL	100,080	0.4%
48	Unitatea Executiva pentru Finantarea Invatamantului Superior, a Cercetarii, Dezvoltarii si Inovarii	HES/REC	94,048	0.4%
49	ASOCIATIA ROMANA PENTRU INDUSTRIIA ELECTRONICA SI SOFTWARE	LARGE	93,625	0.4%
50	CENTRUL DE ECONOMIA INDUSTRIEI SI SERVICIILOR	HES/REC	92,020	0.4%
	<b>Total</b>		<b>22,511,562</b>	<b>96.9%</b>
	<b>RO total cumulated EU Funding</b>		<b>23,241,044</b>	