

A ICT specialists

ICT professionals and technicians (hereafter ICT specialists) are all persons employed in the national economy, whose principal activity comes within the following groups of the International Standard Classification of Occupations (ISCO-08):

- **ICT professionals**
 - Information and communications technology professionals (25)
 - *ICT service managers (133)*
 - *ICT sales professionals (2434)*
- **ICT technicians**
 - Information and communications technicians (35)
 - *ICT installers and servicers*

ICT professionals conduct research, plan, design, write, test, provide advice and improve information technology systems, hardware, software and related concepts for specific applications; and design, develop, control, maintain and support databases and other information systems to ensure optimal performance and data integrity and security.

ICT technicians provide support for the day-to-day running of computer systems, communications systems and networks. Tasks performed by workers in this group usually include: providing assistance to information and communications systems users; installing new programs and equipment; establishing, operating and maintaining network and other data communications systems; installing, monitoring and supporting Internet and Intranet websites or web server hardware or software; modifying web pages; and performing web server backup and recovery operations.

Data on the **numbers and structure** of ICT specialists come from the **Labour Force Survey (LFS)** of the Czech Statistical Office (CZSO). Further information on the Czech LFSS can be found at: <http://www.czso.cz/csu/2013edicniplan.nsf/engp/3104-13>

The **Eurostat Labour Force Survey Database** was used as a data source for the international comparison. For more information see: http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_unemployment_lfs/data/database

Data on **average monthly gross wages** of ICT specialists come from the **Structural Earnings Statistics (SES)**. Further information on the SES can be found at: <http://www.czso.cz/csu/2013edicniplan.nsf/engp/3109-13>

Data for the ICT specialists are available by gender, age, economic activity (NACE), level and field of education (ISCED) and other socio-demographic and economic characteristics.

Data on the **university students and graduates of Computing** come from data sources of the **Ministry of Education of the CR**. The table contains the total number of university students and graduates at ISCED97 levels 5A and 6 in the field of *Computing* (ISCED97 group 48).

Data on students are always related to 31 December of the relevant year; data on graduates apply to the entire school year. Data for students and graduates of Computing are available by gender, age and nationality.

International comparison of *Computing* students refers to the total tertiary level of education (ISCED97 levels 5 and 6). The **Eurostat Education and Training Database** was used. For more information see: <http://epp.eurostat.ec.europa.eu/portal/page/portal/education/data/database>

Further information on ICT specialists can be found at: http://www.czso.cz/csu/redakce.nsf/i/lidske_zdroje_pro_informacni_techologie

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Table A1 ICT specialists in the Czech Republic

	Thousand persons (HC)		
	2010	2011	2012
Total	121,6	126,6	132,0
Gender			
Males	108,7	115,2	119,1
Females	12,9	11,4	13,0
Age group			
15-24 years	10,3	9,8	9,6
25-34 years	54,5	52,2	52,7
35-44 years	32,0	36,3	37,6
45-54 years	17,2	20,2	23,1
55+ years	7,5	8,0	9,1
Level of education			
Tertiary	60,5	73,4	74,3
Upper secondary	53,6	47,1	50,4
Other	7,6	6,1	7,4

Figure A1 ICT specialists

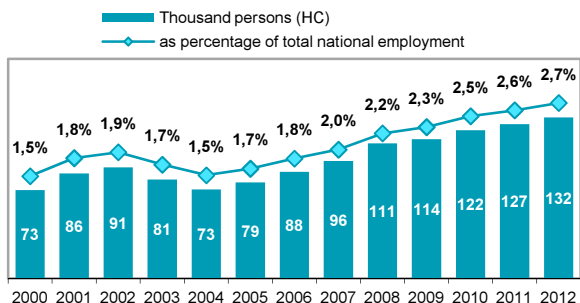


Figure A2 ICT specialists by level of education

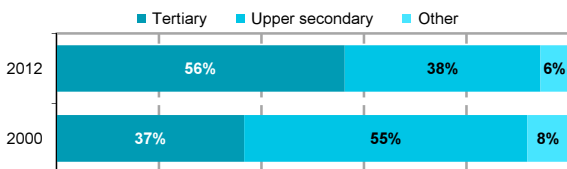
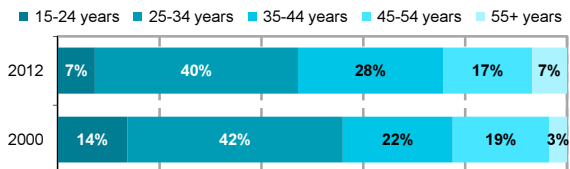


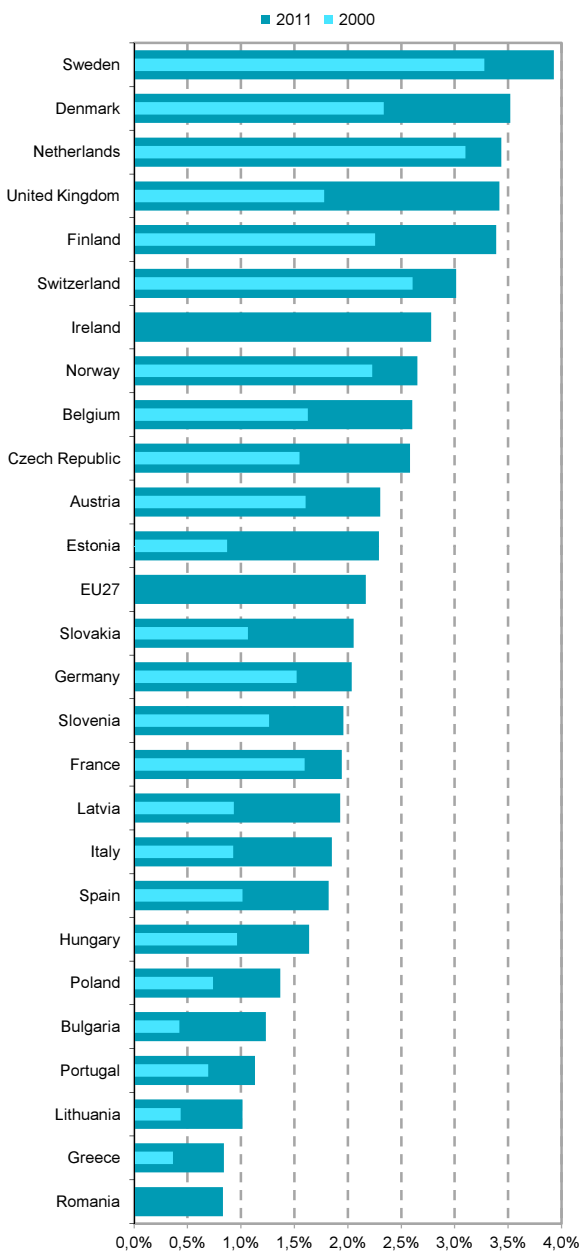
Figure A3 ICT specialists by age groups



Source: CZSO, Labour Force Survey

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Figure A4 ICT specialists
(as a percentage of total national employment)



Source: Eurostat, European Labour Force Survey

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Table A2 ICT specialists in the CR by occupation, 2012

Thousand persons (HC)

	Total	ICT professionals	ICT technicians
Total	132,0	62,6	69,4
Gender			
Males	119,1	57,2	61,9
Females	13,0	5,4	7,5
Age group			
15-24 years	9,6	3,0	6,6
25-34 years	52,7	26,6	26,1
35-44 years	37,6	16,2	21,5
45-54 years	23,1	12,7	10,3
55+ years	9,1	4,2	4,9
Level of education			
Tertiary	74,3	52,8	21,5
Upper secondary	50,4	9,3	41,1
Other	7,4	.	.

Figure A5 ICT specialists by occupation (thous. persons), 2012

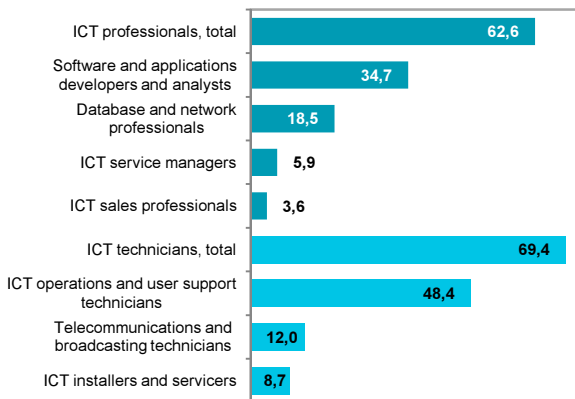
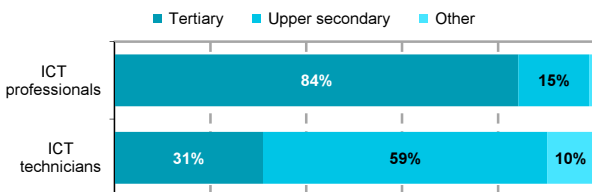


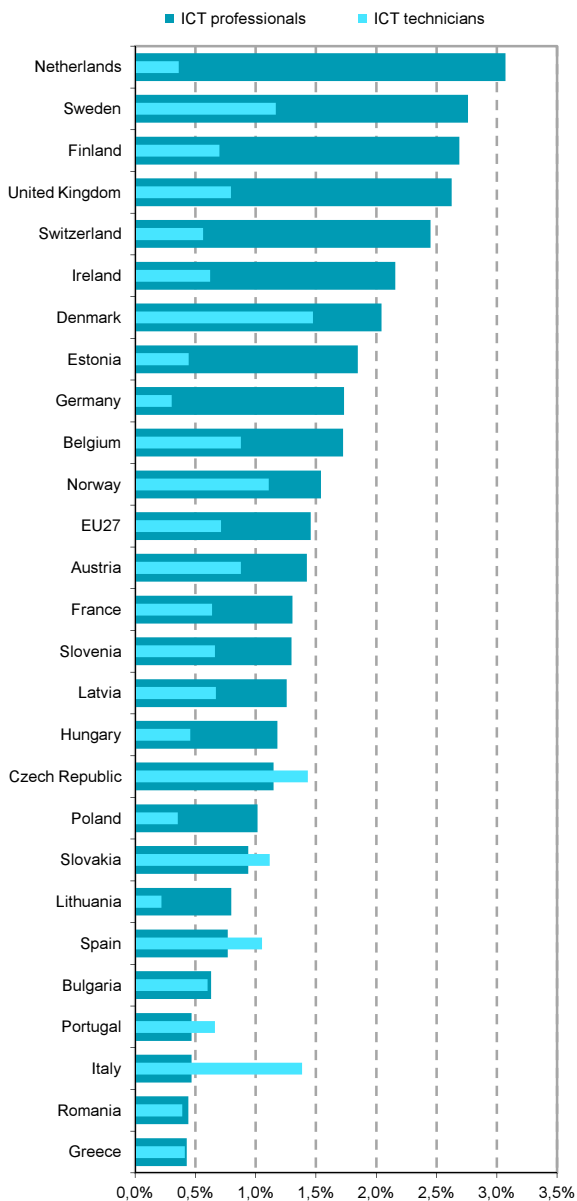
Figure A6 ICT specialists by occupation and level of education, 2012



Source: CZSO, Labour Force Survey

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Figure A7 ICT specialists by occupation, 2012
(as a percentage of total national employment)



Source: Eurostat, European Labour Force Survey

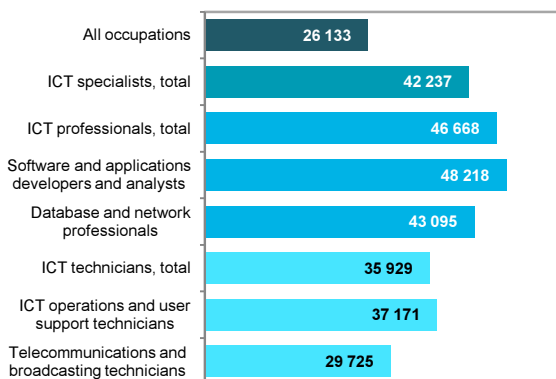
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Table A3 Average monthly gross wage of ICT specialists in the Czech Republic

CZK

	2011	2012
Total	41 231	42 237
Gender		
Males	42 060	42 930
Females	35 747	37 283
Age group		
20-24 years	26 794	26 365
25-29 years	35 088	35 442
30-34 years	43 797	44 171
35-39 years	47 011	48 233
40-44 years	43 635	45 455
45-49 years	43 648	45 116
50-54 years	39 509	40 245
55-59 years	40 611	40 624
60-64 years	39 942	41 500
Level of education		
Master and doctoral	49 181	49 987
Higher professional and bachelo	39 017	40 254
Upper secondary	35 395	36 514
Size class of enterprises		
10-49 employees	39 653	40 551
50-249 employees	43 538	44 288
250-999 employees	48 795	49 829
1 000-4 999 employees	43 996	44 824
5 000+ employees	40 672	42 577
Sector		
Business enterprise sector	42 600	43 636
Public sector	27 033	27 536

Figure A8 Average monthly gross wage of ICT specialists by occupation, 2012 (CZK)



Source: CZSO, Structural Earnings Statistics

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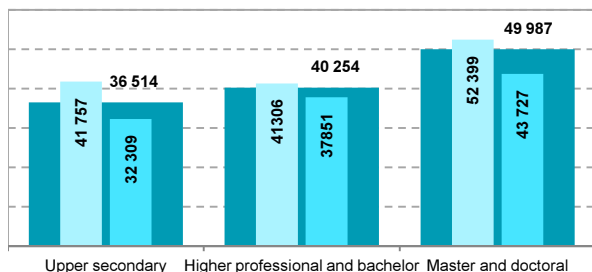
Table A4 Average monthly gross wage of ICT specialists in the Czech Republic by occupation, 2012

CZK

	Total	ICT professionals	ICT technicians
Total	42 237	46 668	35 929
Gender			
Males	42 930	47 360	36 678
Females	37 283	41 862	30 355
Age group			
20-24 years	26 365	27 831	23 952
25-29 years	35 442	37 606	31 650
30-34 years	44 171	49 554	36 180
35-39 years	48 233	54 211	39 784
40-44 years	45 455	51 060	37 953
45-49 years	45 116	49 711	39 034
50-54 years	40 245	46 254	33 560
55-59 years	40 624	45 744	35 036
60-64 years	41 500	44 506	38 467
Level of education			
Master and doctoral	49 987	52 399	43 727
Higher professional and bachelor	40 254	41 306	37 851
Upper secondary	36 514	41 757	32 309
Size class of enterprises			
10-49 employees	40 551	42 492	38 035
50-249 employees	44 288	48 693	36 754
250-999 employees	49 829	56 479	40 264
1 000-4 999 employees	44 824	47 106	40 518
5 000+ employees	42 577	44 283	40 548
Sector			
Business enterprise sector	43 636	48 111	37 145
Public sector	27 536	30 039	24 601

Figure A9 Average monthly gross wage of ICT specialists by occupation and level of education, 2012 (CZK)

■ ICT specialists, total ■ ICT professionals ■ ICT technicians



Source: CZSO, Structural Earnings Statistics

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Table A5 University students of Computing in the CR

	2010	2011	2012
			number
Total	22 158	22 321	22 198
Gender			
Males	19 320	19 262	18 913
Females	2 838	3 059	3 285
Educational programme			
Bachelor and master programmes	21 007	21 223	21 119
Bachelor programmes	15 833	15 793	15 643
Master programmes	5 185	5 439	5 491
Doctoral programmes	1 151	1 102	1 081
Field of education			
Computer sciences	14 176	14 390	14 574
Computers usage	7 661	7 622	7 525
Nationality			
Czech Republic	18 906	18 937	18 611
Foreign	3 252	3 384	3 587

Figure A10 University students of Computing

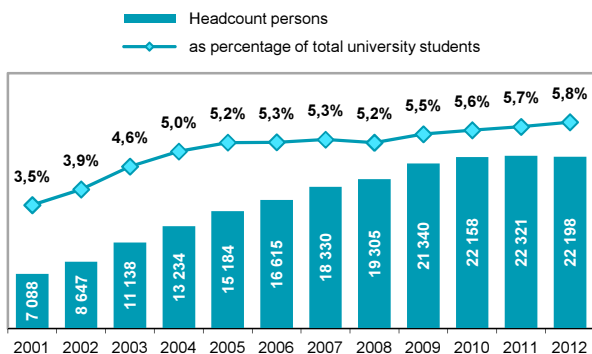
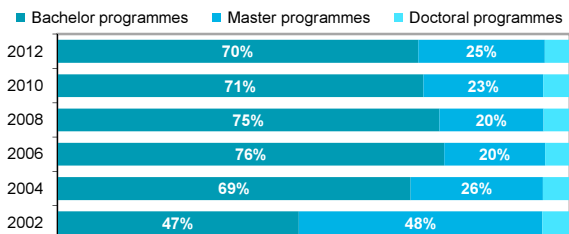


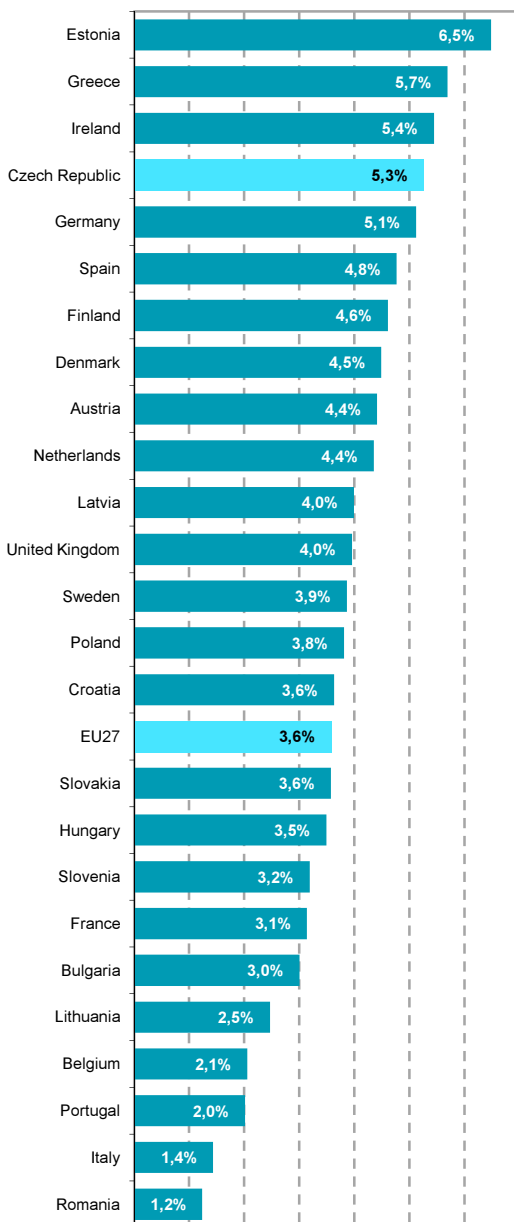
Figure A11 University students of Computing by level of educational programmes



Source: The Ministry of Education, Youth and Sports and CZSO calculations

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**Figure A12 Tertiary students of Computing
(as a percentage of all tertiary students)**



Source: Eurostat

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Table A6: University graduates of Computing in the CR

	2010	2011	2012
			number
Total	3 787	3 928	4 225
Gender			
Males	3 310	3 443	3 708
Females	477	485	517
Educational programme			
Bachelor and master programmes	3 708	3 855	4 142
Bachelor programmes	2 503	2 529	2 543
Master programmes	1 205	1 326	1 599
Doctoral programmes	79	73	83
Field of education			
Computer sciences	2 253	2 316	2 598
Computers usage	1 534	1 612	1 627
Nationality			
Czech Republic	3 259	3 352	3 646
Foreign	528	576	579

Figure A13 University graduates of Computing

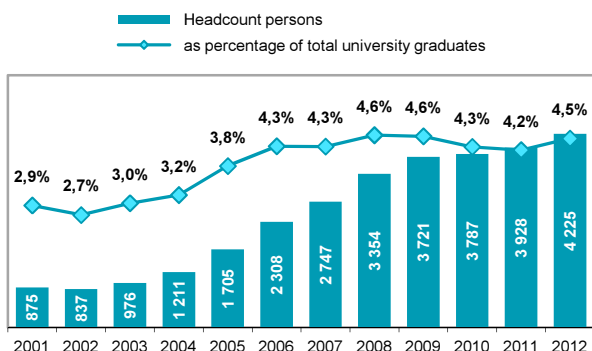
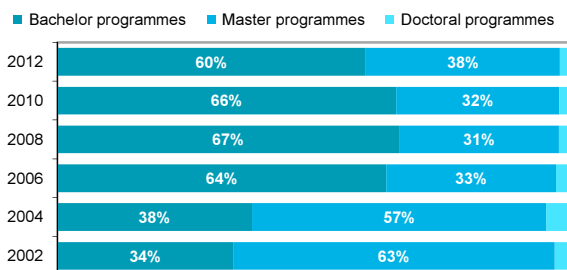


Figure A14 University graduates of Computing by educational programmes



Source: The Ministry of Education, Youth and Sports and CZSO calculations