

## A ICT specialists

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ICT specialists are **defined** as persons who have the ability to develop, operate and maintain ICT systems and for whom ICTs constitute the main part of their job. The occupations of ICT specialists are subdivided into **two major groups** and from 2011 are **assigned** to the groups, and subgroups of the **Classification of Occupations (CZ-ISCO)** as follows:

### ICT managers, engineers and professionals

- 1330 Information and communications technology service managers;
- 2152 Electronics engineers;
- 2153 Telecommunications engineers;
- 2434 Information and communications technology sales professionals;
- Note: The 1330, 2152, 2153 and 2434 subgroups are merged into one category called **ICT managers and engineers**.*
- 25 Information and communications technology professionals**
  - 251 Software and applications developers and analysts;
  - 252 Database and network professionals.

### ICT technicians, installers and servicers

- 3114 Electronics engineering technicians;
- 35 Information and communications technicians**
  - 351 ICT operations and user support technicians;
  - 352 Telecommunications and broadcasting technicians;
- 742 Electronics and telecommunications (ICT) installers and repairers.

*Note: Some data for the ICT specialists, such as wages, are available only for the ICT specialists defined **rather narrow**, which includes only two sub-major groups of CZ-ISCO: **25 ICT professionals** and **35 ICT technicians**.*

Detail description of CZ-ISCO occupations is available here (*only in Czech*): [https://www.czso.cz/csu/czso/klasifikace\\_zamestnani\\_-cz\\_isco-](https://www.czso.cz/csu/czso/klasifikace_zamestnani_-cz_isco-)

### Numbers of ICT specialists

The data on the numbers of ICT specialists are taken from the **Labour Force Survey (LFS)**. *Note: In order to ensure higher reliability and to eliminate considerable year-on-year fluctuations of values for this group of employees, data is here provided as **three-year moving averages** (i.e., for example, the value for 2018 is calculated as an average from the values for 2017, 2018, and 2019).*

For further information on the **Czech LFS** see:

[https://www.czso.cz/csu/czso/employment\\_unemployment\\_ekon](https://www.czso.cz/csu/czso/employment_unemployment_ekon)

The **Eurostat LFS Database** was used for the **international comparison**. *Note: Data for the Czech Republic from Eurostat **differ slightly** from the data published by the Czech Statistical Office. For instance, data from Eurostat are given for the relevant year and not as three-year moving averages.*

### Wages of ICT specialists

Data on wages (average gross monthly wage) of the ICT specialists come from the **Structure of Earnings Survey (SES)** which is generated by merging of databases of the sample survey of the Information System on Average Earnings (ISPV) which covers the **wage sphere**, and from the database of the Salary Information System which covers the **salary sphere**. For more information see: <https://www.ispv.cz/en/homepage.aspx>.

For further information on the **Czech SES** see:

<https://www.czso.cz/csu/czso/structure-of-earnings-survey-2019>

Data about ICT specialists is available by **several breakdowns**: by occupation and industry or by individual characteristics of ICT specialists such as gender, citizenship, age or highest education attainment.

**For further information on ICT specialists see (only in Czech):**

<https://www.czso.cz/csu/czso/ict-odbornici>

## A ICT specialists

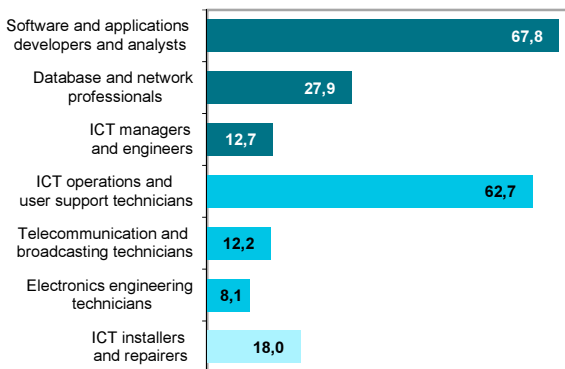
**Table A1 ICT specialists in Czechia**

	Thousand persons*		
	2017	2018	2019
<b>Total</b>	<b>192,5</b>	<b>200,5</b>	<b>209,5</b>
Women	18,0	18,7	19,3
<b>Occupation</b>			
ICT managers, engineers and professionals	92,7	99,3	108,4
ICT technicians, installers and servicers	99,9	101,2	101,1
<b>Age group</b>			
Under 25 years	10,1	10,5	10,1
25–34 years	65,2	65,0	65,2
35–44 years	65,0	71,5	76,9
45–54 years	33,3	33,2	35,6
55 + years	18,9	20,3	21,7
<b>Highest level of education attainment</b>			
Tertiary	107,3	109,6	114,8
Secondary with A-level examination	74,4	79,8	84,3
Other (lower)	10,8	11,1	10,3

**Figure A1 ICT specialists\***



**Figure A2 ICT specialists\*, by occupation (thousands); 2019**

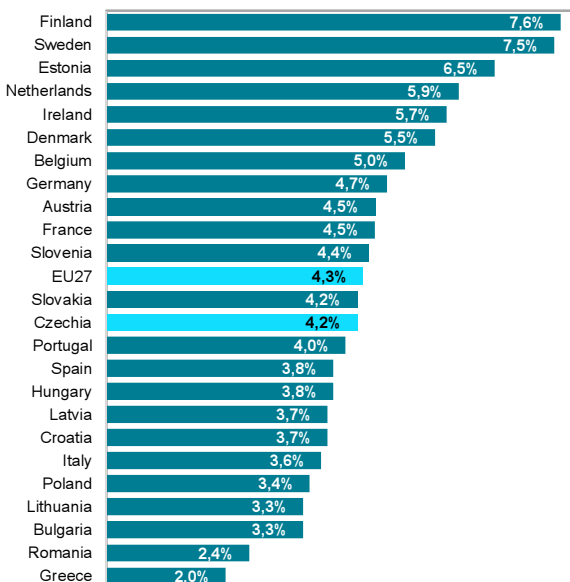


\* Three-year moving averages, see the methodological notes.

Source: CZSO, Labour Force Survey

## A ICT specialists

**Figure A3 ICT specialists in EU countries; 2020**  
(% of total employment)



**Figure A4 ICT specialists, by gender; 2020**



Source: CZSO calculation based on the Eurostat LFS Database

## A ICT specialists

Table A2 ICT managers, engineers and professionals in Czechia

	Thousand persons*		
	2017	2018	2019
<b>Total</b>	<b>92,7</b>	<b>99,3</b>	<b>108,4</b>
Women	9,4	10,1	11,2
<b>Occupation</b>			
<b>ICT professionals, total</b>	<b>76,0</b>	<b>84,5</b>	<b>95,8</b>
Software and app. developers and analysts	50,6	57,8	67,8
Database and network professionals	25,2	26,6	27,9
<b>ICT managers and engineers</b>	<b>16,7</b>	<b>14,8</b>	<b>12,7</b>
<b>Age group</b>			
Under 25 years	3,2	2,8	2,9
25–34 years	32,3	33,6	35,2
35–44 years	34,0	37,8	41,8
45–54 years	14,9	15,7	18,1
55 + years	8,3	9,4	10,4
<b>Highest level of education attainment</b>			
Master's and Doctoral	65,8	68,0	72,0
Bachelor's and Higher professional	12,8	14,5	16,1
Other (lower)	13,1	16,4	20,1

Figure A5 ICT professionals\*

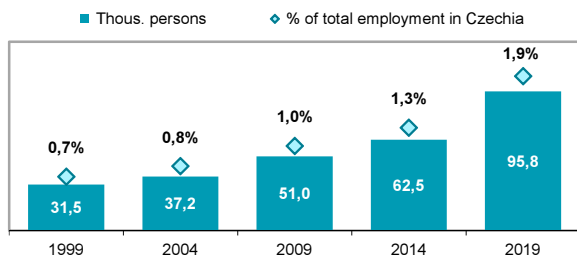


Figure A6 ICT professionals\*, by gender

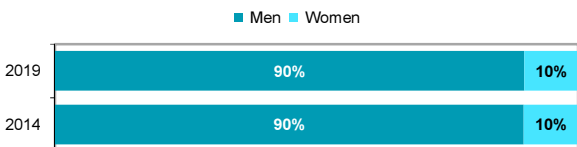
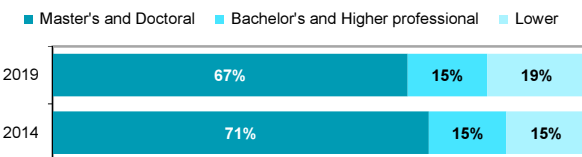


Figure A7 ICT professionals\*, by level of education

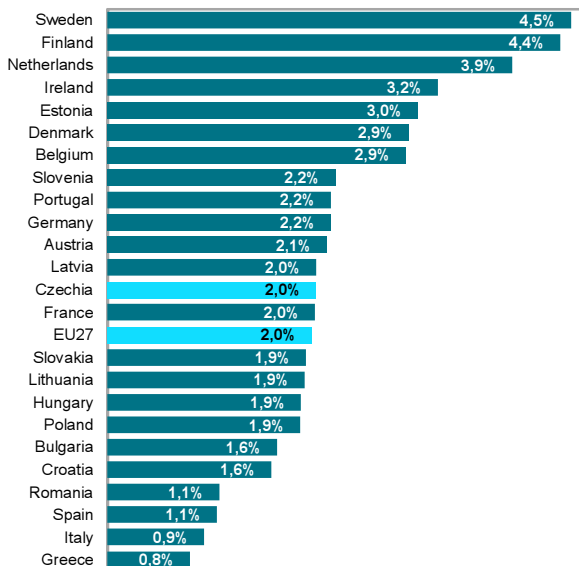


\* Three-year moving averages, see the methodological notes.

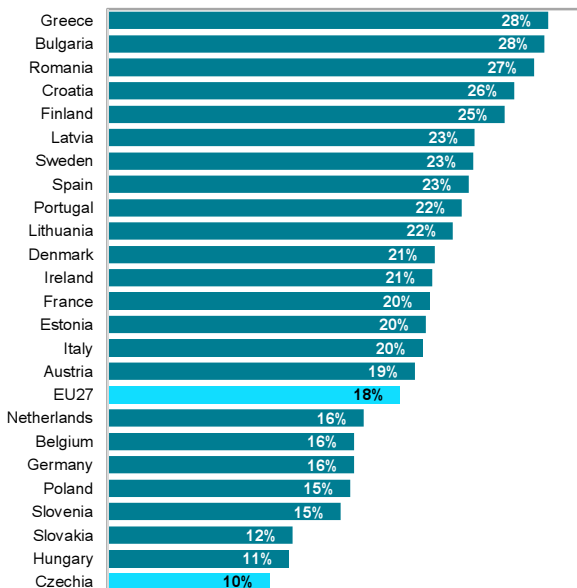
Source: CZSO, Labour Force Survey

## A ICT specialists

**Figure A8 ICT professionals in EU countries; 2020**  
(% of total employment)



**Figure A9 Share of women among ICT professionals; 2020**



Source: CZSO calculation based on Eurostat LFS Database

## A ICT specialists

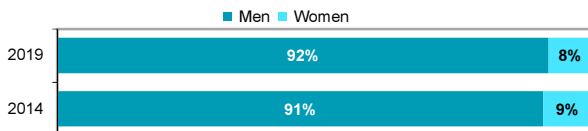
**Table A3 ICT technicians, installers and servicers in Czechia**

	Thousand persons*		
	2017	2018	2019
<b>Total</b>	<b>99,9</b>	<b>101,2</b>	<b>101,1</b>
Women	8,6	8,5	8,1
<b>Occupation</b>			
<b>ICT technicians, total</b>	<b>71,4</b>	<b>74,8</b>	<b>75,0</b>
ICT operations and user support technicians	57,3	61,0	62,7
Telecomm. and broadcasting technicians	14,0	13,7	12,2
<b>ICT installers and servicers</b>	<b>28,5</b>	<b>26,3</b>	<b>26,1</b>
<b>Age group</b>			
Under 25 years	7,0	7,7	7,2
25–34 years	32,9	31,4	30,0
35–44 years	31,0	33,7	35,1
45–54 years	18,4	17,5	17,5
55 + years	10,6	10,9	11,3
<b>Highest level of education attainment</b>			
Tertiary	28,7	27,1	26,7
Secondary with A-level examination	61,3	63,4	64,2
Other (lower)	9,8	10,7	10,1

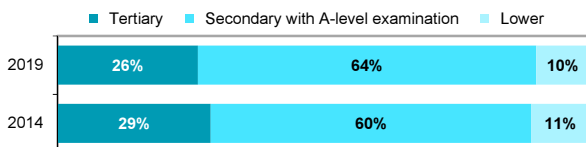
**Figure A10 ICT technicians\***



**Figure A11 ICT technicians\*, by gender**



**Figure A12 ICT technicians\*, by level of education**

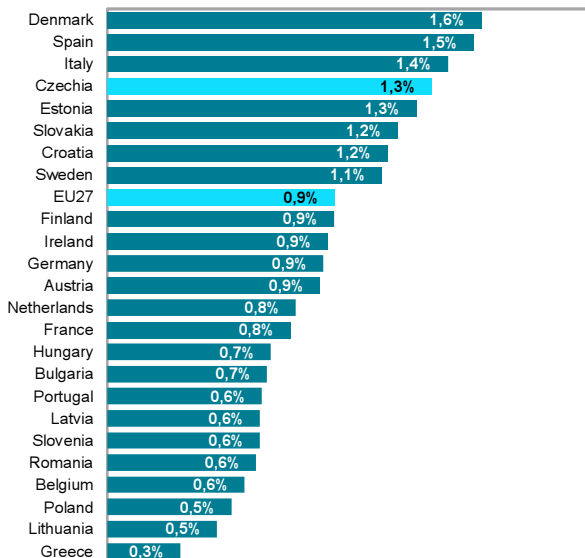


\* Three-year moving averages, see the methodological notes.

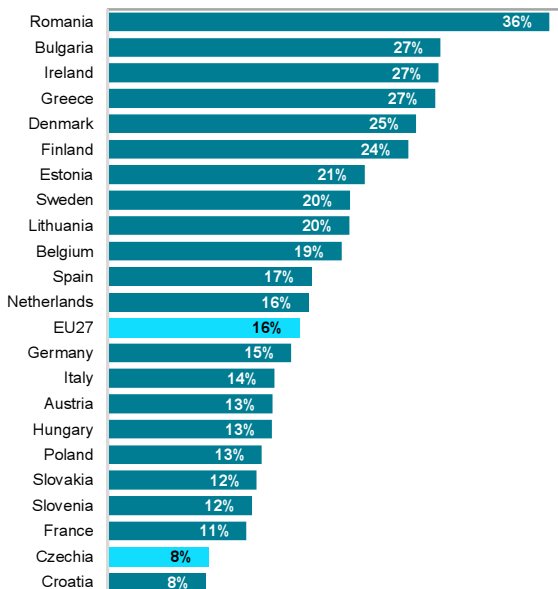
Source: CZSO, Labour Force Survey

## A ICT specialists

**Figure A13 ICT technicians in EU countries; 2020**  
(% of total employment)



**Figure A14 Share of women among ICT technicians; 2020**



Source: CZSO calculation based on Eurostat LFS Database

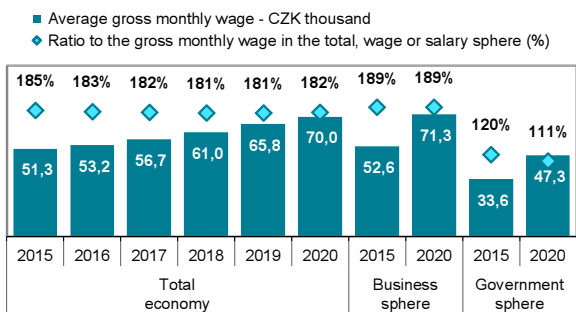
## A ICT specialists

**Table A4 Wages of ICT professionals in Czechia**

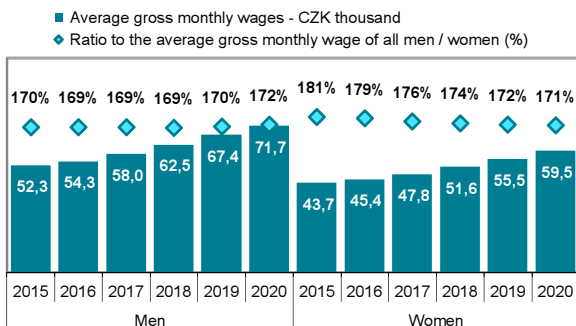
Average gross monthly wage in CZK

	2018	2019	2020
<b>Total</b>	<b>61 026</b>	<b>65 787</b>	<b>70 018</b>
Men	62 460	67 439	71 707
Women	51 550	55 512	59 507
<b>Citizenship</b>			
Czech citizens	59 103	63 439	67 204
Foreigners	73 574	79 941	85 220
<b>Sphere of activity (remuneration)</b>			
Business (wage) sphere	62 073	66 964	71 258
Government (salary) sphere	42 060	44 351	47 347
<b>Age group</b>			
Under 25 years	34 403	38 149	41 509
25–34 years	55 064	59 311	64 022
35–44 years	69 650	74 702	78 322
45–54 years	65 425	71 122	75 550
55 + years	57 134	58 588	60 666
<b>Highest level of education attainment</b>			
Master's and Doctoral	67 578	72 620	76 933
Bachelor's and Higher professional	56 425	62 025	66 575
Secondary with A-level examination	54 396	58 258	59 895

**Figure A15 Wages of ICT professionals**



**Figure A16 Wages of ICT professionals, by gender**



Source: CZSO, Structural Earnings Statistics



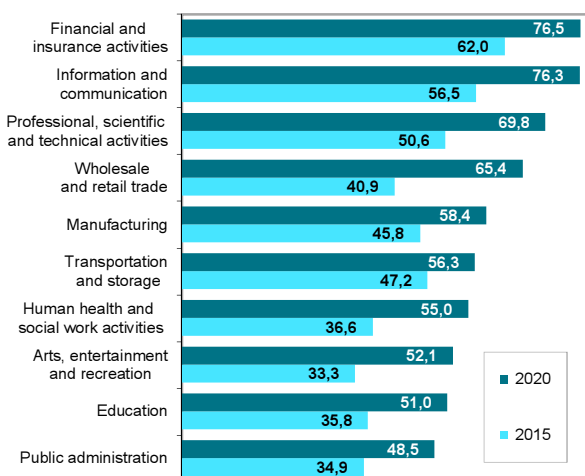
## A ICT specialists

**Table A5 Wages of ICT professionals in Czechia according to their occupation and industry**

Average gross monthly wage in CZK

	2018	2019	2020
<b>Total</b>	<b>61 026</b>	<b>65 787</b>	<b>70 018</b>
<b>Occupation</b>			
<b>Software and app. developers &amp; analysts</b>	<b>63 530</b>	<b>69 035</b>	<b>73 719</b>
Systems analysts	66 790	72 136	73 181
Software developers	64 173	70 788	78 136
Web and multimedia developers		61 266	68 922
Applications programmers	58 386	64 315	68 899
Other SW & App. developers and analysts	63 466	64 788	66 959
<b>Database and network professionals</b>	<b>54 364</b>	<b>57 610</b>	<b>60 715</b>
Database designers/admin.	54 355	64 852	69 303
Systems administrators	52 777	55 160	57 329
Computer network professionals	59 161	62 793	69 570
Data security specialists	66 488	71 428	73 289
<b>Industry (CZ-NACE Section)</b>			
Manufacturing (C)	53 864	56 459	58 447
Wholesale and retail trade (G)	53 925	67 329	65 435
Transporting and storage (H)	52 998	55 837	56 268
Information and communication (J)	65 749	70 290	76 344
Financial and insurance activities (K)	69 909	74 932	76 476
Professional, scientific and techn. act. (M)	60 775	66 387	69 778
Public administration (O)	43 379	46 037	48 516
Education (P)	44 395	47 924	50 999
Human health and social work act. (Q)	43 799	46 445	54 968
Arts, entertainment and recreation (R)	43 540	43 074	52 094

**Figure A17 Average gross monthly wage of ICT professionals in selected industries (CZK thousand)**



Source: CZSO, Structural Earnings Statistics

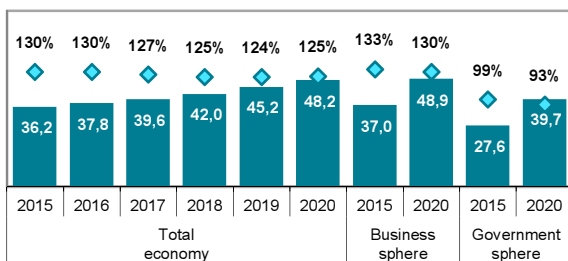
## A ICT specialists

**Table A6 Wages of ICT technicians in Czechia**

	Average gross monthly wage in CZK		
	2018	2019	2020
<b>Total</b>	<b>42 016</b>	<b>45 219</b>	<b>48 175</b>
Men	42 616	45 644	48 503
Women	38 269	42 068	45 710
<b>Citizenship</b>			
Czech citizens	41 024	44 170	46 649
Foreigners	55 168	56 840	62 263
<b>Sphere of activity (remuneration)</b>			
Business (wage) sphere	42 726	45 999	48 906
Government (salary) sphere	34 228	36 802	39 692
<b>Age group</b>			
Under 25 years	28 806	31 664	32 541
25–34 years	38 800	42 302	45 476
35–44 years	45 408	49 204	52 992
45–54 years	45 011	49 829	52 598
55 + years	43 452	42 926	44 403
<b>Highest level of education attainment</b>			
Master's and Doctoral	52 020	55 485	59 284
Bachelor's and Higher professional	44 403	45 944	51 049
Secondary with A-level examination	38 449	41 710	43 888
Other (lower)	31 753	36 371	37 337

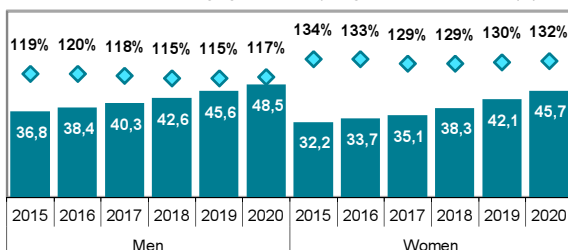
**Figure A18 Wages of ICT technicians**

- Average gross monthly wage - CZK thousand
- ◆ Ratio to the gross monthly wage in the total, wage or salary sphere (%)



**Figure A19 Wages of ICT technicians, by gender**

- Average gross monthly wages - CZK thousand
- ◆ Ratio to the average gross monthly wage of all men / women (%)



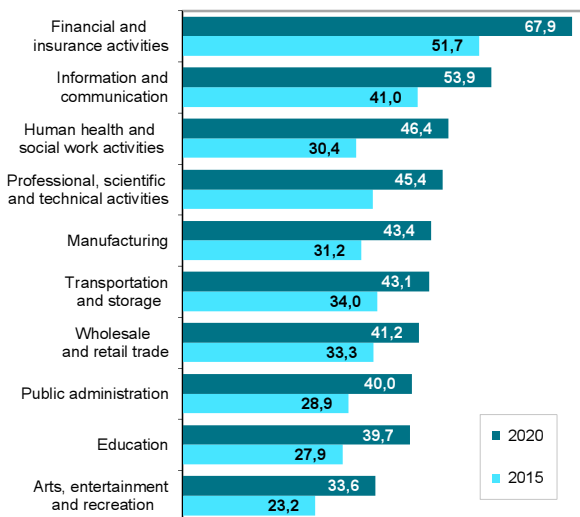
## A ICT specialists

**Table A7 Wages of ICT technicians in Czechia according to their occupation and industry**

Average gross monthly wage in CZK

	2018	2019	2020
<b>Total</b>	<b>42 016</b>	<b>45 219</b>	<b>48 175</b>
<b>Occupation</b>			
<b>ICT operations and user support techn.</b>	<b>42 789</b>	<b>46 134</b>	<b>49 269</b>
ICT operations technicians	40 751	45 950	48 752
ICT user support technicians	46 576	49 438	52 166
Computer network and systems technicians	43 127	43 219	47 309
Web technicians		40 840	45 545
<b>Telecomm. and broadcasting technicians</b>	<b>37 922</b>	<b>39 641</b>	<b>40 889</b>
Broadcasting and audiovisual technicians	35 590	36 333	36 526
Telecommunications engineering techn.	38 940	40 599	42 210
<b>Industry (CZ-NACE Sections)</b>			
Manufacturing (C)	38 292	41 695	43 396
Wholesale and retail trade (G)	37 410	38 740	41 241
Transporting and storage (H)	41 654	42 972	43 091
Information and communication (J)	46 934	49 913	53 907
Financial and insurance activities (K)	59 387	65 315	67 928
Professional, scientific and techn. act. (M)	38 776	44 241	45 416
Public administration (O)	34 995	37 718	40 038
Education (P)	34 184	38 083	39 697
Human health and social work act. (Q)	37 997	39 835	46 367
Arts, entertainment and recreation (R)	30 827	32 964	33 648

**Figure A20 Average gross monthly wage of ICT technicians in selected industries (CZK thousand)**



Source: CZSO, Structural Earnings Statistics

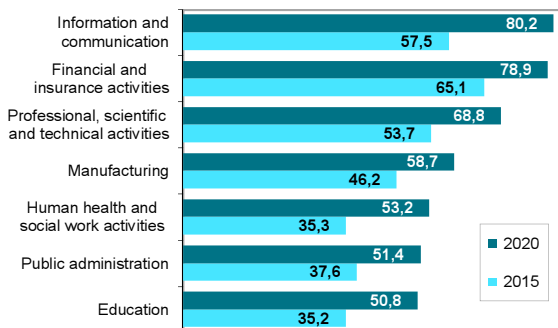
## A ICT specialists

**Table A8 Wages of Software and applications developers and analysts in Czechia**

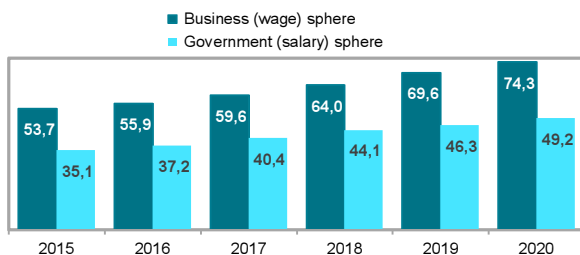
Average gross monthly wages in CZK

	2018	2019	2020
<b>Total</b>	<b>63 530</b>	<b>69 035</b>	<b>73 719</b>
Men	64 961	70 785	75 499
Women	53 840	58 197	62 765
<b>Sphere of activity (remuneration)</b>			
Business (wage) sphere	63 994	69 577	74 284
Government (salary) sphere	44 068	46 300	49 241
<b>Age group</b>			
Under 25 years	34 834	39 235	43 317
25–34 years	57 078	61 441	66 457
35–44 years	73 966	80 165	84 012
45–54 years	67 764	74 758	80 184
55 + years	59 379	61 346	63 771
<b>Highest level of education attainment</b>			
Master's and Doctoral	69 316	75 268	79 598
Bachelor's and Higher professional	58 580	64 237	69 119
Secondary with A-level examination	56 591	60 990	63 233

**Figure A21 Wages of software & applications developers and analysts in selected industries (CZK thousand)**



**Graf A22 Wages of software & applications developers and analysts, by sphere of activity (CZK thousand)**



Source: CZSO, Structural Earnings Statistics