18. INFORMATION SOCIETY

*The term of **information and communication technologies** (hereinafter only referred to as the ICT) generally includes technologies as mobile phones, computers, and the Internet and systems, activities, and processes related to them, which contribute to the display, processing, storage/warehousing, and transmission of information and data in an electronic form.*

*Data on (fixed broadband) **Internet infrastructure** are based on data sources of the Czech Telecommunication Office; they are related to 31 December of the reference year.*

*The **broadband** (high-speed) internet **access** used to be defined in the past according to the International Telecommunication Union as an access to the Internet with the nominal speed ≥ 256 kbps towards the subscriber. The European Commission defines the basic broadband connection to the Internet as such that enables to download with the minimum speed of 2 Mbps. A fast broadband connection enabling to transmit data with the speed of 30–99.9 Mbps is considered to be standard nowadays and an ultra-fast broadband with the speed over 100 Mbps is considered to be ideal. The service subscriber can be both a natural or a legal person that has a contract concluded with a service provider. The number of subscribers to this service is measured on the basis of the number of access points where subscribers are provided with the service for one of the below mentioned technologies used for connection to the Internet. In majority of cases, the number corresponds to the number of contracts concluded for providing of services in the retail segment.*

*The broadband internet access by means of a **digital subscriber line (DSL)** technology enables broadband connectivity by means of a metallic line (telephone line). At present, the most frequently used types of this connection are an asymmetric digital subscriber line (ADSL) and, most of all, a very high bit rate digital subscriber line (VDSL). Since 2013, it also includes access by means of VDSL technology in combination with optical line of the FTTCab type (Fiber To The Cabinet).*

*The broadband internet access by means of a **cable television network** (CATV) is expressed as the number of **cable modems** by means of which subscribers are provided with the service of broadband internet access.*

*The broadband internet access by means of **optical fibre** (fiber to the x – FTTx) includes the optical connection of the fibre to the home (FTTH) type, when the optical fibre delivers optical connectivity up to the subscriber's dwelling (flat) and the optical connection of the fibre to the building (FTTB) type, when the optical fibre only delivers optical connectivity to the building and the indoor distribution to the subscriber's dwelling (flat) is ensured in a different way (e.g. by a radio network or a fixed local area network).*

***Fixed wireless access** (FWA) at a fixed place includes connection to the Internet in the licensed (including fixed LTE) and non-licensed (including fixed WiFi) frequency bands. Since 2019, the fixed wireless access to the Internet also includes services of broadband internet access at a fixed place provided by means of SIM cards in a mobile network (so-called fixed LTE).*

*Data on **information and communication technologies in households and their usage by individuals** are based on the Sample Survey on ICT Usage in Households and by Individuals, which has been carried out within the Integrated Household Surveys (IHS). The survey is carried out using the computer assisted personal interviewing (CAPI) method on the sample of about 10 000 individuals (persons) aged 16+ years. Results have been grossed up to the whole population in Regions of the Czech Republic aged 16+ years. Concerning data on households, the current status in the survey period (the 2nd quarter of the reference year) is surveyed; data on individuals (persons) are for the last three months in the survey period, except for indicators on purchasing on the Internet (shopping) and submitting filled-in (completed) forms to public authorities, which are surveyed for the reference period of 12 months before the interviewing. In order to be more representative, data, which are broken down by Region, are published as three-year moving averages.*

***Households with a computer / internet access** include all households, which at the time of the survey stated that at least one of the household members had an access to a personal computer / the Internet at home.*

***Households having a WiFi router** are households, which at the time of the survey stated that they distribute the internet signal (from the fixed connection to the Internet) across the household by means of a WiFi router. A WiFi router is a device enabling persons in the given household to get connected to the Internet from multiple devices concurrently and also from any location, which is within the WiFi network range.*

***Individuals** (persons) **using information and communication technologies** are such individuals (persons) who have used a computer or the Internet at least once in the last three months anywhere (e.g. at home, at work, at school) and for whatever purpose (private or work).*

***Individuals** (persons) **using a mobile phone to access the Internet** are individuals (persons) who stated that they had used a mobile phone to access the Internet at least once during the last three months. It does not matter whether the phone was a private one or an employer's one as well as it does not matter what type of connection was used to access the Internet (mobile networks, WiFi).*

***Individuals** (persons) **using social networks** (social networking) **on the Internet** are those who in the last three months at least once logged into their user profile on such networks and used available services as, for example, browsing through posts of other users, communication with other users, and/or sharing of their own posts.*

***Individuals** (persons) **purchasing** (shopping) **on the Internet** are individuals (persons) who in the last twelve months purchased or ordered any goods or services on a website. A purchase means a purchase for private purposes. This does not include a purchase for the employer, a school, or other organisations. The goods or services could be paid over as "cash on delivery" or at personal pickup.*

*The data on the **numbers of ICT specialists** are from the Labour Force Sample Survey (LFSS). In order to ensure higher reliability and to eliminate considerable year-on-year fluctuations of values for this group of employees, data in the table are provided as three-year moving averages (e.g. the value for 2019 is calculated as an average of values for the years 2018, 2019, and 2020). (The occupations of) **ICT specialists** are subdivided into two major groups, namely to ICT managers, engineers and professionals (ICT professionals) and ICT technicians, installers and servicers (ICT technicians). Their classification is based on the Classification of Occupations (CZ-ISCO), the corresponding national classification in the Czech Republic based on the International Standard Classification of Occupations (ISCO-08) developed by the International Labour Organization (ILO). From 2011, ICT specialists are defined and assigned to the major groups, groups, and subgroups of the CZ-ISCO based on recommendations of Eurostat and the International Labour Organization.*

*Data on **wages of ICT specialists** come from the structural employee wage statistics, which is generated by merging of databases of the sample survey of the Information System on Average Earnings of the Ministry of Labour and Social Affairs, which covers the wage sphere, and of the administrative data source of the Salary Information System of the Ministry of Finance, which exhaustively covers the salary sphere. Data on wages of ICT specialists in this publication are only available for the ICT specialists defined rather narrowly, which includes two sub-major groups of the CZ-ISCO: 25 Information and communications technology professionals (hereinafter only referred to as the ICT professionals) and 35 Information and communications technicians (hereinafter only referred to as the ICT technicians).*

*Data on **students of and graduates from ICT fields of education** were obtained from data sources of the Ministry of Education, Youth, and Sports, namely from the Union Information from Students' Registers (the "*SIMS*" database). Data are continually added to the source* SIMS *database and the database is continually updated, including retrospective corrections. Data published in this Yearbook correspond to the state of processing as at 20 January 2021. Data on university students are always as at 31 December of the relevant year; data on graduates are for the whole school year. Information and communication technology studies are defined by the international classification of the ISCED-F 2013, class 06 Information and Communication Technologies. Numbers of students and graduates are given as headcount, i.e. each student is included in a particular piece of data only once, including students who study in more study programmes concurrently. The total numbers of students and graduates thus do not have to be equal to the sums of students and graduates of respective types of study programmes.*

*Data on **ICT equipment in schools** come from data sources of the Ministry of Education, Youth, and Sports, which collects data on available IT infrastructure in basic, secondary, and higher professional schools. Data are as at September of a given year.*

*Data on **equipment penetration and usage of information technologies in health** in the Czech Republic, namely in independent surgeries of physicians, come from a survey of the Institute of Health Information and Statistics of the CR.*

***Electronic medical prescription** (ePrescription) makes it possible for physicians (medical practitioners) to issue a medical prescription on their computer. The Central Repository of Electronic Prescriptions then assigns an identification code to the prescription and after that the physician tells the code to the patient. Based on the code, a pharmacist afterwards obtains the electronic prescription from the central repository.*

***Drug interaction alerts** serve to a physician to find out whether a certain patient is not prescribed drugs that interact with each other.*

***Laboratory tests ordering and receiving of the results** means that a physician sends an electronic order for a laboratory test from his/her computer in the surgery and afterwards he/she receives the test results in the form of a secure protocol.*