



Statistical Office of the Republic of Serbia



USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE REPUBLIC OF SERBIA, 2024

Households/Individuals
Enterprises



Belgrade, 2024

ISSN 1820-9084

USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE REPUBLIC OF SERBIA, 2024

Households/Individuals
Enterprises



Belgrade, 2024

Usage of information and communication technologies in the Republic of Serbia, 2024

Published by: Statistical Office of the Republic of Serbia, Belgrade, Milana Rakića 5

Responsible: Branko Josipović, Acting Director, Vladimir Šutić, Uroš Rajčević,
Ivana Minaeva

Authors: Branko Josipović, Acting Director, Vladimir Šutić, Uroš Rajčević,
Ivana Minaeva

Editorial board: Marija Karašćević, Mirjana Ogrizović Brašanac

Translated by: Vesna Aralica

Design and editing: Division for development, preparation and visualisation
of statistical outputs

Illustrations: all-free-download.com

© Use of data published in this publication is authorized provided the source is acknowledged.



INTRODUCTION

Modern society has become "information society" with the development and usage of information and communication technologies, which, as its main characteristic, plays the most important part in production, the economy and all other sphere in the life of individuals and society as a whole.

Aware of the significance of those technologies, the Statistical Office of the Republic of Serbia carried out in 2004 a pilot survey on the usage of information and communication technologies in organisations dealing with financial and insurance activities. This undertaking was primarily meant to test and prepare the methodologies and instruments for the implementation of similar regular surveys related to households and the economy.

In the previous seventeen years, the Statistical Office of the Republic of Serbia conducted two surveys on the usage of information and communication technologies. The first one referred to households and individuals, and the second included also enterprises.

Both surveys were carried out on the territory of the Republic of Serbia also in 2024 based on EUROSTAT methodology. Data for the Republic of Serbia exclude those for AP Kosovo and Metohija.

As for households and individuals, the three months preceeding the telephone interview were taken to be the reference period, which was, for most of the questions asked to enterprises, January 2024, while selected ones referred to the entire 2023.

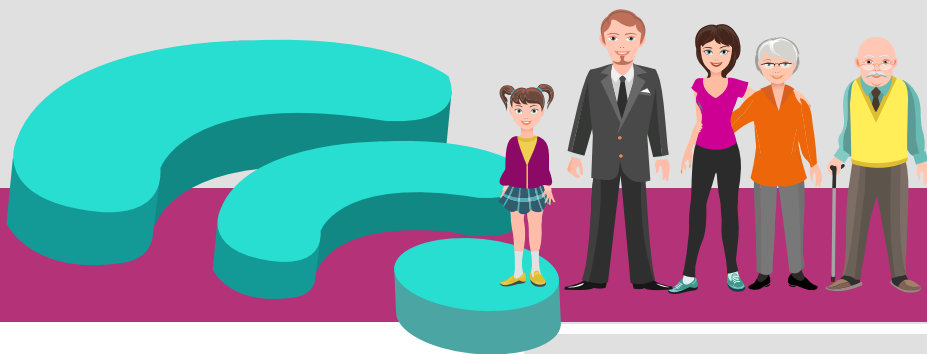
The survey for households was carried out on a two-stage sample, which was stratified according to the criterion on urban characteristics. The sample was allocated to the territories of Central Serbia (excluding Belgrade), AP Vojvodina and Belgrade, proportionally to the number of households. It included 2800 households and 2800 individuals. The interview was done both by telephone and indirectly (answers given by another person other than the absent one).

The survey for enterprises was carried out on a sample stratified by size classes and activities, through telephone interview. The sample covered 1 720 enterprises.

The Statistical Office of the Republic of Serbia is hopeful that this publication will provide the users enough information on the current situation in information and communication technologies, which will serve as the basis for further development.

TABLE OF CONTENT

Preface	3
U Sage of information and communication technologies in households/individuals in the Republic of Serbia, 2024	6
1.1. METHODOLOGY	8
1.2. SAMPLE	9
Households	9
Individuals.....	9
1.3. MAIN FINDINGS	10
1.3.1. Devices available in households	10
1.3.2. Computers in households.....	10
1.3.3. The Internet in households	12
1.3.4. Individuals: use of computers	15
1.3.5. Individuals: use of mobile phone	19
1.3.6. Individuals: use of the Internet	20
1.3.7. e-government.....	24
1.3.8. e-commerce.....	25
1.4. SURVEY RESULTS	27
Questionnaire: usage of information and communication technologies in households/individuals.....	54
U Sage of information and communication technologies in enterprises in the Republic of Serbia, 2024	66
2.1. METHODOLOGY	68
2.2. SAMPLE	69
2.3. MAIN FINDINGS	70
2.3.1. The Internet in enterprises	70
2.3.2. Website.....	72
2.3.3. e-commerce.....	73
2.3.4. ICT specialists and skills	74
2.3.5. ICT security	75
2.3.6. Artificial Intelligence (AI)	76
2.4. SURVEY RESULTS	77
Questionnaire: usage of information and communication technologies in enterprises	104
Glossary	110



73.2% OF INDIVIDUALS USED
A COMPUTER IN THE LAST
THREE MONTHS.

51.8% OF USERS BOUGHT/
ORDERED OVER THE
INTERNET IN THE LAST
THREE MONTHS – MOST
OF THE INTERNET USERS
BOUGHT CLOTHES AND
SPORTS GOODS (69.8%).

INTERNET BANKING IS USED
BY 41.2% OF INTERVIEWED
INDIVIDUALS AMONG USERS
OF THE INTERNET IN THE
LAST THREE MONTHS.

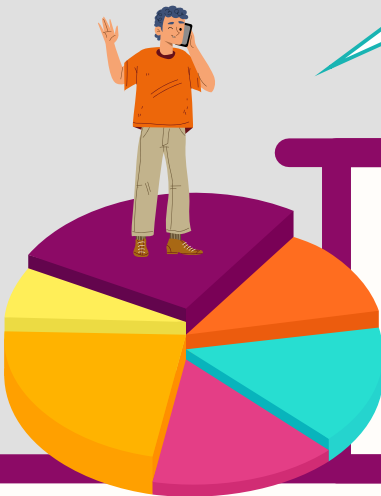
INTERNET WAS USED BY 87.7%
OF INDIVIDUALS IN THE LAST
THREE MONTHS.

AS TO HOW OFTEN THE
RESPONDENTS USED,
ON AVERAGE, THE INTERNET
IN THE LAST THREE MONTHS,
90.8% DID IT SEVERAL
TIMES A DAY.



INTERNET WAS USED BY
25.8% OF THE INTERNET
POPULATION FOR PRINTING
OFFICIAL FORMS FROM
WEB PAGE OR APP OF
PUBLIC AUTHORITIES

THE SAME SAMPLE WAS
USED FOR HOUSEHOLDS
AND INDIVIDUALS
(AGED 16-74) IN THE
SURVEY THE RESPONSE
RATE IS 93.8%.



95.9% OF
HOUSEHOLDS
HAVE A MOBILE
PHONE AND
96.4% A TV SET.

73.4% OF HOUSEHOLDS
HAVE A COMPUTER.

88.8% OF HOUSEHOLDS
HAVE AN INTERNET
CONNECTION.

THE ANALYSIS OF RESPONDENTS
BY SEX INDICATES THAT IN THE
LAST THREE MONTHS 90.3% OF
MEN AND 85.2% OF WOMEN
USED THE INTERNET.

MORE THAN 81% OF THE
INTERNET POPULATION
HAVE AN ACCOUNT ON
SOCIAL MEDIA
(FACEBOOK, TWITTER).









HOUSEHOLDS

INDIVIDUALS



1.1. METHODOLOGY

 Survey period	<ul style="list-style-type: none">• The survey was carried out from 15 February 2024 to 29 February 2024
 Type of survey	<ul style="list-style-type: none">• Telephone interview
 Sample size	<ul style="list-style-type: none">• 2 800 households• 2 800 individuals
 Target population	<ul style="list-style-type: none">• For households: the target population is made of all households with at least one member aged between 16 and 74• For individuals: the target population is made of individuals aged 16 and 74
 Type of sample	<ul style="list-style-type: none">• Two-stage, stratified sample
 Geographic scope	<ul style="list-style-type: none">• Territory of the Republic of Serbia (without AP Kosovo and Metohija)



1.2. SAMPLE

The survey on ICT usage in households was carried out on a representative sample of 2 800 households on the territory of the Republic of Serbia. The response rate was 93.8% (2 628 households).

HOUSEHOLDS

Sample (households)	Income					Region				Type of household		Total
	Up to 30000 dinars	30000 – 50000 dinars	50000 – 70000 dinars	70000 – 90000 dinars	More than 90000 dinars	Beograd	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	Urban	Other	
Number	256	382	345	416	963	733	686	691	518	1750	878	2628
%	10.8	16.2	14.6	17.6	40.8	27.9	26.1	26.3	19.7	66.6	33.4	100.0

The same sample was used to interview both households and individuals aged from 16 to 74 living on the territory of the Republic of Serbia. The sample covered 2 800 individuals. The response rate was 93.8% (2 628 individuals).

INDIVIDUALS

Sample (individuals)	Age						Sex		Educational level			Employment status				Total
	16–24	25–34	35–44	45–54	55–64	65–74	Men	Women	Lower than secondary	Secondary	Tertiary	Employed	Unemployed	Student	Other	
Number	109	204	368	453	543	951	1197	1431	273	1479	876	1029	363	55	1181	2628
%	4.1	7.8	14.0	17.2	20.7	36.2	45.5	54.5	10.4	56.3	33.3	39.2	13.8	2.1	44.9	100.0



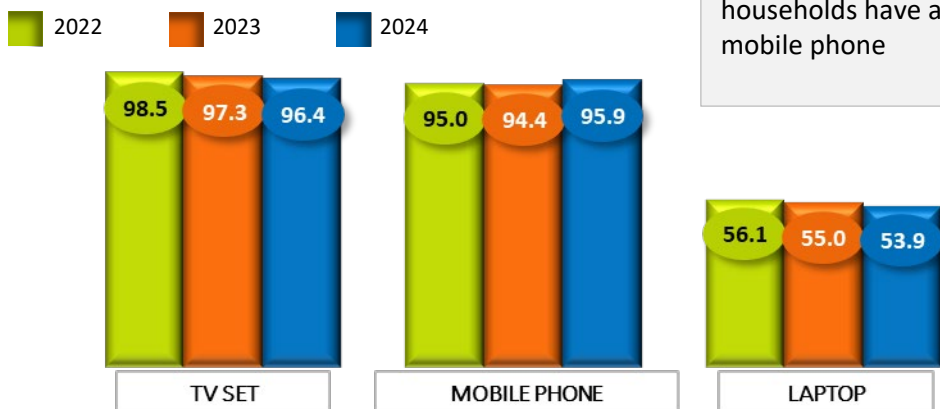
1.3. MAIN FINDINGS

1.3.1. Devices available in households

Household were offered to give more than one answer to the question relative to devices available in households. The survey shows that 96.4% of households have a TV set, and 95.9% a mobile phone.

There are 53.9% of households that have a laptop, which is a decrease of 1.1 percentage point in relation to 2023 and increase of 2.2 pp. in relation to 2022.

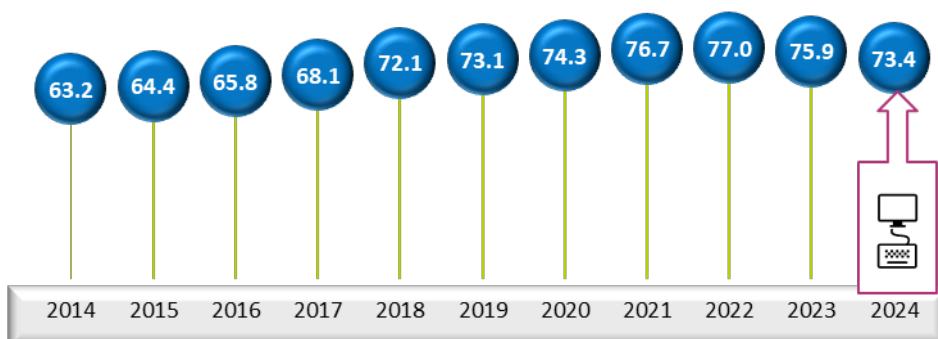
Chart 1.1. Devices available in households (%)



1.3.2. Computers in households

The main findings of this survey show that 73.4% of households in the Republic of Serbia have a computer, which is a decrease of 2.5 pp. and 3.6 pp. in relation to 2023 and 2022, respectively. The percentage of computers in households varies depending on the territory: in Belgrade it amounts to 84.3 %, in Vojvodina to 70.4%, in Šumadija i Zapadna Srbija to 68.5% and in Južna i Istočna Srbija 67.7%.

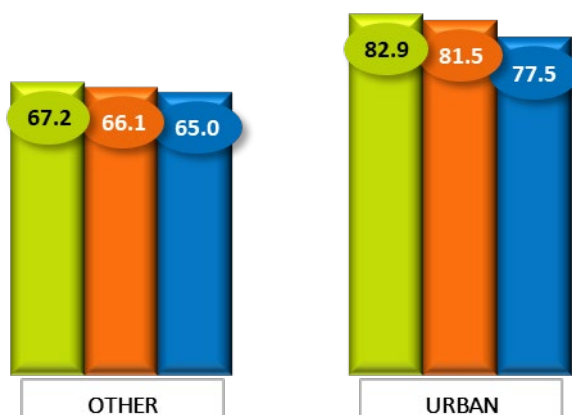
Chart 1.2. Computers in households (%)



The differences are visible when comparing the availability of computers in urban and other parts of the Republic of Serbia: 77.5% versus 65.0%. Urban parts of the Republic of Serbia recorded a decrease of 4.0 pp. and other parts 1.1 pp.

Chart 1.3. Percentage of households having a computer, by type of settlement (%)

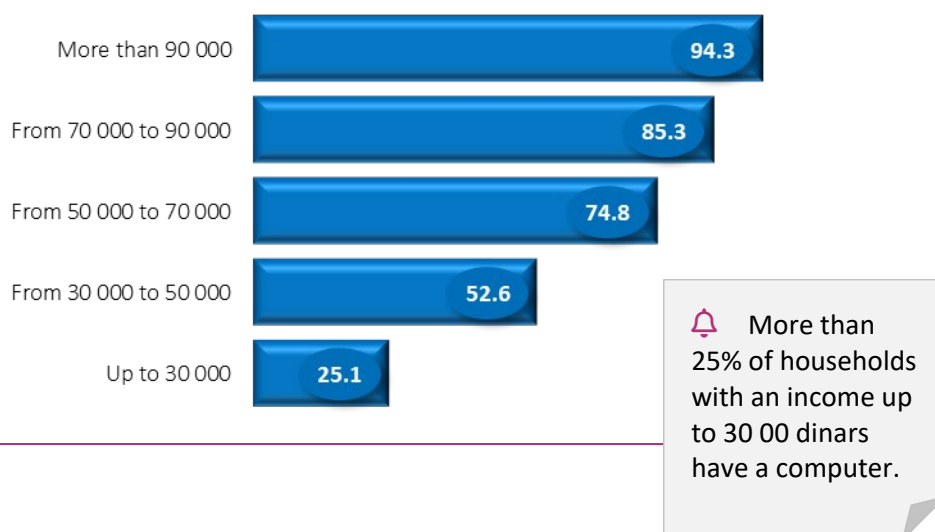
2022 2023 2024



🔔 Computers are mostly available in households having a monthly income exceeding 90 000 dinars (94.3%).

There is a gap in terms of computer availability in households when looking at the structure of households according to the monthly income. In the category of income from 70 000 to 90 000 dinars, 85.3% of households have a computer, i.e. 74.8% in the category of households with an income from 50 000 to 70 000 dinars.

Chart 1.4. Percentage of households having a computer, by income level (%)



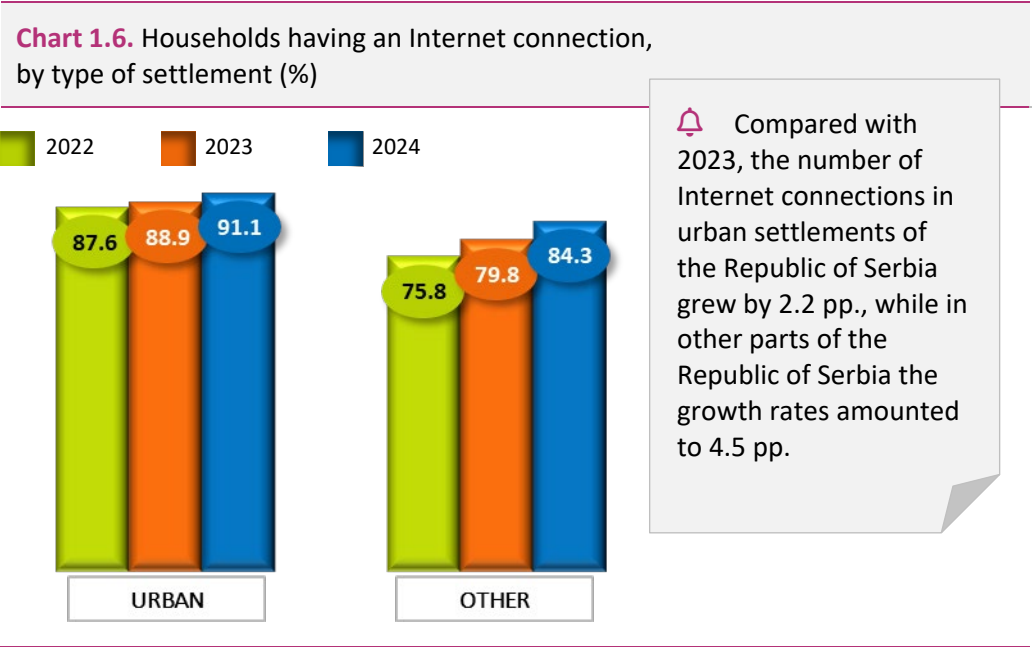
1.3.3. Internet in households

In the Republic of Serbia, 88.8% of households have an Internet connection, which is an increase of 3.2 percentage points and 5.6 pp. in relation to 2023 and 2022, respectively. The survey indicates that all the households having an Internet connection in the Republic of Serbia have a broadband Internet connection.

Chart 1.5. Does the household have access to the Internet at home? (%)



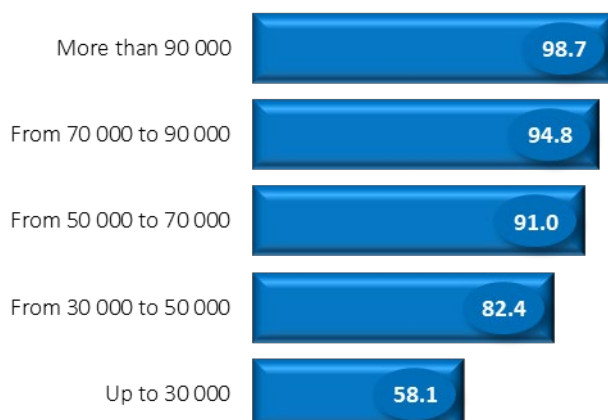
The availability of an Internet connection is the highest in Belgrade, amounting to 92.5%. In Region Vojvodine it is 88.0%, in Region Šumadije i Zapadne Srbije 88.2% and in Region Južne i Istočne Srbije 85.5%.



There are considerable differences as to the availability of Internet connections in urban and other settlements of the Republic of Serbia: 91.1% versus 84.3%. When compared with 2023, in urban settlements of the Republic of Serbia the growth rate is 2.2 pp., while in other parts of the Republic of Serbia the growth rate is 4.5 pp.

As in computer availability in households, there is a large gap as regard the availability of an Internet connection by household income level. Internet connection is mostly used by households which monthly income exceeds 90 000 dinars, i.e. 98.7%, while the share of households with an income up to 30 000 dinars is only 58.1%.

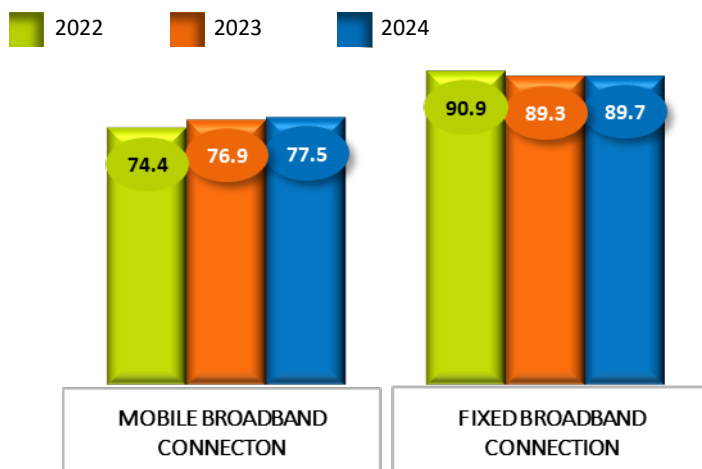
Chart 1.7. Household having an Internet connection, by income level (%)



More than 82% of households with an income from 30 000 to 50 000 dinars have an Internet connection.

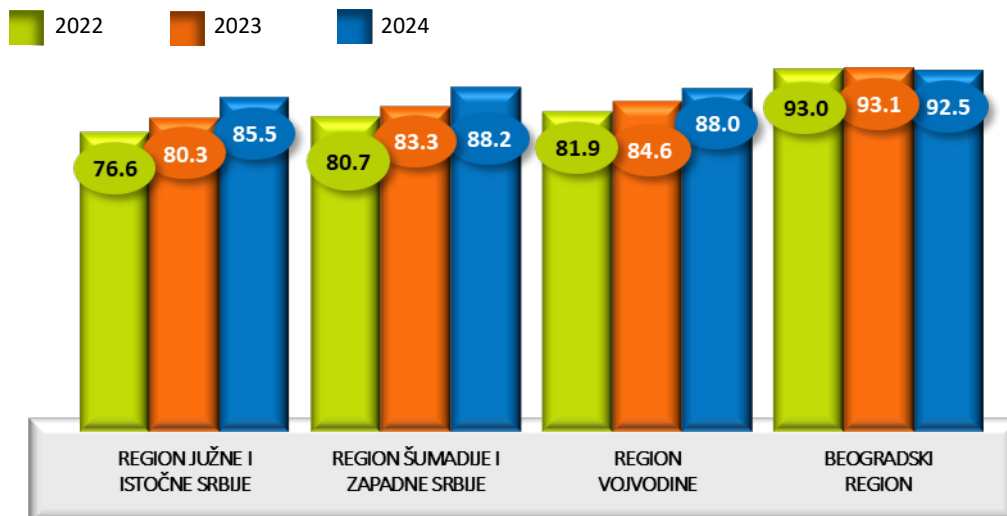
As to how Internet is accessed (type of connection), household were offered to choose between fixed or mobile broadband Internet connection. The obtained results indicate that of the total number of households having an Internet connection, 89.7% of households have a fixed broadband connection, and 77.5% a mobile broadband Internet connection.

Chart 1.8. Type of Internet connection (%)



More than 89% of households have fixed broadband Internet connection.

Chart 1.9. Internet connection in households, by territory (%)



1.3.4. Individuals: use of computers

In the Republic of Serbia 73.2% persons used a computer in the last three months, 4.3% more than three months ago, 8.2% more than a year ago, while 14.2% never used a computer. The number of computer users who used a computer in the last three months fell by 2.2 pp., 2.7 pp. and 1.6 pp, compared with 2023, 2022 and 2021, respectively.

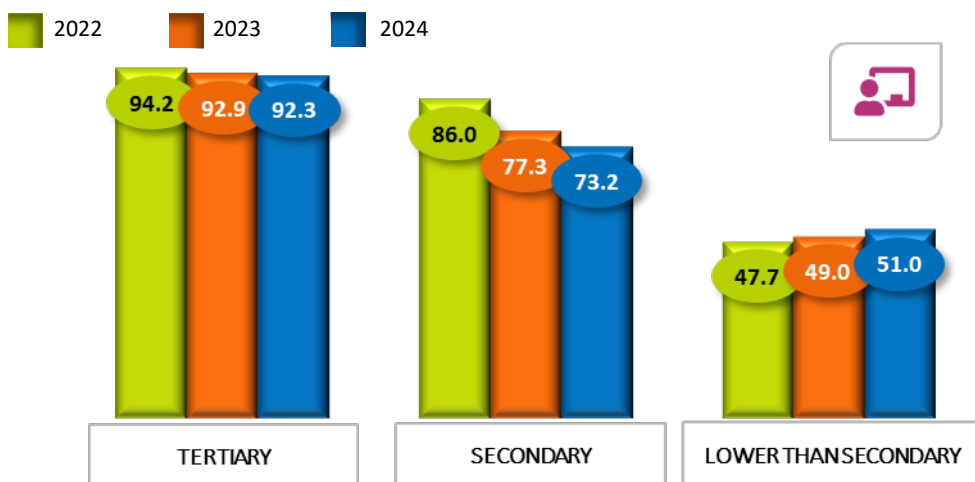
The share of computer users (in the last three months), by educational level:

- 92.3% of persons with tertiary education;
- 73.2% of persons with secondary education;
- 51.0% of persons with lower than secondary education.

Chart 1.10. When did you last use a computer? (%)

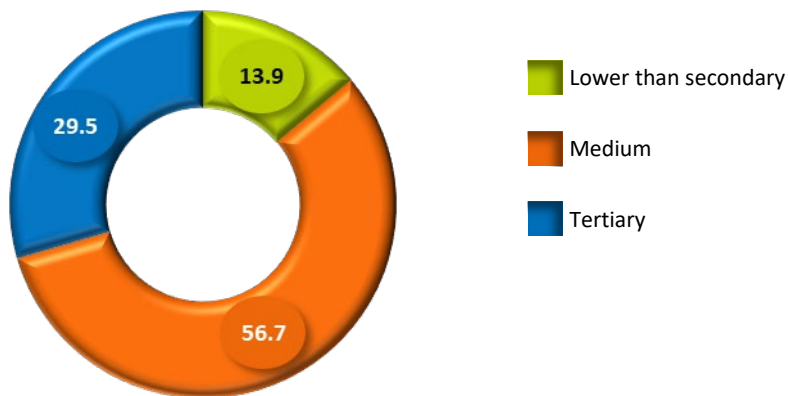


Chart 1.11. Share of computer users (in the last three months), by educational level (%)



Among computer users, 73.2% have secondary education, 51.0% of users have lower than secondary education, and 92.3% tertiary education.

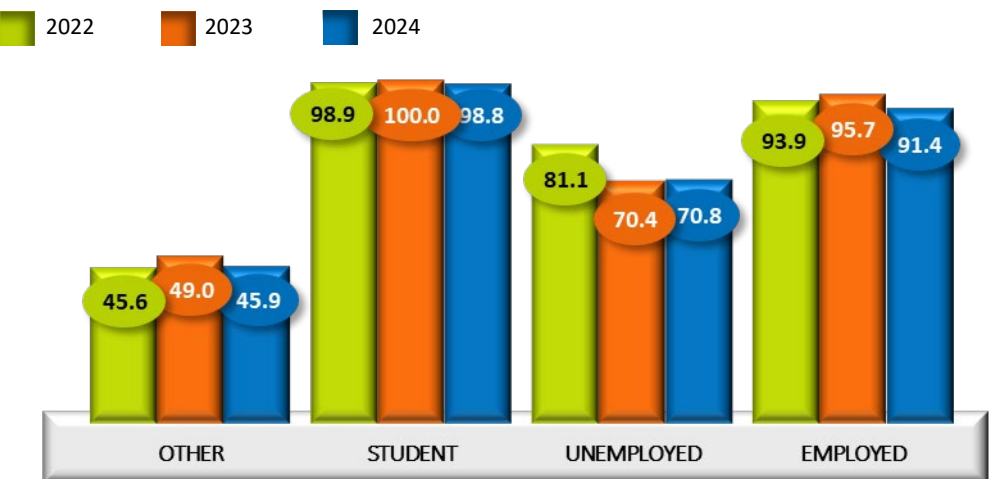
Chart 1.12. Structure of computer users' education (%)



Share of computer users (in the last three months), by employment status:

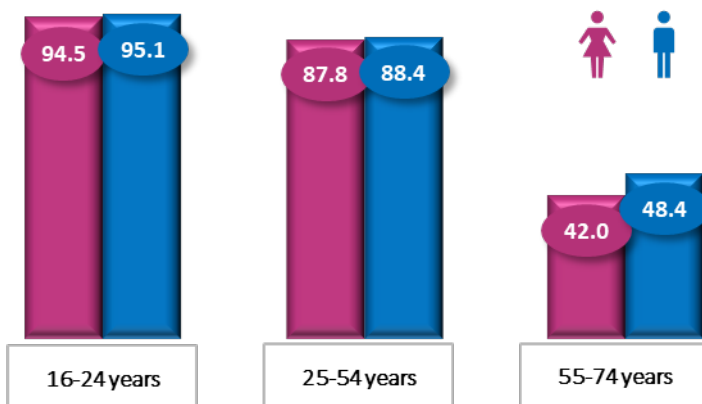
- 98.8% of students;
- 91.4% of employed persons;
- 70.8% of unemployed persons;
- 45.9% of others (retired persons, persons serving military service...).

Chart 1.13. Share of computer users (in the last three months), by employment status (%)



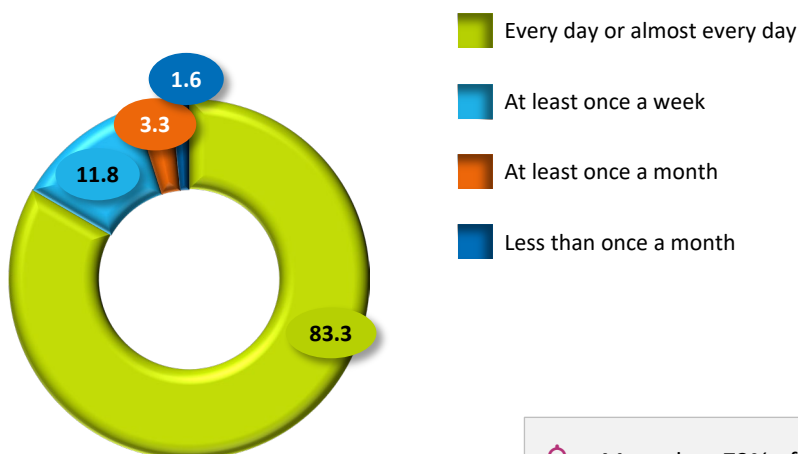
The analysis of respondents by sex shows that 71.1% of female persons and 75.5% of male persons used a computer in the last three months.


Chart 1.14. Use of the computers (in the last three months) (%)



When asked how often, on average, they used a computer in the last three months, 83.3% of respondents said having used a computer every day or almost every day, 11.8% at least once a week, 3.3% at least once a month, and 0.7% less than once a month.

Chart 1.15. How often, on average, did you use a computer in the last three months? (%)



 More than 73% of persons used a computer in the last three months.

1.3.5. Individuals: use of mobile phones

The survey indicates that 96.8% of inhabitants use a mobile phone.

Chart 1.16. Use of a mobile phone (%)

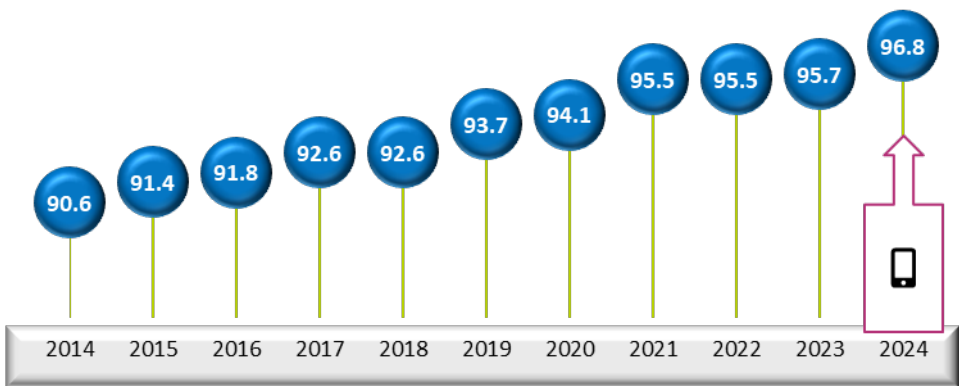
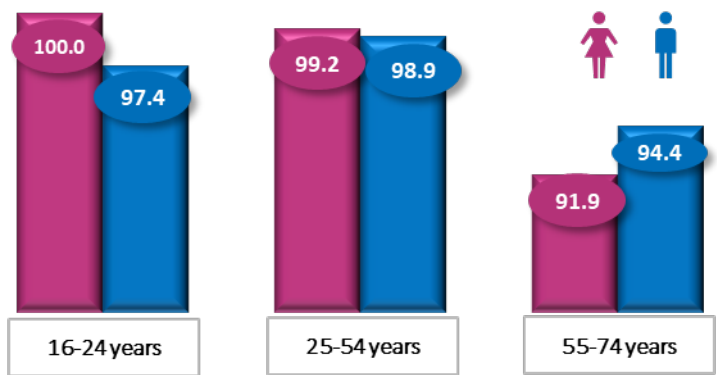


Chart 1.17. Use of a mobile phone, by sex and age (%)



1.3.6. Individuals: use of the Internet

In the Republic of Serbia 87.7% of persons used the Internet in the last three months, 4.1% of the respondents used it more than three months ago, 0.9% more than a year ago, while 7.3% of the respondents never used it.

The number of Internet users increased by 2.3 pp. in the last three months in relation to 2023, and by 4.2 pp. in relation to 2022.

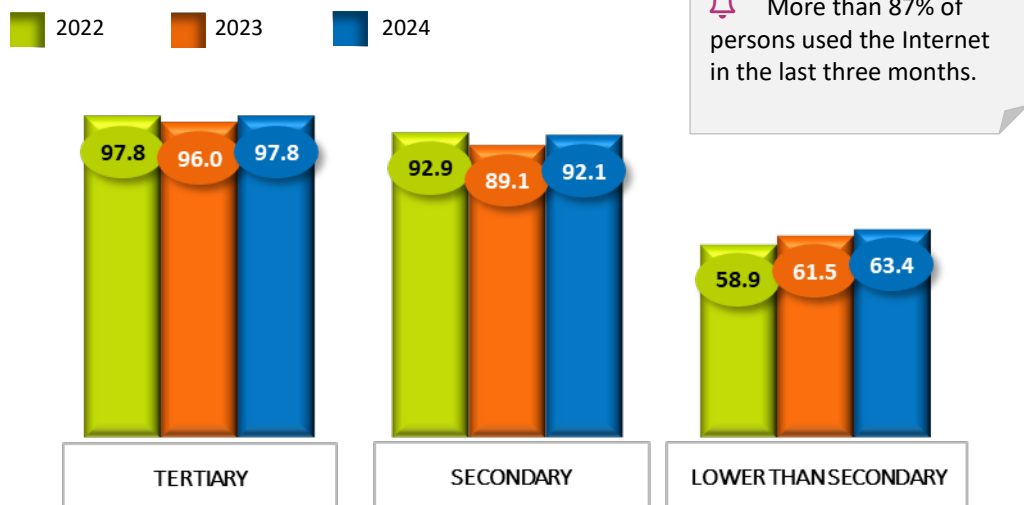
Chart 1.18. When did you last use the Internet? (%)



Share of Internet users (in the last three months), by educational level:

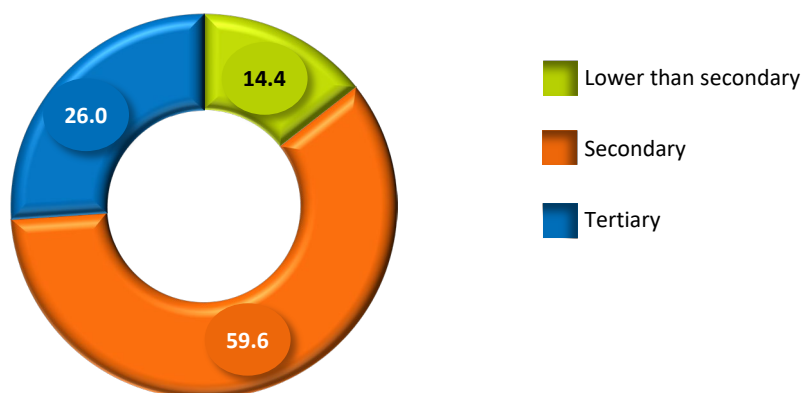
- 97.8% of persons with tertiary education;
- 92.1% of persons with secondary education;
- 63.4% of persons with lower than secondary education.

Chart 1.19. Share of Internet users (in the last three months), by educational level (%)



Among Internet users, 92.1% have secondary educational level, 63.4% lower than secondary educational level, and 97.8% tertiary educational level.

Chart 1.20. Structure of Internet users' educational level (%)



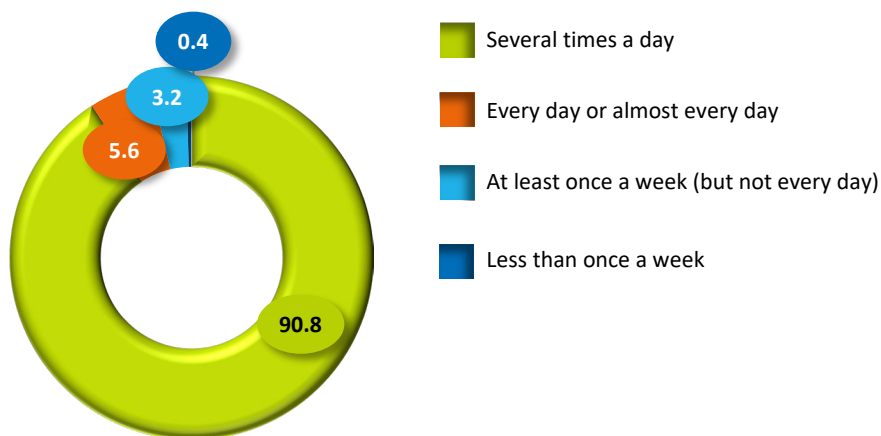
Share of Internet users (in the last three months), by professional status:

- 100.0% of students;
- 99.1% of employed persons;
- 95.2% of unemployed persons;
- 65.7% of others (retired persons, persons serving military service ...).

Chart 1.21. Share of Internet users (in the last three months), by employment status (%)



Chart 1.22. How often, on average, did you use the Internet in the last three months? (%)





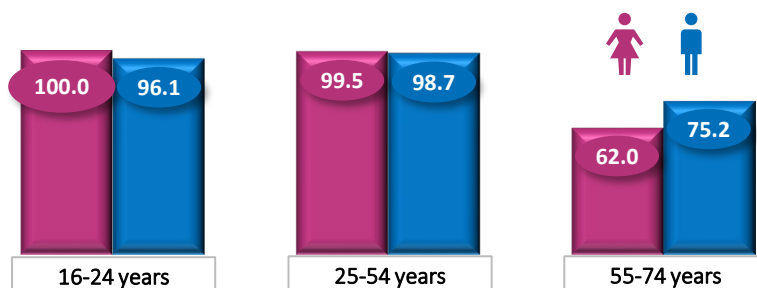
  More than 81% of Internet population have an account on social networks (Facebook, Twitter).

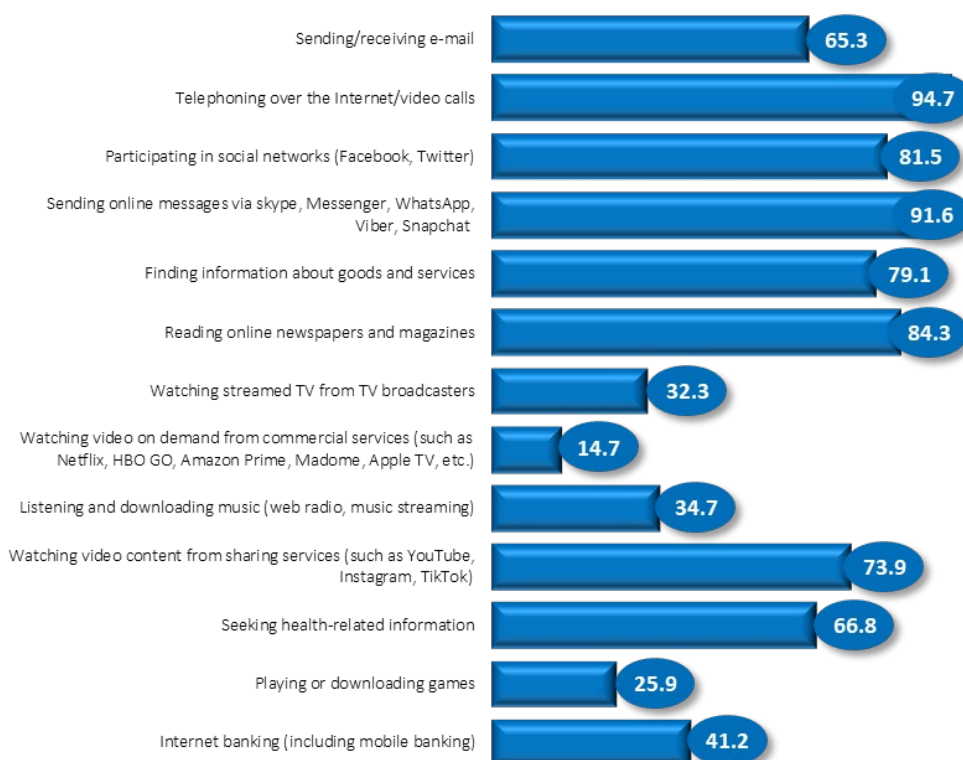
Chart 1.23. Use of the Internet (in the last three months), by sex and age (%)



The analysis of the respondents by sex indicates that 90.3% of men and 85.2% of women used the Internet in the last three months.

In the last three months the respondents used the Internet mostly for sending online messages via WhatsApp, Viber, Skype, Messenger (91.6%), as well as for telephoning over the Internet/video calls (94.7%).

Chart 1.24. Types of Internet use (for private purposes) in the last three months (%)



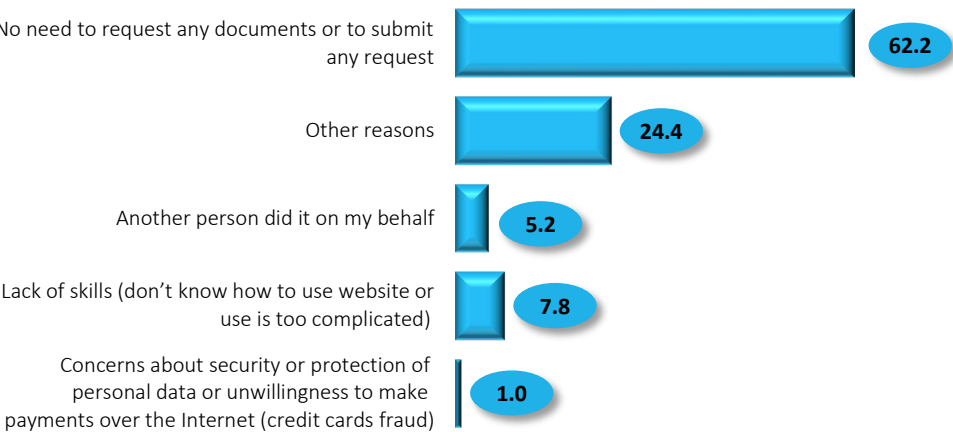
1.3.7. e-government

Chart 1.25. For which of the following services of public authorities did you use the Internet? (%) (among Internet users in the last 12 months)



The survey indicates also that 25.8% of the Internet population used the Internet to print official forms from public authorities' websites or applications.

Chart 1.26. Reason for not submitting filled in forms to public authorities over the Internet (%) (among Internet users in the last 12 months)



1.3.8. e-commerce

As regard the period when Internet users bought/ordered goods or services over the Internet, 51.8% bought/ordered goods/services in the last three months, 13.3% more than three months ago, and 10.7% more than a year ago.

The percentage of Internet users who have never bought/ordered goods or services over the Internet is 24.2%.

Chart 1.27. When did you last buy or order goods or services over the Internet for private purposes? (%)

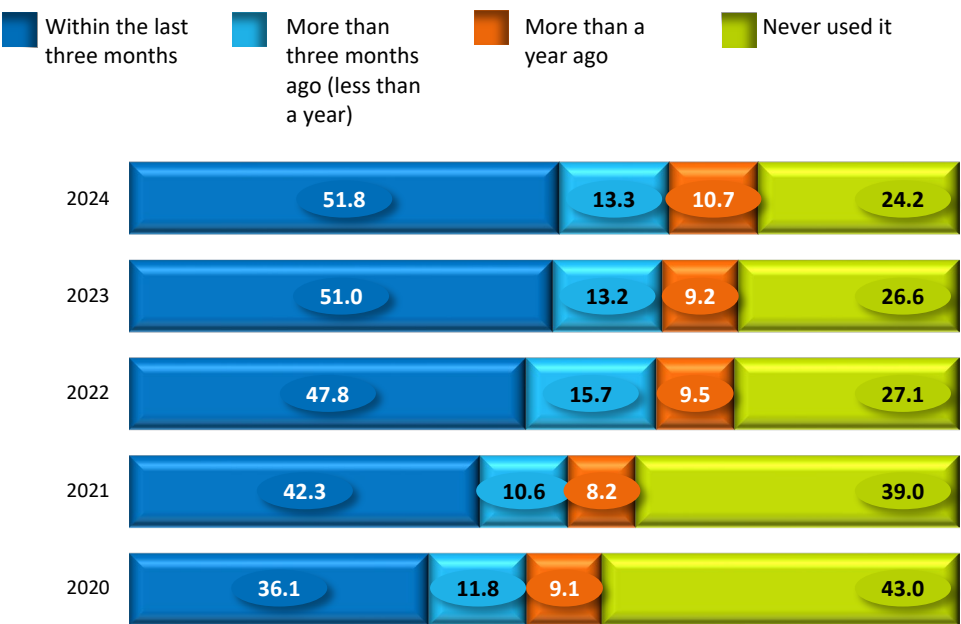
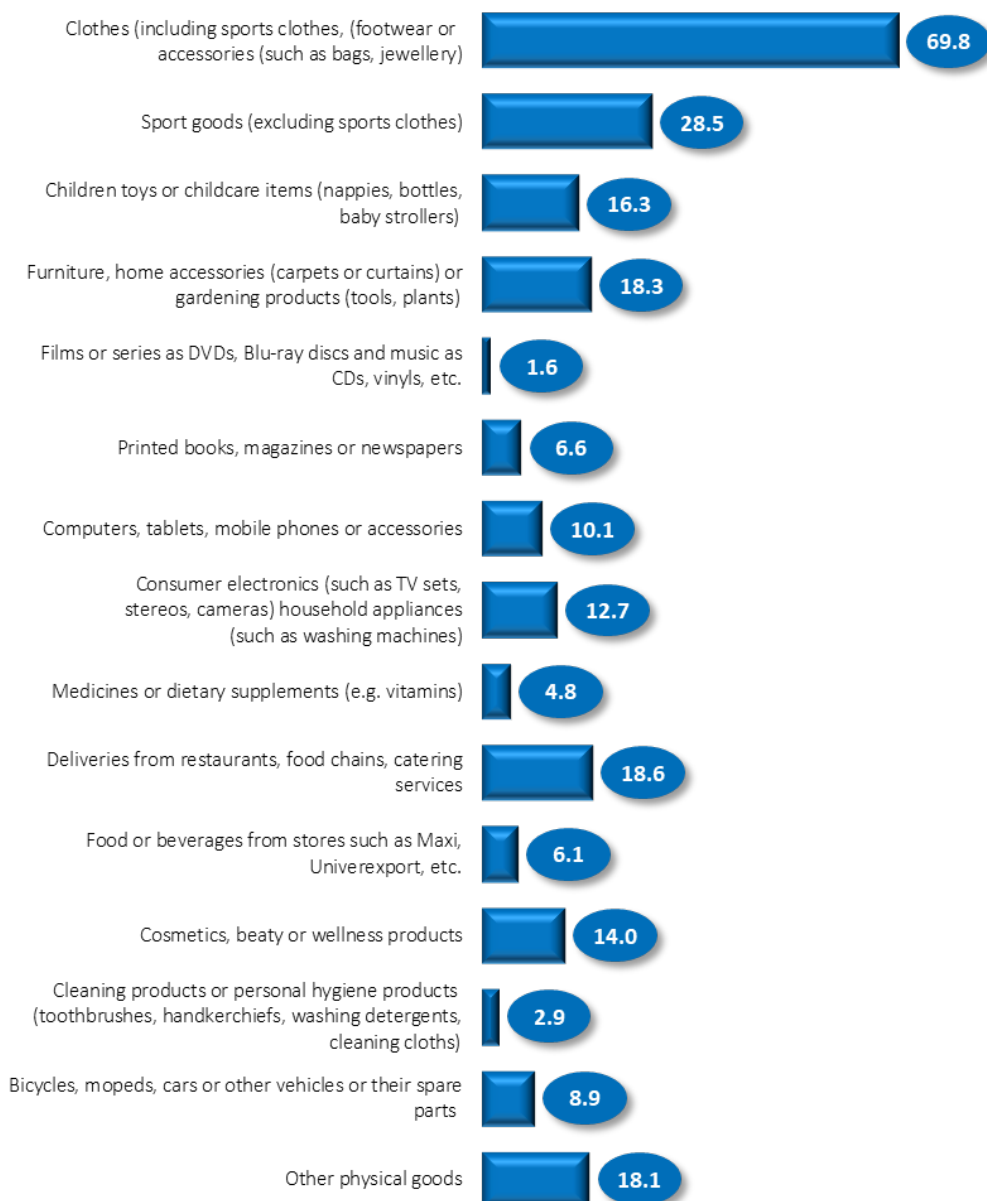


Chart 1.28. What types of goods did you buy over the Internet for private purposes in the last three months? (%)



Most of users buy clothes and sports goods over the Internet (69.8%) and sports accessories (28.5%).



1.4. SURVEY RESULTS

MODULE 1.A: Access to information and communication technologies

%

Answer (households)	Income					Region				Type of household		Total
	Up to 30 000 dinars	30 000– 50 000 dinars	50 000 – 70 000 dinars	70 000 – 90 000 dinars	More than 90 000	Belgrade	Vojvodina	Šumadija i Zapadni Srbija	Južna i Istočna Srbija	Urban	Other	

A1_H: Devices available in households (tick all that apply)

Desktop computer	25.1	52.6	74.8	85.3	94.3	84.3	70.4	68.5	67.7	77.5	65.0	73.4
Laptop	12.3	27.9	50.7	63.3	84.4	61.8	52.3	51.3	47.9	59.6	42.4	53.9
TV	96.8	96.6	94.9	96.9	96.9	94.8	96.3	97.6	97.2	96.5	96.1	96.4
Mobile phone	80.4	95.3	97.9	99.1	99.1	97.8	96.3	95.7	92.9	96.9	93.8	95.9

A1: Do you or anyone in your household have access to the Internet at home?

Yes	58.1	82.4	91.0	94.8	98.7	92.5	88.0	88.2	85.5	91.1	84.3	88.8
No	41.9	17.6	9.0	5.2	1.3	7.5	12.0	11.8	14.5	8.9	15.7	11.2

A2_H: Type of Internet connection (tick all that apply)¹⁾

Fixed broadband connection	75.6	79.2	87.3	91.4	97.6	92.0	89.6	90.8	84.5	91.3	86.0	89.7
Mobile broadband connection	68.4	69.5	72.0	77.1	86.2	83.4	70.1	79.2	76.5	78.0	76.5	77.5

¹⁾ The data refer to households that answered "Yes" in question A1.

MODULE B_H: Use of computers

Answer (individuals)	Age						Sex	
	16-24	25-34	35-44	45-54	55-64	65-74	Male	Female

B1_H: When did you last

Within the last three months	94.8	93.8	92.4	79.4	59.0	31.3	75.5	71.1
More than three months ago (less than a year)	3.6	2.0	2.7	3.8	8.5	4.7	4.4	4.2
More than a year ago	1.6	4.1	5.0	8.3	11.4	16.1	8.1	8.4
Never used it	0.0	0.0	0.0	8.6	21.2	47.9	12.0	16.3

B2_H: How often, on average, did you

Every day or almost every day	92.2	85.0	89.6	86.6	73.5	54.7	81.7	85.0
At least once a week	5.2	6.0	7.8	8.3	22.2	38.5	13.3	10.3
At least once a month	2.6	7.0	1.0	3.0	2.0	5.5	3.5	3.1
Less than a month	0.0	2.0	1.6	2.1	2.3	1.3	1.6	1.6

¹⁾ The data refer to individuals who answered "Within the last three months" in question B1_H.

Educational level			Employment status				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employed	Unemployed	Student	Other		

use a computer?

51.0	73.2	92.3	91.4	70.8	98.8	45.9	73.2	Within the last three months
7.2	4.3	2.0	2.5	9.0	1.2	4.4	4.3	More than three months ago (less than a year)
4.5	11.5	3.6	3.6	10.8	0.0	14.3	8.2	More than a year ago
37.3	11.1	2.0	2.5	9.4	0.0	35.3	14.2	Never used it

use a computer in the last three months?¹⁾

72.7	82.8	88.6	89.5	72.2	95.4	71.4	83.3	Every day or almost every day
22.5	11.9	7.4	7.9	13.6	2.8	24.4	11.8	At least once a week
3.7	3.7	2.4	1.8	9.4	0.0	3.4	3.3	At least once a month
1.2	1.7	1.6	0.8	4.8	1.8	0.9	1.6	Less than a month

MODULE B: Use of the Internet

Answer (individuals)	Age						Sex	
	16–24	25–34	35–44	45–54	55–64	65–74	Male	Female

B1: When did you

Within the last three months	98.0	99.5	99.6	98.2	78.7	57.8	90.3	85.2
More than three months ago (less than a year)	2.0	0.0	0.0	0.2	12.1	8.9	2.9	5.3
More than a year ago	0.0	0.0	0.4	0.2	1.0	3.2	0.7	1.1
Never used it	0.0	0.5	0.0	1.3	8.3	30.1	6.2	8.5

B2: How often, on average, did you

Several times a day	97.4	97.3	95.7	92.9	81.1	75.3	90.2	91.4
Every day or almost every day	1.8	2.7	4.0	4.7	11.1	10.5	6.1	5.0
At least once a week (but not every day)	0.8	0.0	0.3	2.0	7.1	12.4	3.1	3.4
Less than once a week	0.0	0.0	0.0	0.4	0.8	1.8	0.6	0.2

¹⁾ The data refer to individuals who answered “Within the last three months”.

Educational level			Employment status				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employed	Unemployed	Student	Other		

last use the Internet?

63.4	92.1	97.8	99.1	95.2	100.0	65.7	87.7	Within the last three months
10.9	2.9	1.1	0.5	0.7	0.0	11.6	4.1	More than three months ago (less than a year)
1.1	1.1	0.1	0.1	0.4	0.0	2.4	0.9	More than a year ago
24.6	3.9	1.0	0.3	3.8	0.0	20.3	7.3	Never used it

use the Internet in the last three months?¹⁾

85.2	89.4	97.0	96.2	85.5	98.3	82.5	90.8	Several times a day
8.3	6.5	1.8	2.9	10.1	1.7	7.9	5.6	Every day or almost every day
6.2	3.5	1.1	0.8	4.2	0.0	8.2	3.2	At least once a week (but not every day)
0.3	0.6	0.2	0.2	0.2	0.0	1.3	0.4	Less than once a week

MODULE B: Use of the Internet (continued)

Answer (individuals)	Age						Sex	
	16–24	25–34	35–44	45–54	55–64	65–74	Male	Female
B3: For which of the following activities did you use								
Sending/receiving e-mails	76.6	78.4	73.4	60.2	60.4	35.8	64.6	66.0
Telephoning over the Internet/video calls	99.0	93.8	97.4	94.1	91.9	91.1	92.7	96.7
Participating in social networks (Facebook, Twitter)	95.9	94.3	91.2	83.9	68.6	44.0	80.1	82.8
Sending online messages via WhatsApp, Viber, Skype, Messenger	96.5	97.0	95.2	92.1	91.9	71.2	90.7	92.5
Finding information about goods and services	82.4	86.8	83.8	84.5	68.4	61.3	77.9	80.2
Reading online newspapers, magazines	84.7	91.7	88.7	84.5	78.1	73.9	82.1	86.5
Posting opinions about civic or political issues via websites or social media	3.4	5.7	8.8	6.9	3.7	1.9	7.5	3.4
Taking part in online consultations or voting to define civic or political issues (urban planning, signing petitions)	0.7	4.4	2.7	2.1	1.5	0.1	2.2	2.0
Listening and downloading music (web radio, music streaming)	68.1	52.0	44.3	21.4	14.3	6.6	35.8	33.5
Watching Internet streamed TV from TV broadcasters	46.4	46.1	35.4	27.3	22.2	14.3	32.3	32.4
Watching video on demand from commercial services (such as Netflix, HBO GO, Amazon Prime, Maxdome, Apple TV, etc.)	24.0	19.0	21.8	10.7	7.7	2.3	15.3	14.1
Watching video content from sharing services (such as YouTube, Instagram, TikTok)	84.9	87.0	78.7	70.3	64.1	54.6	74.6	73.2
Playing or downloading games	54.1	29.6	30.0	21.7	13.3	5.8	27.0	24.7

¹⁾ The data refer to individuals who answered “Within the last three months” in question B1“.

Educational level			Professional status				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employed	Unemployed	Student	Other		
the Internet for private purposes, in the last three months? ¹⁾ (tick all that apply)								
36.1	63.1	86.3	79.8	53.2	96.0	38.6	65.3	Sending/receiving e-mails
93.2	93.7	97.8	95.0	94.7	97.9	93.3	94.7	Telephoning over the Internet/video calls
77.0	81.2	84.5	89.2	86.0	94.3	58.4	81.5	Participating in social networks (Facebook, Twitter)
86.4	91.3	95.1	96.5	92.8	95.4	79.5	91.6	Sending online messages via WhatsApp, Viber, Skype, Messenger
62.6	78.5	89.6	84.9	80.2	86.0	64.4	79.1	Finding information about goods and services
73.6	83.7	91.7	88.5	80.6	92.5	76.8	84.3	Reading online newspapers, magazines
5.8	4.6	7.4	6.9	4.4	1.8	4.5	5.5	Posting opinions about civic or political issues via websites or social media
2.7	1.5	3.0	2.9	2.2	1.8	0.3	2.1	Taking part in online consultations or voting to define civic or political issues (urban planning, signing petitions)
33.3	32.6	40.0	39.9	30.5	66.9	19.9	34.7	Listening and downloading music (web radio, music streaming)
25.0	29.4	43.1	38.0	23.0	68.2	20.6	32.3	Watching Internet streamed TV from TV broadcasters
10.2	10.6	26.4	18.3	6.4	32.3	10.4	14.7	Watching video on demand from commercial services (such as Netflix, HBO GO, Amazon Prime, Maxdome, Apple TV, etc.)
73.1	72.7	77.1	76.5	74.1	92.0	64.3	73.9	Watching video content from sharing services (such as YouTube, Instagram, TikTok)
30.9	24.9	25.3	24.4	26.9	69.9	17.6	25.9	Playing or downloading games

MODULE B: Use of the Internet (continued)

Answer (individuals)	Age						Sex	
	16–24	25–34	35–44	45–54	55–64	65–74	Male	Female

B3: For which of the following activities did you use

Seeking health-related information	61.6	71.1	68.6	67.8	67.2	60.7	62.8	70.8
Making an appointment with a doctor over website or app	2.5	5.9	7.6	5.4	6.3	3.4	5.4	5.5
Online access to own medical record	2.4	2.1	2.0	1.0	1.0	0.5	1.7	1.3
Using other medical services over website or app instead of going to hospital or doctor (such as obtaining prescription or online consultations)	0.0	1.2	2.4	1.2	1.1	0.7	1.1	1.3
Selling goods or services over website or app (such as eBay, Facebook, Marketplace)	5.3	8.4	12.2	6.9	5.4	2.0	9.1	5.3
Internet banking (including mobile banking)	42.0	53.6	47.1	38.7	39.0	20.2	41.5	40.9

B4: Which of the following activities did you carry out over the Internet

Doing an online course	28.7	20.4	6.5	8.0	2.4	0.9	9.0	12.7
Finding online learning material (audio-visual material, online learning software, electronic textbooks, learning apps...)	65.0	31.7	21.5	16.3	10.4	4.7	20.5	28.0
Communicating with instructors or students using audio or visual tools (such as Zoom, MS Teams, Google Classroom, etc.)	35.4	10.9	7.2	7.1	3.2	2.1	8.0	12.7
Never carried out any of the above	29.8	67.6	73.1	78.7	87.4	94.7	76.8	67.9

¹⁾ The data refer to individuals who answered “Within the last three months” in question B1.

²⁾ The data refer to individuals who answered “Yes” to any of the proposed answers in question B4.

Educational level			Employment status				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employed	Unemployed	Student	Other		

the Internet for private purposes, in the last three months?¹⁾ (tick all that apply)

56.9	65.8	74.3	73.0	61.8	64.2	58.8	66.8	Seeking health-related information
0.9	3.8	11.8	8.3	3.3	2.1	2.3	5.5	Making an appointment with a doctor over website or app
1.6	0.8	3.0	2.0	0.5	5.8	0.3	1.5	Online access to own medical record
0.0	1.0	2.3	2.1	0.3	0.0	0.5	1.2	Using other medical services over website or app instead of going to hospital or doctor (such as obtaining prescription or online consultations)
5.4	7.8	6.8	10.8	4.3	7.6	2.3	7.2	Selling goods or services over website or app (such as eBay, Facebook, Marketplace)
23.9	35.2	64.6	56.8	26.0	45.3	21.4	41.2	Internet banking (including mobile banking)

For educational, private or professional purposes in the last three months?¹⁾²⁾

12.5	7.1	18.5	12.2	4.9	40.1	6.4	10.8	Doing an online course
25.0	18.1	37.8	25.8	12.2	87.3	16.9	24.2	Finding online learning material (audio-visual material, online learning software, electronic textbooks, learning apps...)
18.6	6.4	14.9	9.5	2.6	40.2	12.0	10.3	Communicating with instructors or students using audio or visual tools (such as Zoom, MS Teams, Google Classroom, etc.)
73.5	79.3	56.2	70.0	86.4	7.9	80.1	72.4	Doing an online course

MODULE B: User of the Internet (continued)

Answer (individuals)	Age						Sex	
	16–24	25–34	35–44	45–54	55–64	65–74	Male	Female
B5: What was the purpose of the learning activities you performed								
For formal education (school or university)	90.7	31.6	28.9	20.8	12.6	28.8	44.9	47.1
For professional or business purposes	6.6	56.2	47.8	48.9	62.1	21.2	35.9	37.8
For private purposes	21.5	37.0	46.4	40.1	41.2	52.7	35.1	35.7
B6: Have you ever created an account or registered								
Yes	86.2	85.0	79.6	66.9	56.3	29.1	69.1	68.7
No	13.8	15.0	20.4	33.1	43.7	70.9	30.9	31.3
B7: Did you delete or try to delete (or close)								
Yes	19.7	26.4	19.7	15.3	10.5	7.9	18.1	18.6
No	80.3	73.6	80.3	84.7	89.5	92.1	81.9	81.4
B8: Did you encounter problems when you tried to delete								
Yes	9.4	8.9	0.9	11.4	9.4	11.2	7.1	7.9
No	90.6	91.1	99.1	88.6	90.6	88.8	92.9	92.1

¹⁾ The data refer to individuals who answered “Within the last three months” in question B1“.

Educational level			Employment status				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employed	Unemployed	Student	Other		

in the last three months?¹⁾ (tick all that apply)

86.9	55.4	24.9	24.5	29.6	95.9	68.7	46.2	For formal education (school or university)
6.5	21.8	61.2	60.8	12.0	4.0	12.0	37.0	For professional or business purposes
13.1	39.5	38.1	35.2	71.9	20.3	33.4	35.4	For private purposes

via a free app or service?¹⁾

64.6	66.5	76.7	77.5	71.4	93.5	43.0	68.9	Yes
35.4	33.5	23.3	22.5	28.6	6.5	57.0	31.1	No

your account in a free app or service in the last three months?¹⁾

3.8	19.4	23.1	19.4	18.8	21.7	12.1	18.4	Yes
96.2	80.6	76.9	80.6	81.2	78.3	87.9	81.6	No

(or close) your account in a free app or service in the last three months?¹⁾

0.0	6.9	9.0	8.7	0.0	8.5	16.0	7.5	Yes
100.0	93.1	91.0	91.3	100.0	91.5	84.0	92.5	No

MODULE C: Use of e-government

Answer (individuals)	Age						Sex	
	16–24	25–34	35–44	45–54	55–64	65–74	Male	Female

C1: In the last 12 months, have you used the services of public authorities or public for the following activities?¹⁾

Accessing your personal data stored by public authorities (information on immunization, green certificate, etc.)	38.8	45.4	38.8	37.9	28.7	15.7	35.6	34.1
Accessing information from public databases or registers (cadastre registers, business registers)	8.7	25.4	25.7	21.7	17.2	10.2	20.2	17.8
Obtaining information (about services, benefits, rights, laws, working hours)	28.3	40.3	39.5	30.8	20.9	13.3	26.7	32.5

C2: In the last 12 months, have you downloaded or printed official forms from

Yes	29.7	39.2	29.8	26.5	18.7	8.0	25.0	26.5
No	70.3	60.8	70.2	73.5	81.3	92.0	75.0	73.5

C3: In the last 12 months, have you made an appointment or reservation using a (for passport, ID card, etc.),

Yes	17.8	25.4	20.9	19.3	12.6	7.0	16.7	18.4
No	82.2	74.6	79.1	80.7	87.4	93.0	83.3	81.6

C6: In the last 12 months, have you carried out any of the following activities for private purposes?

Submitting a request for an official document or certificate (such as diplomas, birth certificate, marriage/divorce certificate, etc.)	17.2	20.8	13.2	10.3	6.6	4.9	10.8	13.4
Asking for benefits or rights (pension, unemployment, children's allowance, enrolment in schools, universities)	14.0	19.7	13.8	9.1	7.7	3.9	10.0	12.9
Submitting other requests, complaints (asking for legal assistance)	0.0	1.6	0.4	1.2	1.1	0.7	0.7	1.0

¹⁾ The data refer to individuals who answered "More than three months ago (less than a year)" in question B1.

Educational level			Employment status				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employed	Unemployed	Student	Other		

**services via a website or app, for private purposes
(tick all that apply)**

29.1	31.0	47.4	43.8	28.2	43.7	22.1	34.8	Accessing your personal data stored by public authorities (information on immunization, green certificate, etc.)
4.9	17.3	32.2	27.6	11.5	13.8	10.7	19.0	Accessing information from public databases or registers (cadastre registers, business registers)
19.2	23.5	50.5	39.0	21.9	40.4	16.7	29.6	Obtaining information (about services, benefits, rights, laws, working hours)

public authorities' or public services' we page or app, for private purposes?¹⁾

9.8	22.4	43.8	37.6	13.7	40.5	11.1	25.8	Yes
90.2	77.6	56.2	62.4	86.3	59.5	88.9	74.2	No

**website or app of public authorities or a service
for private purposes¹⁾**

5.9	14.4	32.5	24.3	11.6	26.0	8.5	17.6	Yes
94.1	85.6	67.5	75.7	88.4	74.0	91.5	82.4	No

**using¹⁾ a website or app of public authorities or public services,
(tick all that apply)**

2.5	11.0	20.8	15.8	9.7	23.5	5.0	12.1	Submitting a request for an official document or certificate (such as diplomas, birth certificate, marriage/divorce certificate, etc.)
1.5	11.7	17.2	13.7	11.4	19.5	5.9	11.4	Asking for benefits or rights (pension, unemployment, children's allowance, enrolment in schools, universities)
0.0	0.5	2.2	1.5	0.3	0.0	0.3	0.9	Submitting other requests, complaints (asking for legal assistance)

MODULE C: Use of e-government (continued)

Answer (individuals)	Age						Sex	
	16–24	25–34	35–44	45–54	55–64	65–74	Male	Female

C7: What were the reasons for not asking official documents or not submitting in the last 12 months?

No need to request any documents or to submit any request	70.5	74.2	74.1	65.6	51.5	36.6	60.4	64.1
Lack of skills (don't know how to use website or use is too complicated)	0.0	0.7	1.0	5.3	15.7	23.6	8.0	7.6
Concerns about security or protection of personal data or unwillingness to make payments over the Internet (credit cards fraud)	0.8	1.1	0.3	0.9	1.3	1.7	0.9	1.1
Another person did it on my behalf	7.9	1.7	0.4	2.0	7.6	14.3	4.0	6.6
Other reasons	20.8	22.3	24.2	26.2	24.9	26.6	27.6	21.1

BC: Were there problems when you used website or app of public authorities¹⁾

Use of website or app too complicated (not user-friendly, wordings not clear, procedure badly explained)	6.0	2.3	5.6	5.8	7.0	8.3	4.8	5.9
Technical problems when using website or app (loading too slow, web location down)	9.6	9.1	14.8	11.0	18.5	7.9	12.0	12.3
It was impossible to access the service on smartphone or tablet (incompatible device version or apps not accessible)	2.5	0.0	2.0	2.3	1.7	1.1	1.8	1.5
Other reasons	3.8	8.5	9.0	8.0	7.9	9.8	6.3	9.4
Did not have any problems	81.9	81.8	73.5	74.6	67.7	75.4	77.6	74.3

¹⁾ The data refer to individuals answered "Within the last three months" or "More than three months ago (less than a year)" in question B1.

%

Educational level			Employment status				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employed	Unemployed	Student	Other		

**forms using¹⁾ a website or app of public authorities or public services
(tick all that apply)**

58.4	59.5	72.9	71.4	64.5	83.1	43.0	62.2	No need to request any documents or to submit any request
15.9	6.8	3.5	2.6	9.1	0.0	16.1	7.8	Lack of skills (don't know how to use website or use is too complicated)
0.2	0.9	1.9	0.8	0.7	0.0	1.7	1.0	Concerns about security or protection of personal data or unwillingness to make payments over the Internet (credit cards fraud)
7.6	5.5	2.5	1.1	2.2	11.1	12.8	5.2	Another person did it on my behalf
17.9	28.1	19.7	24.0	23.5	5.7	28.5	24.4	Other reasons

or public services in the last 12 months (tick all that apply)

2.5	6.1	5.1	4.0	11.1	6.9	4.6	5.4	Use of website or app too complicated (not user-friendly, wordings not clear, procedure badly explained)
0.0	14.3	11.9	12.9	15.2	9.1	7.5	12.1	Technical problems when using website or app (loading too slow, web location down)
0.0	1.5	2.1	1.2	2.7	0.8	2.3	1.6	It was impossible to access the service on smartphone or tablet (incompatible device version or apps not accessible)
4.3	10.7	5.0	6.9	8.8	3.9	12.9	7.9	Other reasons
93.2	70.5	79.2	77.1	67.1	86.2	75.1	75.9	Did not have any problems

MODULE D: e-commerce¹⁾

Answer (individuals)	Age						Sex	
	16–24	25–34	35–44	45–54	55–64	65–74	Male	Female

D1: When did you last buy or order

Within the last three months	71.5	72.6	66.0	51.7	29.8	15.6	48.5	55.0
More than three months ago (less than a year)	15.5	12.1	15.1	13.4	13.5	9.3	15.3	11.3
More than a year ago	0.7	6.8	5.7	10.0	21.3	19.5	11.5	10.0
Never	12.3	8.4	13.3	24.9	35.3	55.6	24.8	23.7

D2: What types of goods did you buy over

Clothes, sport goods	80.4	78.9	67.7	62.2	57.9	51.4	59.6	78.7
Sport accessories (excluding sport clothes)	30.4	28.1	33.0	29.3	20.3	10.9	31.7	25.6
Children toys or childcare items (nappies, bottles, baby strollers)	8.0	26.9	21.4	11.0	7.0	12.3	11.7	20.3
Furniture, home accessories (such as carpets or curtains or gardening products)	12.9	21.2	17.4	18.1	22.4	22.9	14.6	21.5
Music as CDs, vinyls, etc. or films or series as DVDs, Blu-ray disks	2.9	1.4	0.8	2.3	0.0	1.9	2.4	0.8
Printed books, magazines or newspapers	10.1	4.2	6.5	6.5	5.0	9.4	6.1	7.0
Computers, tablets, mobile phones or accessories	15.3	13.3	10.6	6.2	3.4	2.2	11.4	9.0
Consumer electronics (TV sets, stereos, cameras) or household appliances (such as washing machines)	8.3	11.3	16.3	10.2	17.4	17.8	16.8	9.1
Medicines or dietary supplements	2.6	2.9	4.3	6.9	3.8	20.5	4.0	5.5
Deliveries from restaurants, food chains, catering services	29.6	22.2	17.3	11.9	11.6	9.0	17.5	19.6
Food or beverages from stores or food delivery services	9.1	9.9	4.5	2.6	1.8	9.2	6.8	5.5
Cosmetics, beauty or wellness products	8.3	21.6	16.6	12.6	7.3	4.8	4.1	22.6
Cleaning products or personal hygiene products	4.7	0.5	2.3	4.2	1.8	7.1	1.8	3.8
Bicycles, mopeds, cars or other vehicles or their spare parts	1.2	8.7	10.6	11.7	15.2	3.8	16.4	2.4
Other physical goods	19.3	21.5	16.9	17.7	11.5	18.3	21.0	15.5

¹⁾ The data refer to individuals who answered “Within the last three months” or “More than three months ago (less than a year)” in question B1.

Educational level			Employment status				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employed	Unemployed	Student	Other		

Goods or services over the Internet for private purposes?

41.3	49.5	63.7	62.9	50.1	87.9	26.2	51.8	Within the last three months
9.7	13.8	14.3	14.3	11.6	10.0	13.3	13.3	More than three months ago (less than a year)
11.2	11.6	8.4	7.3	16.7	0.0	14.3	10.7	More than a year ago
37.8	25.1	13.7	15.5	21.5	2.1	46.1	24.2	Never

website or app in the last three months? (tick all that apply)

84.0	67.4	68.3	66.5	77.2	76.1	68.9	69.8	Clothes, sport goods
30.4	28.0	28.5	31.0	26.7	37.8	14.1	28.5	Sport accessories (excluding sport clothes)
4.9	18.2	17.6	16.4	20.1	10.9	13.8	16.3	Children toys or childcare items (nappies, bottles, baby strollers)
23.0	15.4	21.7	19.5	20.6	20.4	8.7	18.3	Furniture, home accessories (such as carpets or curtains or gardening products)
0.0	1.7	2.0	2.0	0.4	3.4	0.3	1.6	Music as CDs, vinyls, etc. or films or series as DVDs, Blu-ray disks
3.1	6.0	9.2	7.4	5.0	10.9	2.6	6.6	Printed books, magazines or newspapers
3.0	10.8	11.8	11.0	9.6	16.8	2.8	10.1	Computers, tablets, mobile phones or accessories
10.2	12.7	13.6	14.7	7.4	9.3	13.9	12.7	Consumer electronics (TV sets, stereos, cameras) or household appliances (such as washing machines)
2.5	4.4	6.5	5.3	3.7	0.5	6.9	4.8	Medicines or dietary supplements
28.2	10.4	29.6	19.4	13.6	32.7	13.2	18.6	Deliveries from restaurants, food chains, catering services
6.3	3.3	11.1	7.0	1.7	8.5	7.0	6.1	Food or beverages from stores or food delivery services
4.9	14.6	16.6	13.2	17.8	11.6	13.4	14.0	Cosmetics, beauty or wellness products
3.5	2.9	2.6	2.3	5.6	0.5	2.7	2.9	Cleaning products or personal hygiene products
11.3	11.3	3.5	10.7	5.9	1.9	10.2	8.9	Bicycles, mopeds, cars or other vehicles or their spare parts
16.5	16.4	21.7	18.2	13.8	14.8	25.7	18.1	Other physical goods

MODULE D: e-commerce¹⁾ (continued)

Answer (individuals)	Age						Sex	
	16-24	25-34	35-44	45-54	55-64	65-74	Male	Female

D3: Did you buy any of the following via a website or

Subscription to the Internet or connection via mobile phone	13.3	12.8	16.0	9.2	10.2	5.7	11.7	13.0
Subscription to electricity, water or heating supply, waste disposal or similar services	4.4	7.6	10.2	7.8	6.7	6.8	10.2	5.2

D4: Did you buy any transport service via website or app

A transport enterprise for buses, train, taxi (e.g. UBER)	12.0	22.3	12.9	15.6	8.1	10.6	15.9	13.9
Enterprise such as hotels or travel agencies	24.8	18.3	18.8	19.2	13.7	9.0	17.1	20.6
Tickets to cultural or other events (cinema, concerts, fairs)	28.6	31.6	20.1	15.4	17.3	8.6	18.7	26.0
Electronic or audio books as downloads (including upgrades)	0.0	0.0	1.7	0.2	1.7	2.1	0.9	0.5
Software as downloads (including upgrades)	0.0	1.2	0.5	1.0	0.0	0.0	1.0	0.2
Games as downloads (including upgrades) or virtual goods in games	1.2	0.6	0.4	0.2	0.0	0.0	0.9	0.2
Never bought any transport service	55.4	58.7	67.2	70.9	73.2	82.9	68.9	61.8

¹⁾ The data refer to individuals who answered "Within the last three months" or "More than three months ago (less than a year)" in question B1.

Educational level			Employment status				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employed	Unemployed	Student	Other		

app for private purposes in the last three months? (tick all that apply)

18.1	9.1	16.1	12.6	8.7	4.9	22.2	12.4	Subscription to the Internet or connection via mobile phone
3.1	6.9	10.6	8.8	5.7	3.5	7.7	7.6	Subscription to electricity, water or heating supply, waste disposal or similar services

for private purposes in the last three months from: (tick all that apply)

9.8	9.5	26.5	20.9	3.4	11.7	7.7	14.8	A transport enterprise for buses, train, taxi (e.g. UBER)
6.1	15.3	30.9	22.8	8.5	34.1	7.7	18.9	Enterprise such as hotels or travel agencies
9.2	18.2	36.1	26.1	18.2	30.5	8.9	22.6	Tickets to cultural or other events (cinema, concerts, fairs)
0.0	0.2	2.0	0.9	0.4	0.0	0.6	0.7	Electronic or audio books as downloads (including upgrades)
0.0	0.0	1.9	1.0	0.0	0.0	0.0	0.6	Software as downloads (including upgrades)
0.0	0.4	1.0	0.5	0.0	2.4	0.0	0.5	Games as downloads (including upgrades) or virtual goods in games
84.1	70.1	48.2	59.6	76.3	47.6	83.9	65.1	Never bought any transport service

MODULE D: e-commerce¹⁾ (continued)

Answer (individuals)	Age						Sex	
	16–24	25–34	35–44	45–54	55–64	65–74	Male	Female
D5: Did you buy or subscribe to any of the following via website or app								
Music as a streaming service or for downloading	9.8	4.1	5.9	2.2	3.5	2.1	5.6	4.6
Films or series as a streaming service or for downloading	7.4	8.3	6.6	4.0	3.1	2.1	6.6	5.6
Online information websites, e-newspapers or online magazines	0.0	0.0	1.9	1.3	0.4	0.8	0.9	0.8
Games as a streaming service or for downloading	6.3	1.1	3.2	1.8	0.9	0.0	3.5	1.8
Apps related to health or fitness	0.0	0.0	0.3	0.4	0.0	0.0	0.2	0.1
Other apps (related to language learning, travels, weather)	0.0	1.0	1.2	0.5	1.0	0.0	1.0	0.5
D7: Did you carry out any of the following activities via website or								
Buying insurance policies, including travel insurance, also as a package with another services, e.g. air ticket	5.1	8.1	7.0	5.3	4.0	1.9	5.3	5.7
Taking a loan, mortgage or credit from banks or other financial institutions	0.7	0.4	0.0	0.0	0.2	0.0	0.0	0.3
Buying or selling shares, bonds, units in funds or other financial resources	0.0	0.0	0.3	0.3	0.4	0.2	0.2	0.3

¹⁾ The data refer to individuals who answered “Within the last three months” or “More than three months ago (less than a year)” in question B1.

Educational level			Employment status				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employed	Unemployed	Student	Other		

for private purposes in the last three months? (tick all that apply)

3.1	4.7	6.6	5.6	3.3	10.4	1.8	5.1	Music as a streaming service or for downloading
6.3	3.4	10.7	7.4	2.9	8.4	3.3	6.1	Films or series as a streaming service or for downloading
0.0	0.5	1.7	1.4	0.0	0.0	0.0	0.8	Online information websites, e-newspapers or online magazines
0.0	3.3	2.5	2.4	2.4	5.4	2.0	2.6	Games as a streaming service or for downloading
0.0	0.1	0.3	0.3	0.0	0.0	0.0	0.2	Apps related to health or fitness
0.0	0.6	1.3	1.2	0.0	0.0	0.4	0.7	Other apps (related to language learning, travels, weather)

app, for private purpose in the last three months? (tick all that apply)

0.9	3.9	11.7	8.7	0.9	6.5	2.7	5.5	Buying insurance policies, including travel insurance, also as a package with another services, e.g. air ticket
0.0	0.3	0.1	0.2	0.0	0.0	0.4	0.2	Taking a loan, mortgage or credit from banks or other financial institutions
0.0	0.3	0.2	0.4	0.0	0.0	0.1	0.2	Buying or selling shares, bonds, units in funds or other financial resources

MODULE E: Internet of things¹⁾

Answer (individuals)	Age						Sex	
	16–24	25–34	35–44	45–54	55–64	65–74	Male	Female

E1: Did you use any of the following Internet-connected devices

Internet-connected thermostat, lights, plug-ins or other Internet-connected solutions for energy for your home	2.8	3.0	2.6	1.5	0.7	0.9	2.5	1.3
Internet-connected home alarm system, smoke detector, security cameras, door locks or other safety/security solutions for your home	6.9	7.3	8.9	6.2	6.1	3.0	7.9	5.3
Internet-connected home appliances, such as robot vacuums, fridges, ovens, coffee machines	13.4	8.0	3.3	2.1	2.7	0.4	5.5	4.0
Virtual assistant in the form of a smart speaker or app (Google Home, Amazon)	8.5	1.4	1.2	1.5	0.5	0.6	2.7	1.4

E2: What were the reasons for not using any of the mentioned Internet-connected

Didn't know such devices or systems existed	2.1	1.8	2.5	2.7	3.9	6.7	3.2	3.1
I had no need to use those connected devices/systems	54.0	60.7	60.5	65.2	67.7	59.3	63.3	60.3
Costs too high	2.2	3.2	9.7	9.1	7.6	5.9	6.8	6.7
Lack of compatibility with other devices or systems	1.1	3.5	8.0	6.9	6.4	5.0	5.2	5.8
Lack of skills to use those devices or systems	1.0	0.6	3.5	4.3	10.9	12.3	5.2	5.4
Concerns about privacy and protection of data about me generated by those devices or systems	0.9	0.0	0.0	1.5	1.3	0.8	0.5	1.0
Concerns about security (that the device or system will be hacked)	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1
Concerns about security or health (the use of the devices or systems could lead to an accident, injury or health problems)	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0
Other reasons	41.8	34.7	29.8	28.1	17.4	24.9	27.8	30.1

¹⁾ The data refer to individuals who answered "Within the last three months" in question B1.

Educational level			Employment status				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employed	Unemployed	Student	Other		

or systems for private purposes in the last three months? (tick all that apply)

0.0	1.9	3.1	2.8	0.9	2.6	0.9	1.9	Internet-connected thermostat, lights, plug-ins or other Internet-connected solutions for energy for your home
6.4	5.5	9.3	10.1	2.4	4.9	3.6	6.6	Internet-connected home alarm system, smoke detector, security cameras, door locks or other safety/security solutions for your home
6.0	2.9	8.2	6.0	1.5	5.6	4.9	4.8	Internet-connected home appliances, such as robot vacuums, fridges, ovens, coffee machines
4.0	1.6	2.1	1.7	0.9	3.8	3.5	2.1	Virtual assistant in the form of a smart speaker or app (Google Home, Amazon)

devices or systems for private purposes in the last three months (tick all that apply)

8.0	3.0	0.8	2.2	4.3	0.0	4.7	3.2	Didn't know such devices or systems existed
59.6	60.5	66.1	64.5	64.3	58.7	55.0	61.8	I had no need to use those connected devices/systems
6.7	8.0	3.7	7.1	9.1	2.4	4.9	6.7	Costs too high
3.6	5.8	6.0	6.0	6.9	1.8	4.1	5.5	Lack of compatibility with other devices or systems
10.0	5.3	2.6	2.3	7.1	0.0	10.5	5.3	Lack of skills to use those devices or systems
0.3	0.7	1.0	0.7	0.8	0.0	0.9	0.7	Concerns about privacy and protection of data about me generated by those devices or systems
0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.0	Concerns about security (that the device or system will be hacked)
0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	Concerns about security or health (the use of the devices or systems could lead to an accident, injury or health problems)
25.4	30.4	27.7	28.4	23.7	39.0	32.8	29.0	Other reasons

MODULE E: Internet of things¹⁾ (continued)

Answer (individuals)	Age						Sex	
	16–24	25–34	35–44	45–54	55–64	65–74	Male	Female

E3: Did you use the Internet on any of the following devices

Internet-connected TV	83.9	74.4	71.7	68.1	58.6	45.6	67.3	68.2
Internet-connected game consoles	22.7	3.8	5.7	3.6	1.3	0.3	6.9	4.8
Internet-connected audio system, smart speakers	19.8	7.5	5.7	4.2	5.2	1.2	6.7	7.2

E4: Did you use any of the following Internet-connected devices

Smart watch, fitness band, connected goggles or headsets, safety trackers, Internet-connected accessories	33.3	25.5	26.4	19.9	10.1	2.8	20.9	19.7
Internet-connected devices for monitoring blood pressure, sugar level, body weight (smart scales) or other Internet-connected devices for health and medical care	2.0	2.0	1.5	1.0	1.4	0.6	1.0	1.9
Internet-connected toys, such as robot toys (including educational) or dolls	2.5	0.9	1.5	1.0	0.1	0.0	0.8	1.3
Car with built-in wireless Internet connection	0.0	1.1	0.9	1.2	0.5	0.1	0.8	0.6

¹⁾ The data refer to individuals who answered "Within the last three months" in question B1.

Educational level			Employment status				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employed	Unemployed	Student	Other		

in your home for private purposes in the last three months? (tick all that apply)

57.8	64.5	80.8	75.6	55.6	88.0	57.5	67.8	Internet-connected TV
9.1	4.8	6.5	6.7	1.3	14.5	6.1	5.9	Internet-connected game consoles
9.1	6.1	7.7	8.2	3.1	11.9	6.6	7.0	Internet-connected audio system, smart speakers

for private purposes in the last three months? (tick all that apply)

14.3	18.2	28.6	25.7	14.1	27.8	13.0	20.3	Smart watch, fitness band, connected goggles or headsets, safety trackers, Internet-connected accessories
1.5	1.0	2.4	2.0	0.5	0.9	1.2	1.4	Internet-connected devices for monitoring blood pressure, sugar level, body weight (smart scales) or other Internet-connected devices for health and medical care
1.5	1.0	0.8	1.4	0.6	0.0	0.9	1.0	Internet-connected toys, such as robot toys (including educational) or dolls
0.0	0.8	0.9	0.9	1.2	0.0	0.1	0.7	Car with built-in wireless Internet connection

MODULE F: Green internet¹⁾

Answer (individuals)	Age						Sex	
	16–24	25–34	35–44	45–54	55–64	65–74	Male	Female

F1_1: What did you do with your mobile phone or

Still in the household	47.4	45.5	47.9	52.7	52.4	56.3	49.9	50.5
Sold or donated	30.2	29.4	22.7	17.1	10.6	8.5	17.0	23.1
Disposed of within collection or recycling of electronic waste (including taken to the seller to dispose of it)	9.9	15.8	14.0	15.3	13.8	5.8	14.7	11.2
Disposed of, but not withing collection and recycling of electronic waste	3.4	3.4	4.2	4.5	6.8	6.1	4.7	4.6
A new one is not bought or is still being used	7.4	5.2	10.1	9.9	13.6	20.0	12.2	9.0
Other	1.7	0.7	1.1	0.6	2.8	3.3	1.4	1.6

F1_2: What did you do with your laptop or table

Still in the household	17.2	27.4	20.7	22.9	19.2	13.8	18.5	23.0
Sold or donated	15.8	15.8	10.8	9.3	5.3	5.0	10.4	10.4
Disposed of within collection or recycling of electronic waste (including taken to the seller to dispose of it)	1.6	3.3	3.7	3.6	2.1	1.5	2.9	2.7
Disposed of, but not withing collection and recycling of electronic waste	5.2	1.2	4.6	0.7	0.7	1.0	1.5	3.0
A new one is not bought or is still being used	32.1	20.9	24.5	18.7	20.2	12.9	21.9	21.3
Other	28.1	31.3	35.8	44.9	52.6	65.8	44.8	39.6

F1_3: What did you do with your desktop computer

Still in the household	15.3	19.9	19.6	19.7	17.4	12.5	18.3	17.4
Sold or donated	10.5	4.9	5.1	5.4	3.4	3.9	6.4	4.4
Disposed of within collection or recycling of electronic waste (including taken to the seller to dispose of it)	0.9	2.4	2.9	2.2	3.2	1.7	2.4	2.2
Disposed of, but not withing collection and recycling of electronic waste	3.2	2.8	3.4	1.3	2.8	1.4	2.2	2.8
A new one is not bought or is still being used	12.8	10.0	15.6	15.9	15.1	13.3	14.7	13.3
Other	57.3	60.0	53.4	55.6	58.3	67.1	56.1	59.9

¹⁾ The data refer to individuals who answered "Within the last three months" in question B1.

Educational level			Employment status				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employed	Unemployed	Student	Other		

smartphone when you replaced it or stopped using it?

59.1	51.8	41.6	47.0	55.8	37.8	54.6	50.2	Still in the household
18.4	18.7	23.8	20.1	23.9	45.3	10.4	20.0	Sold or donated
9.5	12.2	16.6	18.0	8.9	5.6	7.9	13.0	Disposed of within collection or recycling of electronic waste (including taken to the seller to dispose of it)
1.5	4.7	6.4	5.5	2.6	2.1	5.4	4.7	Disposed of, but not withing collection and recycling of electronic waste
10.8	11.1	9.4	7.9	8.5	5.1	19.4	10.6	A new one is not bought or is still being used
0.7	1.4	2.2	1.4	0.3	4.0	2.3	1.5	Other

when you replaced it or stopped using it?

18.9	18.3	27.2	24.1	17.5	27.8	15.1	20.7	Still in the household
6.9	8.3	17.2	13.9	5.3	13.5	7.0	10.4	Sold or donated
0.0	2.0	6.1	3.6	2.0	5.2	1.2	2.8	Disposed of within collection or recycling of electronic waste (including taken to the seller to dispose of it)
4.1	1.5	2.8	2.9	0.1	6.5	1.6	2.2	Disposed of, but not withing collection and recycling of electronic waste
17.8	21.2	24.6	22.7	20.9	41.6	15.4	21.6	A new one is not bought or is still being used
52.2	48.6	22.1	32.8	54.2	5.4	59.7	42.2	Other

when you replaced it or stopped using it?

17.1	16.7	21.1	21.2	16.2	7.4	14.8	17.9	Still in the household
2.0	5.1	8.1	6.4	2.2	16.2	3.8	5.4	Sold or donated
0.8	1.6	4.7	3.3	1.2	2.1	1.2	2.3	Disposed of within collection or recycling of electronic waste (including taken to the seller to dispose of it)
3.2	1.7	3.8	3.2	1.7	1.8	2.0	2.5	Disposed of, but not withing collection and recycling of electronic waste
11.7	15.0	13.0	14.5	14.8	18.6	11.0	14.0	A new one is not bought or is still being used
65.1	60.0	49.3	51.4	63.9	54.0	67.2	57.9	Other



Data from this questionnaire are confidential and are used for statistical purposes only
(Law on Official Statistics, "Official Gazette of the RS", number 104/09)

USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN HOUSEHOLDS AND BY INDIVIDUALS

MODULE A: ACCESS TO INFORMATION AND COMMUNICATION TECHNOLOGIES

A1_N	Do you or anyone in your household have access to the following devices at home?	
(tick all that apply)		
a) Desktop computer	<input type="checkbox"/>	
b) Laptop (notebook)	<input type="checkbox"/>	
c) Tablet	<input type="checkbox"/>	
d) TV	<input type="checkbox"/>	
e) Radio receiver (including mobile phone, car radio...)	<input type="checkbox"/>	
f) Mobile phone	<input type="checkbox"/>	
g) None of the above	<input type="checkbox"/>	
→ Go to A1		
A1	Do you or anyone in your household have access to the Internet at home? (on any device)	
(tick all that apply)		
a) Yes	<input type="checkbox"/>	→ Go to A2
b) No	<input type="checkbox"/>	→ Go to B1_N
c) Don't know	<input type="checkbox"/>	→ Go to B1_N
A2_N	What type of Internet connection do you use at home?	
(tick all that apply)		
a) Fixed broadband connection	<input type="checkbox"/>	
b) Mobile broadband connection	<input type="checkbox"/>	
→ Go to B1_N		

MODULE B_N: USE OF COMPUTERS

B1_N	When did you last use a computer (at home, at work or some other place)? (desktop, laptop, notebook, tablet, excluding smartphones)	
(tick only one)		
a) Within the last three months	<input type="checkbox"/>	→ Go to B2_N
b) More than three months ago (less than a year)	<input type="checkbox"/>	→ Go to B1
c) More than a year ago	<input type="checkbox"/>	→ Go to B1
d) Never used it	<input type="checkbox"/>	→ go to B1

B2_N	How often, on average, did you use a computer in the last three months?	
(tick only one)		
a) Every day or almost every day	<input type="checkbox"/>	
b) At least once a week	<input type="checkbox"/>	
c) At least once a month	<input type="checkbox"/>	
d) Less than once a month	<input type="checkbox"/>	
-> Go to B1		
MODULE B: USE OF THE INTERNET		
B1	When did you last use the Internet? (on desktop, laptop, mobile phone, smartphone)	
(tick only one)		
a) Within the last three months	<input type="checkbox"/>	→ Go to B2
b) More than three months ago (less than a year)	<input type="checkbox"/>	→ Go to C1
c) More than a year ago	<input type="checkbox"/>	→ Go to G1
d) Never used it	<input type="checkbox"/>	→ Go to G1
B2	How often, on average, did you use the Internet in the last three months?	
(tick only one)		
a) Several times a day	<input type="checkbox"/>	
b) Every day or almost every day	<input type="checkbox"/>	
c) At least once a week (but not every day)	<input type="checkbox"/>	
d) Less than once a week	<input type="checkbox"/>	
-> Go to B3		

B3	For which of the following activities did you use the Internet (including via apps) for private purposes, in the last three months?	
(tick all that apply)		
Communication		
a) Sending/receiving e-mails		
b) Telephoning over the Internet/video calls via web cam) (using apps, such as Skype, Messenger, WhatsApp, FaceTime, Viber, Snapchat, Zoom, MS Teams, Webex)		
c) Participating in social networks (creating user profile, posting messages or other contributions on Facebook, Twitter, Instagram, Snapchat, etc.)		
d) Sending online messages via Skype, Messenger, WhatsApp, Viber, Snapchat		
Access to information		
e) Finding information about goods and services		
f) Reading online newspapers, magazines		
Civic and political participation		
g) Posting opinions about civic or political issues via websites or social media (such as Facebook, Twitter, Instagram, YouTube)		
h) Taking part in online consultations or voting to define civic or political issues (urban planning, signing petitions)		
Use of entertainment		
i) Listening downloading music (web radio, music streaming)		
j) Watching Internet streamed TV from TV broadcasters		
k) Watching video on demand from commercial services (such as Netflix, HBO GO, Amazon Prime, Maxdome, Apple TV, etc.)		
l) Watching video content from sharing services (such as YouTube, Instagram, TikTok)		
m) Playing or downloading games		
E- health		
n) Seeking health-related information		
o) Making an appointment with a doctor over website or app		
p) Online access to own medical record		
q) Using other medical services over website or app instead of going to hospital or doctor (such as obtaining prescription or online consultations)		
Other online services		
r) Selling goods or services over website or app (such as eBay, Facebook, Marketplace)		
s) Internet banking (including mobile banking)		
-> Go to B4		
B4	Which of the following learning activities did you carry out over the Internet for educational, private or professional purposes in the last three months?	
(tick all that apply)		
a) Doing an online course		
b) Finding online learning material (audio-visual material, online learning software, electronic textbooks, learning apps...)		
c) Communicating with instructors or students using audio or visual tools (such as Zoom, MS Teams, Google Classroom, etc.)		
d) Never carried out any of the above		
If the answer is "Yes" in a), b) or c)-> go to question B5; otherwise, go to question B6		
B5	What was the purpose of the learning activities you performed in the last three months?	
(tick all that apply)		

a) For formal education (school or university)			
b) For professional or business purposes			
c) For private purposes			
-> Go to B6			
B6	Have you ever created an account or registered via a free app or service? (e.g. subscription/social media account, app. for buying transport tickets, music streaming, games ...)		
(tick only one)			
a) Yes			
b) No			
If the answer is "Yes" -> go to question B7; otherwise, go to question C1			
B7	Did you delete or try to delete (or close) your account in a free app or service, in the last three months?		
(tick only one)			
a) Yes			
b) No			
If the answer is "Yes" -> go to question B8; otherwise, go to question C1			
B8	Did you encounter any problems when you tried to delete (close) your account in a free app or service, in the last three months? (e.g. difficult to find out how to delete the account, disproportional time consuming, technical problems, unreasonable conditions for deleting, impossible to do it successfully...)		
(tick only one)			
a) Yes			
b) No			
-> Go to C1			
MODULE C: USE OF E-GOVERNMENT			
(for persons who used the Internet in the last 12 months – who answered "Yes" in question B1a or B1b)			
C1	In the last 12 months, have you used the services of public authorities or public services via a website or app, for private purposes, for the following activities?		
(tick all that apply)			
a) Accessing your personal data stored by public authorities (information on immunization, green certificate, etc.)			
b) Accessing information from public databases or registers (cadastre registers, business registers)			
c) Obtaining information (about services, benefits, rights, laws, working hours)			
d) Never used public authorities' services			
-> Go to C2			
C2	In the last 12 months, have you downloaded or printed official forms from public authorities' or public services' web page or app, for private purposes.		
(tick only one)			
a) Yes			
b) No			
-> Go to C3			
C3	In the last 12 months, have you made an appointment or reservation using a website or app of public authorities or a service (for passport, ID card, etc.) for private purposes?		
(tick only one)			
a) Yes			
b) No			

-> Go to C5		
C5	In the last 12 months, have you amended, reviewed or approved your tax return via a website or app for private purposes?	
(tick only one)		
a) Yes	<input type="checkbox"/>	<input type="checkbox"/>
b) No	<input type="checkbox"/>	<input type="checkbox"/>
-> Go to C6		
C6	In the last 12 months, have you carried out any of the following activities using a website or app of public authorities or public services, for private purposes?	
(tick all that apply)		
a) Submitting a request for an official document or certificate (such as diplomas, birth certificate, marriage/divorce certificate, death certificate, residence certificate, police or criminal record)	<input type="checkbox"/>	<input type="checkbox"/>
b) Asking for benefits or rights (pension, unemployment, children's allowance, enrolment in schools, universities)	<input type="checkbox"/>	<input type="checkbox"/>
c) Submitting other requests, complaints (asking for legal assistance)	<input type="checkbox"/>	<input type="checkbox"/>
d) None of the above	<input type="checkbox"/>	<input type="checkbox"/>
-> If the answer in C6 is d) „None of the above” -> go to C7; otherwise go to C8		
C7	What were the reasons for not asking for official documents or not submitting forms using a website or app of public authorities or public services, in the last 12 months?	
(tick all that apply)		
a) No need to request any documents or to submit any request	<input type="checkbox"/>	<input type="checkbox"/>
If the answer is “Yes” in a) -> go to question d1; otherwise go to b-e in question C7		
b) Lack of skills (don't know how to use website or use is too complicated)	<input type="checkbox"/>	<input type="checkbox"/>
c) Concerns about security or protection of personal data or unwillingness to make payments over the Internet (credit cards fraud)	<input type="checkbox"/>	<input type="checkbox"/>
d) Another person did it on my behalf	<input type="checkbox"/>	<input type="checkbox"/>
e) Other reasons	<input type="checkbox"/>	<input type="checkbox"/>
-> If the answer is “Yes” to any of the above offered answers in questions C1 a)-c) ;C2 a),C3 a),C5 a); C6 a)-c) -> go to C8; otherwise go to D1		

C8	Were there problems when you used website or app of public authorities or public services in the last 12 months?	
(for persons who answered "Yes" to any of the offered answers in questions C1 a)-c); C2 a), C3 a); C5 a); C6 a)-c))		
(tick all that apply)		
a) Use of website or app too complicated (not user-friendly, wordings not clear, procedure badly explained)	<input type="checkbox"/>	<input type="checkbox"/>
b) Technical problems when using website or app (loading too slow, web location down)	<input type="checkbox"/>	<input type="checkbox"/>
c) It was impossible to access the service on smartphone or tablet (incompatible device version or apps not accessible)	<input type="checkbox"/>	<input type="checkbox"/>
d) Other reasons	<input type="checkbox"/>	<input type="checkbox"/>
e) Did not have any problems	<input type="checkbox"/>	<input type="checkbox"/>
-> Go to D1		
MODULE D: E-COMMERCE		
D1	When did you last buy or order goods or services over the Internet for private purposes? (via website or apps using any device: desktop, laptop, mobile phone, smartphone)	
(for persons who used the Internet in the last 12 months – who answered "Yes" in question B1a or B1b)		
(tick only one)		
a) Within the last three months	<input type="checkbox"/>	→ Go to D2
b) More than three months ago (less than a year)	<input type="checkbox"/>	→ Go to D7
c) More than a year ago	<input type="checkbox"/>	→ Go to D7
d) Never	<input type="checkbox"/>	→ Go to D7

D2	What types of goods or services did you buy over internet in the last three months, for private purposes? Including online purchase from enterprises or physical persons and including second hand goods.	
(tick all that apply)		
a) Clothes (including sports clothes), footwear or accessories (such as bags, jewellery)		
b) Sport goods (excluding sports clothes)		
c) Children toys or childcare items (nappies, bottles, baby strollers)		
d) Furniture, home accessories (carpets or curtains) or gardening products (tools, plants)		
e) Films or series as DVDs, <i>Blu-ray</i> discs and music as CD-s, vinyls, etc.		
f) Printed books, magazines or newspapers		
g) Computers, tablets, mobile phones or accessories		
h) Consumer electronics (such as TV sets, stereos, cameras) household appliances (such as washing machines)		
i) Medicines or dietary supplements (e.g. vitamins)		
j) Deliveries from restaurants, food chains, catering services		
k) Food or beverages from stores such as <i>Maxi</i> , <i>Univerexport</i> , etc.		
l) Cosmetics, beauty or wellness products		
m) Cleaning products or personal hygiene products (toothbrushes, handkerchiefs, washing detergents, cleaning cloths)		
n) Bicycles, mopeds, cars or other vehicles or their spare parts		
o) Other physical goods		
-> Go to D3		
D3	Did you buy any of the following via a website or app for private purposes, in the last three months?	
(for persons who answered „Within the last three months“ in question D1)		
(tick all that apply)		
a) Subscription to the Internet or connection via mobile phone		
b) Subscription to electricity, water or heating supply, waste disposal or similar services		
c) Never bought or subscribed to any of the above		
-> go to D4		
D4	In the last three months, did you buy any transport service via website or app for private purposes from:	
(for persons who answered „ Within the last three months“ in question D1)		
(tick all that apply)		
a) A transport enterprise for buses, train, taxi (e.g. UBER)		
b) Enterprises such as hotels or travel agencies		
c) Tickets to cultural or other events (cinema, concerts, fairs)		
d) Electronic or audio books as downloads (including up-grades)		
e) Software as downloads (including up-grades)		
f) Games as downloads (including up-grades) or virtual goods in games		
g) Never bought any transport service		
-> go to D5		

D5	Did you buy or subscribe to any of the following via website or app for personal purposes, in the last 3 months?	
(for persons who answered „Within the last three months“ in question D1)		
(tick all that apply)		
a)	Music as a streaming service or downloading	
b)	Films or series as a streaming service or for downloading	
c)	Online information websites, e-newspapers or e-magazines	
d)	Games as a streaming service or downloading	
e)	Apps related to health or fitness	
f)	Other apps (related to language learning, travels, weather)	
g)	Didn't buy or subscribe any of the above	
-> Go to D7		
D7	In the last three months, did you carry out any of the following activities via website or app, for private purposes?	
(for persons who answered “Within the last three months” in question B1)		
(tick all that apply)		
a)	Buying insurance policies, including travel insurance, also as a package with another services, e.g. air ticket	
b)	Taking a loan, mortgage or credit from banks or other financial institutions	
c)	Buying or selling shares, bonds, units in funds or other financial resources	
d)	Didn't carry out any of the above	
Go to E1		
MODULE E: INTERNET OF THINGS		
(For persons who used the Internet in the last three months – who answered “Yes” in question B1)		
E1	Did you use any of the following Internet-connected devices or systems for private purposes?	
(tick all that apply)		
a)	Internet-connected thermostat, lights, plug-ins or other Internet-connected solutions for energy for your home	→ Go to E3
b)	Internet-connected home alarm system, smoke detector, security cameras, door locks or other safety/security solutions for your home	→ Go to E3
c)	Internet-connected home appliances, such as robot vacuums, fridges, ovens, coffee machines	→ Go to E3
d)	Virtual assistant in the form of smart speakers or app (Google Home, Amazon)	→ Go to E3
e)	Never used any of the above	→ go to E2
-> If the answer in question E1 in e), “Never used any of the above” -> go to E2; otherwise go to E3		

E2	What were the reasons for not using any of the mentioned Internet-connected devices or systems for private purposes in the last three months?	
(tick all that apply)		
a) Didn't know such devices or systems existed		
If the answer "Yes" in E2 in a) -> Go to E3; otherwise go to E2 in b)-i)		
b) I had no need to use those connected devices/systems		
c) Costs too high		
d) Lack of compatibility with other devices or systems		
e) Lack of skills to use those devices or systems		
f) Concerns about privacy and protection of data about me generated by those devices or systems		
g) Concerns about security (that the device or system will be hacked)		
h) Concerns about security or health (the use of the devices or systems could lead to an accident, injury or health problems)		
i) Other reasons		
-> Go to E3		
E3	Did you use the Internet on any of the following devices in your home for private purposes in the last three months?	
(tick all that apply)		
a) Internet-connected TV		
b) Internet-connected game consoles		
c) Internet-connected audio system, smart speakers		
d) None of the above		
-> Go to E4		
E4	Did you any of the following Internet-connected devices for private purposes in the last three months?	
(tick all that apply)		
a) Smart watch, fitness band, connected goggles or headsets, safety trackers, Internet-connected accessories		
b) Internet-connected devices for monitoring blood pressure, sugar level, body weight (smart scales) or other Internet-connected devices for health and medical care		
c) Internet-connected toys, such as robot toys (including educational) or dolls		
d) Car with built-in wireless Internet connection		
e) None of the above		
-> If the answer is "Yes" to any of the mentioned questions E1 a)-d); E3 a)-c); D4 a)-d) -> go to E5; otherwise go to F1_1		

E5	Did you encounter any of the following problems related to the mentioned Internet-connected devices or systems in the last three months?	
(for persons who answered „Yes“ to any of the offered answers in questions E1 a)-d), E3 a)-c), E4 a)-d))		
(tick all that apply)		
a) Problems related to security or privacy (hacked device or system, problems related with the protection of information about you, or your family generated by those devices or systems)	<input type="checkbox"/>	
b) Problems related to security or health (use of devices or systems lead to accidents, injury or health problems)	<input type="checkbox"/>	
c) Difficulties related to the use of devices (devices settings, installing, connecting devices)	<input type="checkbox"/>	
d) Other problems (problems related to connection, support)	<input type="checkbox"/>	
e) Didn't encounter any problem	<input type="checkbox"/>	
-> Go to F1_1		
MODULE F: GREEN ICT		
(for persons who used the Internet in the last three months – who answered “Yes in questionB1a)		
F1_1	What did you do with our mobile phone or smartphone when you replaced it or stopped using it?	
(tick only one)		
a) Still in the household	<input type="checkbox"/>	
b) Sold or donated	<input type="checkbox"/>	
c) Disposed of within collection or recycling of electronic waste (including taken to the seller to dispose of it)	<input type="checkbox"/>	
d) Disposed of, but not within collection and recycling of electronic waste	<input type="checkbox"/>	
e) A new one is not bought or is still be used	<input type="checkbox"/>	
f) Other	<input type="checkbox"/>	
-> Go to F1_2		
F1_2	What did you do with your laptop or tablet when you replaced it or stopped using it?	
(tick only one)		
a) Still in the household	<input type="checkbox"/>	
b) Sold or donated	<input type="checkbox"/>	
c) Disposed of within collection or recycling of electronic waste (including taken to the seller to dispose of it)	<input type="checkbox"/>	
d) Disposed of, but not within collection and recycling of electronic waste	<input type="checkbox"/>	
e) A new one is not bought or is still be used	<input type="checkbox"/>	
f) Other	<input type="checkbox"/>	
-> Go to F1_3		
F1_3	What did you do with your desktop computer when you replaced it or stopped using it?	
(tick only one)		
a) Still in the household	<input type="checkbox"/>	
b) Sold or donated	<input type="checkbox"/>	
c) Disposed of within collection or recycling of electronic waste (including taken to the seller to dispose of it)	<input type="checkbox"/>	
d) Disposed of, but not within collection and recycling of electronic waste	<input type="checkbox"/>	
e) A new one is not bought or is still be used	<input type="checkbox"/>	
f) Other	<input type="checkbox"/>	
-> Go to G1		

MODULE G: RESPONDENT'S BACKGROUND INFORMATION

G1	Year of birth		->Go to G1a
G1a	Did your birthday pass?		
	a) Yes		
	b) No		
G2	Respondent's sex		
	a) Male		
	b) Female		
-> Go to G3			
G3	Country of birth (select from the classification <i>SCL GEO code</i>)		-> Go to G4
G4	Citizenship (select from the classification <i>SCL GEO code</i>)		-> Go to G5
G5	Education		
	(tick only one)		
	a) Without school		
	b) 1–4 grades of primary school		
	c) 5–8 grades of primary school		
	d) Secondary vocational school, grammar school		
	e) Specialisation after secondary school, school for highly qualified workers		
	f) High school		
	g) Faculty / higher school / academy		
	h) Master		
	i) Doctorate		
-> Go to G6			
G6	Respondent's employment situation?		
	(tick only one)		
	a) Employed		→ Go to G7
	b) Unemployed		→ Go to G12
	c) Retired		→ Go to G12
	d) Others not included in labour force		→ Go to G12
	e) Student		→ Go to G12
	f) Housewife		→ Go to G12
	g) Persons serving military service		→ Go to G12
	h) Other		→ Go to G12
G7	Respondent's employment status (this question refers to persons who answered "Employed" in question G6)		
	a) Self-employed person with employees		
	b) Self-employed person without employees		
	c) Employed		
	d) Employed in family business (unpaid work)		
-> go to G8			

G8	Working hours? (this question refers to persons who answered "Employed" in question G6)	
(tick only one)		
a) Full-time		
b) Part-time		
-> Go to G9		
G9	Type of employment contract? (this question refers to persons who answered »Employed« in question G7)	
(tick only one)		
a) Permanent employment contract		
b) Fixed-term employment contract		
-> Go to G11		
G11	Occupation? (select from the list of occupations of the ISCO 08 classification)	→ Go to G12
G12	Region of residence (NUTS1 classification)	→ Go to G17
G17	Total number of household members	→ Go to G18
E18	Of which children aged under 16	→ Go to19
G19	Household income (average net monthly income)	
(tick only one)		
a) Up to 30000		
b) From 30000 to 50000		
c) From 50000 to 70000		
d) From 70000 to 90000		
e) More than 90000		
G20	Disability and limited activity due to health issues (own opinion)	
(tick only one)		
a) Very limited		
b) Limited, but nor severely		
If the answer is "Yes" in G20 in a) or b) -> Go to G20_1; otherwise go to E20 in c)		
c) Not limited at all /Without limitation		
G20_1	Were you limited at least in the last 6 months?	
(tick only one)		
a) Yes		
b) No		
G21	Duration of the interview (in minutes)	End of the interview



85.0% OF ENTERPRISES HAVE A WEB SITE, BY 0.1 PERCENTAGE POINTS LESS THAN IN 2023 AND BY 0.1 PERCENTAGE POINTS MORE THAN IN 2022.

THERE ARE DIFFERENCE FROM TERRITORY TO TERRITORY. IN BELGRADE REGION 90.0% OF ENTERPRISES HAVE A WEBSITE, 85.5% IN REGION VOJVODINA, 81.3% IN REGION ŠUMADIJA I ZAPADNA SRBIJA AND 72.9% IN REGION JUŽNA I ISTOČNA SRBIJA.

MORE THAN 43% OF ENTERPRISES HAVE REMOTE MEETINGS (E.G. VIA SKYPE, ZOOM, MS TEAMS, WEBEX).



THE PERCENTAGE OF TOTAL TURNOVER GENERATED BY WEB SALE OF GOODS/SERVICES IS AS FOLLOWS: 68.6% OF ENTERPRISES IN THE CATEGORY FROM 1% TO 24%, AND 1.4% OF ENTERPRISES IN THE CATEGORY FROM 75% TO 100%.

25.2% OF ENTERPRISES EMPLOY ICT SPECIALISTS, OF WHICH 28.7% IN BELGRADE REGION AND 19.3% IN REGION ŠUMADIJA I ZAPADNA SRBIJA.

11.9% OF ENTERPRISES PROVIDED TRAINING TO DEVELOP ICT SKILLS FOR ICT SPECIALISTS, AND 23.9% PROVIDED TRAINING FOR OTHER PERSONS EMPLOYED.

ON THE TERRITORY OF THE REPUBLIC OF SERBIA, 7.0% OF ENTERPRISES USED AI TECHNOLOGIES, OF WHICH 6.8% IN BELGRADE AND 8.1% IN VOJVODINA.

THE SURVEY WAS CARRIED OUT ON A REPRESENTATIVE SAMPLE OF 1 720 ENTERPRISES. THE RESPONSE RATE IS 93.9% (1 615 ENTERPRISES).



100% ENTERPRISES HAVE AN INTERNET CONNECTION.

100% ENTERPRISES HAVE BROADBAND INTERNET.

IN 20.9% OF ENTERPRISES 1%-24% OF PERSONS EMPLOYED USE THE INTERNET, WHILE IN 46.8% ENTERPRISES 75%-100% OF PERSONS EMPLOYED USE THE INTERNET.

AS AN ICT SECURITY MEASURE ON THEIR ICT SYSTEMS, 84.4% OF ENTERPRISES APPLY AUTHENTICATION VIA STRONG PASSWORD, 72.8% APPLY DATA BACKUP TO A SEPARATE LOCATION, AND 57.8% APPLY NETWORK ACCESS CONTROL






MORE THAN 55% OF PERSONS EMPLOYED IN ENTERPRISES ATTEND VOLUNTARILY TRAINING AND USE INTERNALLY ACCESSIBLE INFORMATION RELATED TO ICT SECURITY RELATED ISSUES.



ENTERPRISES



2.1. METHODOLOGY

 Survey period	<ul style="list-style-type: none">• The survey was carried out from 15 March to 31 March 2024
 Type of survey	<ul style="list-style-type: none">• Telephone interview
 Sample size	<ul style="list-style-type: none">• 1 720 enterprises
 Target population ¹⁾	<ul style="list-style-type: none">• Enterprises with 10 and more employees• Section C: Manufacturing• Section D and E: Electricity, gas, steam and air conditioning supply; Water supply, sewerage• Section F: Construction• Section G: Wholesale and retail trade, repair of motor vehicles• Section H: Transportation, storage and communications• Section I: Accommodation and food service activities• Section J: Information and communications• Section L and M: Real estate activities; Professional, scientific and technical activities• Section N and division 95: Administrative and support service activities; Repair of computers
 Type of sample	<ul style="list-style-type: none">• Stratified sample
 Geographical scope	<ul style="list-style-type: none">• Territory of the Republic of Serbia (without AP Kosovo and Metohija)

¹⁾ Since 2011, the Classification of Activities has been in use according to the Regulation on the Classification of Activities ("Official Gazette of the RS" number 54/2010). This classification is harmonized with NACE rev.2.



2.2. SAMPLE

The survey on ICT in enterprises was carried out on a representative sample of 1720 enterprises on the territory of the Republic of Serbia. The response rate was 93.9% (1615 enterprises).

Sample (enterprises)		Size class			Region				Total
		Small (10–49)	Medium (50–249)	Large (250+)	Belgrade	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
Activity	Manufacturing	200	186	212	124	160	166	148	598
	Water, gas, steam and air conditioning supply; Water supply, sewerage	33	34	35	27	25	27	23	102
	Construction	15	17	23	16	17	12	10	55
	Wholesale and retail trade	69	66	82	89	47	44	37	217
	Transportation and storage	13	17	32	28	13	11	10	62
	Accommodation and food service activities	77	75	4	59	38	35	24	156
	Information and communications	69	61	29	81	30	22	26	159
	Real estate activities; Professional, scientific and technical activities	86	56	21	68	38	32	25	163
	Administrative and support service activities; Repair of computers	46	23	34	61	19	13	10	103
Number		608	535	472	553	387	362	313	1615
Percentage		37.64	33.12	29.22	34.24	23.96	22.41	19.38	100.0

2.3. MAIN FINDINGS

2.3.1. Internet in enterprises

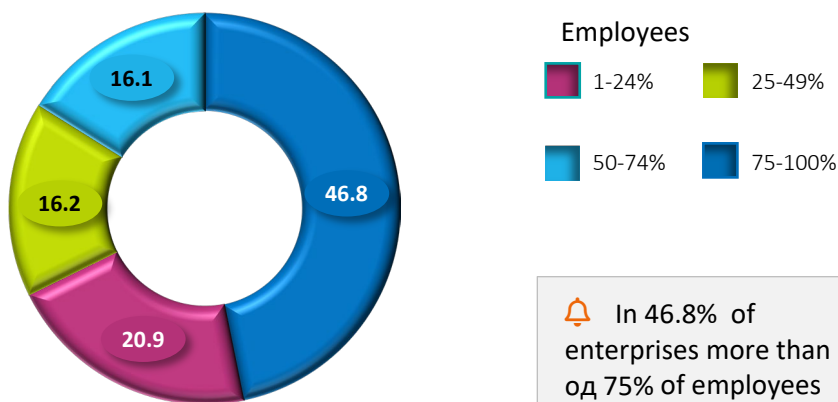
In the Republic of Serbia 100% enterprises have an Internet connection. The survey indicates that all the enterprises in the Republic of Serbia have a broadband Internet connection.

Chart 2.1. Does your enterprise have access to the Internet? (%)



In 20.9% of enterprises, the Internet is used by 1% to 24% of employees, and in 46.8% of enterprises by 75% to 100% of employees.

Chart 2.2. Enterprises by the percentage of employees who use the Internet (%)




 In 46.8% of enterprises more than 75% of employees use the Internet.

Chart 2.3. What is the maximum contracted speed of the Internet in your enterprise? (%)

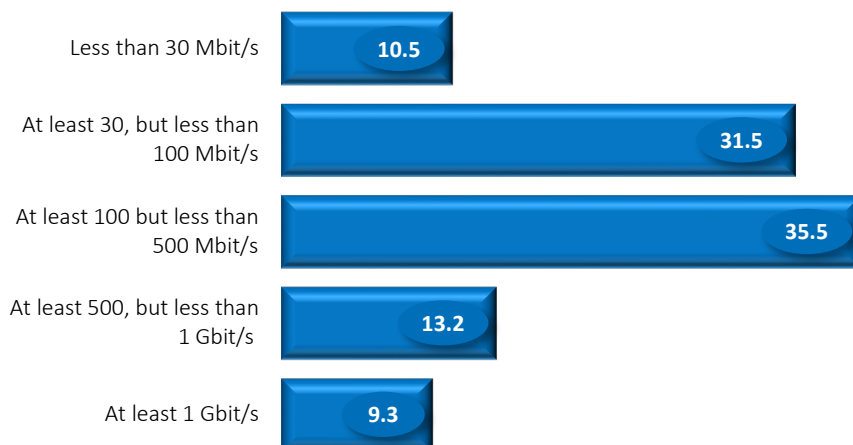
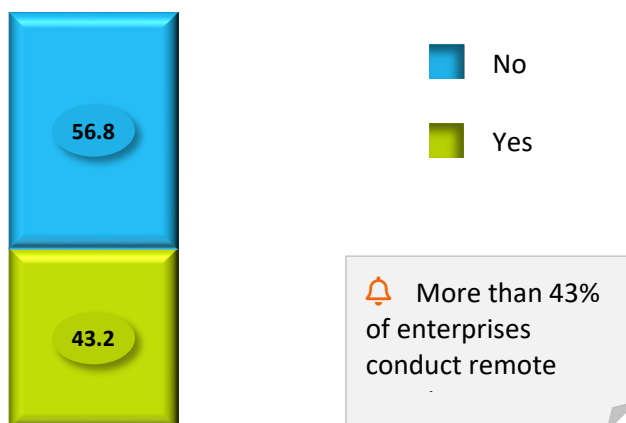


Chart 2.4. Does your enterprise conduct remote meetings (e.g. via Skype, Zoom, MS Teams, WebEx)? (%)



2.3.2. Website

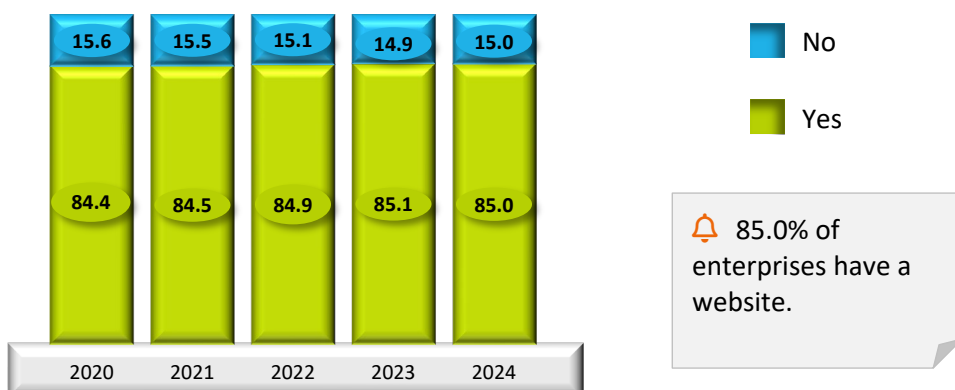
There are 85.0% of enterprises that have a website, an increase of 0.1 percentage points relative to 2023, and of 0.1 percentage points relative to 2022.

Looking at the structure of enterprises by size class, the following results are:

- 97.2% of large enterprises have a website;
- 94.3% of medium enterprises have of a website;
- 82.0% of small enterprises have a website.

There are also differences by territory. In Beogradski region 90.0% of enterprises have a website, in Region Vojvodina 85.5%, in Region Šumadije i Zapadne Srbije 81.3% and in Region Južne i Istočne Srbije 72.9%.

Chart 2.5. Does your enterprise have a website? (%)



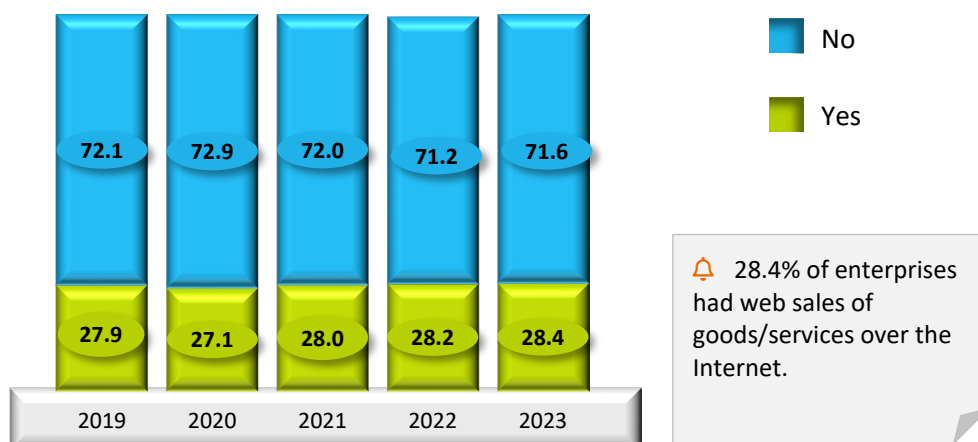
Website available in enterprises, by activity:

- Information and communications (97.7%);
- Administrative and support service activities; Repair of computers (86.4%);
- Real estate activities; Professional, scientific and technical activities (93.5%);
- Manufacturing (88.8%);
- Accommodation and food service activities (78.6%);
- Wholesale and retail trade (80.2%);
- Construction (79.0%);
- Electricity, gas, steam and air conditioning supply; Water management, sewerage (93.2%);
- Transportation and storage (73.7%).

2.3.3. e-commerce

During 2023, 28.4% of enterprises in the Republic of Serbia sold goods/services over the Internet.

Chart 2.6. Did your enterprise have web sales of goods/services over the Internet? (%)



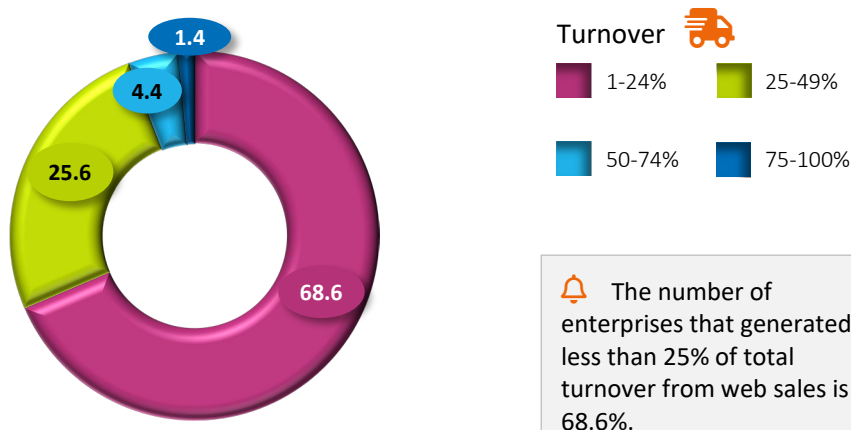
Looking at the structure of enterprises by size class, the obtained results are as follows:

- 35.2% of large enterprises had web sales of goods/services over the Internet;
- 32.0% of medium enterprises had web sales of goods/services over the Internet;
- 27.2% of small enterprises had web sales of goods/services over the Internet;

When asked about the percentage of the total turnover resulting from the sale of goods/services over the Internet, the enterprises provided the following answers:

- “Less than 25%” (68.6% of enterprises);
- “More than 25%, and less than 50%” (25.6% of enterprises);
- “More than 50%, and less than 75%” (4.4% of enterprises);
- “75 % and more” (1.4% of enterprises).

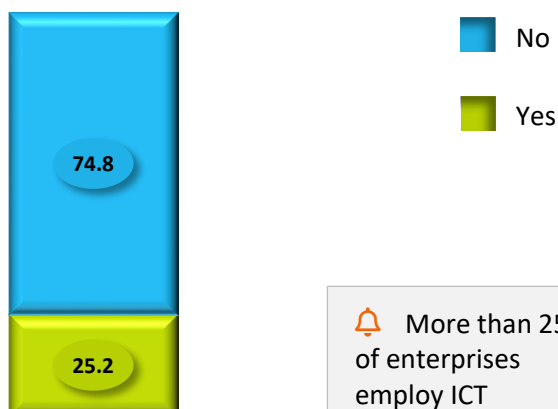
Chart 2.7. Percentage of the total turnover in 2023 resulting from web sale of goods/services (%)




2.3.4. ICT specialists and skills

On the territory of the Republic of Serbia 25.2% of enterprises employ ICT specialists, of which 28.7% in Belgrade, 25.2% in Vojvodina, 19.3% in Region Šumadije i Zapadne Srbije, and 23.3% in Region Južne i Istočne Srbije.

Chart 2.8. Does your enterprise employ ICT specialists? (%)



 More than 25% of enterprises employ ICT specialists

2.3.5. ICT security

In the Republic of Serbia 84.4% of enterprises use authentication via strong password as an ICT security measure in their ICT systems, while 72.8% of enterprises make data backup to separate location and 57.8% perform network access control as a security measure in their ICT systems.

Chart 2.9. Did your enterprise apply any of the following ICT security measures? (%)

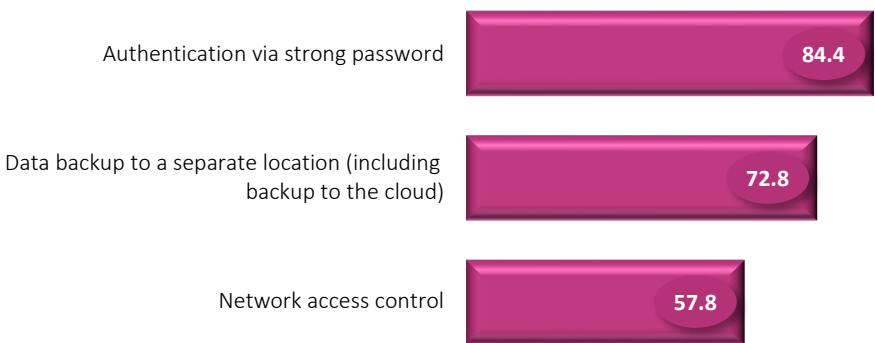
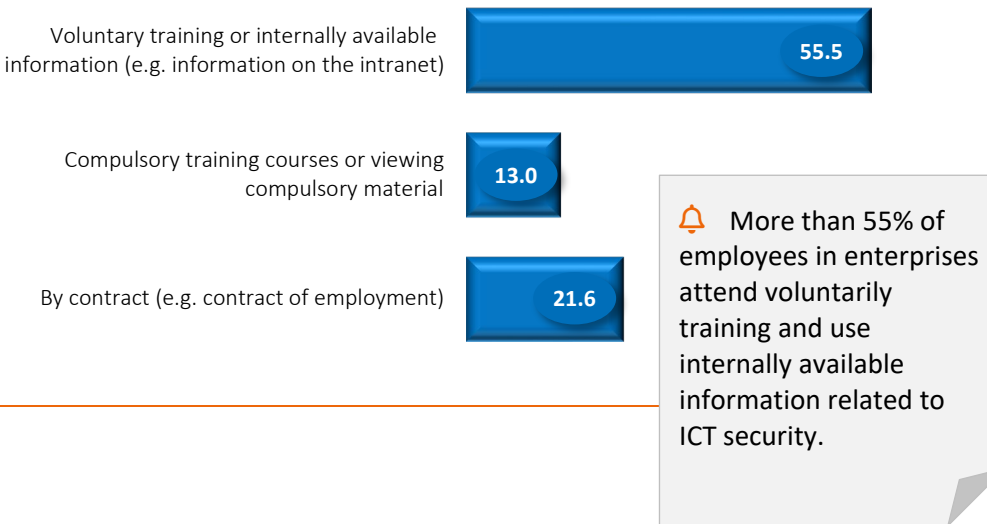


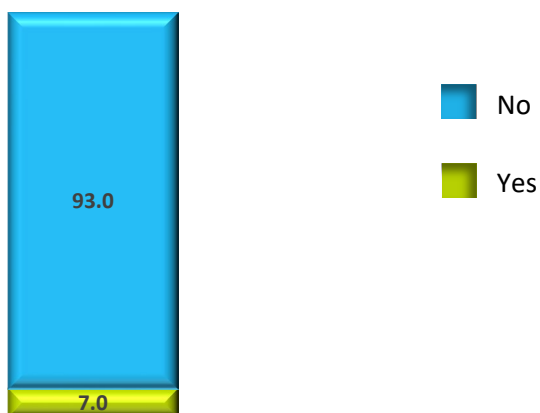
Chart 2.10. Does your enterprise makes persons employed aware of their obligations in ICT security related issues? (%)



2.3.6. ARTIFICIAL INTELLIGENCE (AI)

On the Republic of Serbia there are 7.0% enterprises that used Artificial Intelligence technologies – in Belgrade 6.8%, Vojvodina 8.1% in Region Šumadija i Zapadna Srbija 7.0% and Region Južna i Istočna Srbija 5.8%.

Chart 2.11. Does your enterprise use Artificial Intelligence technologies? (%)





2.4. SURVEY RESULTS

MODULE A: Use of the Internet

A1: Percentage of persons employed who use the Internet for business purposes?

%

	Enterprises							
	Size class			Region				Total
	Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i istočna Srbija	
1–24%	20.5	22.4	21.4	14.5	22.3	29.1	26.2	20.9
25–49%	15.9	16.1	22.4	9.9	25.3	17.6	16.8	16.2
50–74%	16.0	16.1	18.2	16.5	10.3	19.3	21.2	16.1
75–100%	47.6	45.4	37.9	59.1	42.1	34.1	35.8	46.8

A2: Does your enterprise use any types of fixed broadband Internet connection (e.g. ADSL, SDSL, FTTP, cable Internet, public Wi-Fi)?

%

Enterprises		Size class			Region				Total
		Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i istočna Srbija	
Activity	YES								
	Manufacturing	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Construction	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Wholesale and retail trade	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Transportation and storage	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Accommodation and food service activities	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Information and communications	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Real estate activities; Professional, scientific and technical activities	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Administrative and support service activities; Repair of computers	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

A3: What is the maximum contracted speed of the Internet connection your enterprise?

%

	Enterprise							
	Size class			Region				Total
	Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
Less than 30 Mbit/s	12.3	5.3	1.4	6.9	16.2	9.0	14.4	10.5
At least 30, but less than 100 Mbit/s	32.0	31.0	24.7	21.7	28.9	47.5	42.4	31.5
At least 100, but less than 500 Mbit/s	32.4	45.3	47.8	36.0	38.8	32.4	32.4	35.5
At least 500, but less than 1 Gbit/s	13.7	10.8	14.1	22.7	7.8	5.3	5.5	13.2
At least 1 Gbit/s	9.5	7.6	12.0	12.7	8.4	5.8	5.4	9.3

A4: Is the speed of your fixed Internet connection to the Internet sufficient for the actual needs of the enterprise?

%

Enterprises	Size class			Region				Total
	Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	

YES

Activity	Manufacturing	94.3	95.9	98.0	92.0	99.1	94.5	92.6	95.0
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	93.6	99.4	91.4	96.5	99.2	88.6	100.0	95.9
	Construction	100.0	100.0	92.2	99.7	100.0	100.0	99.4	99.8
	Wholesale and retail trade	86.0	96.8	95.5	89.1	99.9	78.0	76.5	87.8
	Transportation and storage	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Accommodation and food service activities	97.1	98.9	100.0	99.0	100.0	95.3	83.2	97.3
	Information and communications	98.5	100.0	100.0	99.2	100.0	100.0	93.6	98.9
	Real estate activities; Professional, scientific and technical activities	98.1	91.3	86.4	98.2	97.7	96.7	80.1	96.9
	Administrative and support service activities; Repair of computers	92.9	100.0	86.7	90.2	99.4	100.0	100.0	93.9
Total		94.0	97.3	95.6	94.7	99.4	92.0	89.5	94.7

**A6: Do any of the persons employed have remote access to the following?
(via computers or smartphones)**

%

Enterprises	Size class			Region				Total
	Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	

e-mail of the enterprise

Activity	Manufacturing	80.6	82.1	93.5	92.4	79.0	84.4	65.9	81.9
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	74.7	70.9	80.0	96.5	81.8	86.8	25.9	73.6
	Construction	64.6	94.7	92.2	100.0	44.4	67.8	14.0	70.2
	Wholesale and retail trade	82.8	90.3	92.6	86.5	94.4	74.1	72.1	84.1
	Transportation and storage	92.6	90.2	97.1	96.2	79.3	100.0	97.3	92.4
	Accommodation and food service activities	60.3	90.5	100.0	58.9	55.1	87.6	84.5	64.6
	Information and communications	98.5	89.0	94.7	97.3	93.7	90.0	98.5	96.2
	Real estate activities; Professional, scientific and technical activities	91.2	81.6	100.0	86.0	96.3	96.9	96.8	89.9
	Administrative and support service activities; Repair of computers	88.6	73.5	94.2	90.8	79.7	71.5	81.5	85.7
Total		81.8	85.0	93.1	88.8	80.6	82.5	67.1	82.9

Documents of the enterprise (e.g. files, spreadsheets, presentations, charts, photos)

Activity	Manufacturing	56.6	67.7	84.0	72.9	64.4	55.2	50.9	61.3
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	23.3	57.9	62.9	68.4	17.9	68.2	25.9	41.8
	Construction	56.1	85.5	64.7	83.5	40.5	63.7	14.0	61.2
	Wholesale and retail trade	55.9	75.7	86.1	57.7	74.2	44.6	63.0	59.6
	Transportation and storage	63.2	77.9	77.7	73.8	72.1	37.6	97.3	65.9
	Accommodation and food service activities	43.4	51.5	100.0	52.0	29.9	36.3	45.2	44.9
	Information and communications	82.5	80.3	91.5	88.5	71.4	47.7	83.6	82.3
	Real estate activities; Professional, scientific and technical activities	83.7	69.9	77.3	77.9	89.9	90.3	74.4	81.5
	Administrative and support service activities; Repair of computers	62.8	45.1	72.8	58.6	69.7	45.1	61.4	59.8
Total		60.5	70.1	81.0	69.9	64.6	52.8	55.5	63.2

A6: Do any of the persons employed have remote access to the following?
(via computer or smartphone) (continued)

%

Enterprises		Size class			Region				Total
		Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
Business applications or software of the enterprise (e.g. access to accounting, sales, orders, CRM)									
Activity	Manufacturing	56.5	66.9	82.1	71.5	61.0	57.3	52.1	60.8
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	23.3	50.2	68.6	59.1	12.4	70.0	25.9	39.0
	Construction	56.1	62.4	66.7	76.2	40.5	63.3	9.9	57.4
	Wholesale and retail trade	56.3	75.3	86.3	66.1	68.5	34.2	62.5	59.9
	Transportation and storage	53.2	70.2	80.6	70.0	72.1	8.5	97.3	56.6
	Accommodation and food service activities	36.4	49.1	100.0	44.3	19.6	32.7	53.6	38.6
	Information and communications	87.7	79.4	91.5	87.2	92.6	43.7	89.0	86.0
	Real estate activities; Professional, scientific and technical activities	80.4	60.0	68.2	73.3	90.4	75.4	72.0	77.1
	Administrative and support service activities; Repair of computers	57.8	54.4	71.0	61.3	55.3	41.7	61.4	58.0
Total		59.1	66.3	80.4	69.6	62.2	47.3	55.9	61.4

A7: Does your enterprise conduct remote meetings (e.g. via Skype, Zoom, MS Teams, WebEx)?

%

Enterprises		Size class			Region				Total
		Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
YES									
Activity	Manufacturing	38.4	56.2	91.7	51.7	45.7	48.2	36.7	46.5
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	44.4	45.5	57.1	73.1	38.7	52.6	30.0	46.0
	Construction	21.9	76.1	61.8	36.4	4.3	40.5	52.3	31.8
	Wholesale and retail trade	25.5	67.6	85.2	39.1	37.1	29.4	10.2	33.2
	Transportation and storage	19.3	47.4	81.1	34.6	14.3	34.1	8.8	25.4
	Accommodation and food service activities	18.5	43.4	33.3	29.0	10.5	15.0	11.5	21.9
	Information and communications	89.9	90.2	95.1	92.0	96.4	55.0	84.7	90.2
	Real estate activities; Professional, scientific and technical activities	53.4	79.2	95.5	69.7	23.4	59.4	55.1	58.1
	Administrative and support service activities; Repair of computers	52.3	40.5	72.2	57.4	45.0	44.7	29.5	51.3
Total		36.3	62.2	84.1	51.9	36.1	41.0	31.3	43.2

A9_P: Does your enterprise have a website?

%

Enterprises	Size class			Region				Total
	Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
Activity	Manufacturing	86.9	92.1	95.7	91.7	89.9	94.6	88.8
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	87.9	97.6	100.0	98.2	99.2	86.8	93.2
	Construction	75.2	94.7	100.0	68.6	72.2	95.9	79.0
	Wholesale and retail trade	76.4	98.3	100.0	93.2	81.3	62.4	80.2
	Transportation and storage	69.1	93.3	100.0	75.0	76.2	70.7	73.7
	Accommodation and food service activities	75.1	100.0	100.0	83.6	66.1	72.7	78.6
	Information and communications	98.2	95.9	100.0	98.9	95.0	95.8	97.7
	Real estate activities; Professional, scientific and technical activities	92.3	99.5	100.0	98.3	98.5	65.2	93.5
	Administrative and support service activities; Repair of computers	88.1	79.6	90.8	93.3	95.3	49.8	86.4
	Total	82.0	94.3	97.2	90.0	85.5	81.3	85.0

MODULE B: E-COMMERCE

B1: During 2023, did your enterprise have web sales of goods/services via? %

Enterprises	Size class			Region				Total
	Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	

Your enterprise's website or mobile app

Activity	Manufacturing	12.8	15.7	12.0	19.2	12.7	10.6	12.7	13.5
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	6.4	0.6	-	-	-	11.4	-	3.3
	Construction	7.2	9.8	2.9	-	2.8	27.3	8.8	7.5
	Wholesale and retail trade	33.9	43.7	57.8	43.5	29.2	28.3	34.2	36.0
	Transportation and storage		50.9	54.7	10.9	13.8	4.7	4.2	9.3
	Accommodation and food service activities	58.6	77.9	66.7	59.4	63.0	71.1	52.2	61.2
	Information and communications	46.3	59.8	69.1	49.8	55.7	31.5	52.1	50.2
	Real estate activities; Professional, scientific and technical activities	28.3	27.7	54.5	30.2	33.2	19.8	10.3	28.7
	Administrative and support service activities; Repair of computers	9.3	37.0	77.4	20.9	12.6	9.4	53.9	20.5
Total		23.5	30.1	33.7	31.4	21.7	19.0	21.6	25.2

E-commerce marketplace websites or apps used by several enterprises

Activity	Manufacturing	2.3	0.8	2.9	1.2	0.5	3.2	3.6	2.0
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	7.0	-	-	1.8	-	10.5	-	3.3
	Construction	3.1	3.9	2.9	-	2.8	-	22.1	3.2
	Wholesale and retail trade	3.0	10.5	20.9	1.2	8.9	5.8	7.1	4.6
	Transportation and storage	24.1	40.9	30.6	6.2	10.1	66.2	29.0	26.9
	Accommodation and food service activities	22.5	38.4	33.3	21.6	15.9	30.6	56.5	24.7
	Information and communications	21.6	33.1	41.1	26.9	28.3	17.3	6.1	24.9
	Real estate activities; Professional, scientific and technical activities	26.7	16.8	50.0	26.8	30.5	19.0	4.7	25.6
	Administrative and support service activities; Repair of computers	5.0	23.3	48.5	10.4	11.9	6.4	35.3	12.3
Total		9.9	12.2	16.6	10.4	8.9	12.3	11.6	10.6

B2: What percentage of total turnover was generated by web sales of goods or services in 2023? ¹⁾

%

	Enterprises							
	Size class			Region				Total
	Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
1–24%	68.0	72.4	62.0	67.9	69.4	67.4	72.7	68.6
25–49%	27.4	20.4	21.9	25.6	25.7	29.0	18.8	25.6
50–74%	3.9	5.1	8.6	5.4	2.2	2.6	7.7	4.4
75–100%	0.7	2.0	7.5	1.1	2.7	1.0	0.7	1.4

¹⁾ The results refer to enterprises that answered “Yes” in question B1.

B3: What was the percentage of the value generated by web sales in 2023?

%

	Enterprises							
	Size class			Region				Total
	Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
Via your enterprise’s website or app								
1–24%	15.8	15.9	10.0	8.8	7.1	30.7	28.6	15.5
25–49%	9.2	13.7	22.7	13.7	15.3	5.3	2.4	10.9
50–74%	7.2	5.2	3.5	7.8	8.9	2.6	5.3	6.6
75–100%	67.8	65.3	63.9	69.7	68.8	61.4	63.7	67.0
Via e-commerce website or app used by several enterprises for trading goods								
1–24%	67.5	65.3	63.9	69.7	68.8	61.4	61.7	66.8
25–49%	0.7	1.5	1.5	0.2	1.5	1.0	2.8	0.9
50–74%	16.0	17.4	24.7	21.2	22.6	6.9	6.9	16.7
75–100%	15.8	15.9	10.0	8.8	7.1	30.7	28.6	15.5

B4: During 2023, what was the percentage of web sales by type of transactions? %

	Enterprises							
	Size class			Region				Total
	Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
Sales to end consumers (B2C)								
1–24%	21.1	19.8	15.0	23.2	17.2	18.8	18.5	20.5
25–49%	1.9	3.3	2.5	2.1	3.2	2.0	1.3	2.2
50–74%	15.4	7.1	4.5	11.6	16.2	16.1	7.7	13.1
75–100%	61.6	69.8	77.9	63.0	63.4	63.2	72.5	64.2
Sales to enterprises (B2B, B2G)								
1–24%	61.5	69.0	77.5	62.9	63.3	62.5	72.3	63.9
25–49%	7.9	5.5	4.5	5.2	6.6	12.7	5.9	7.2
50–74%	9.5	5.6	3.0	8.6	13.0	6.0	3.1	8.3
75–100%	21.1	19.9	15.0	23.2	17.2	18.8	18.7	20.5

B5: During 2023, did your enterprise have web sales to customers located in the following geographic areas?

%

Enterprises		Size class			Region				Total
		Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
Republic of Serbia									
Activity	Manufacturing	99.4	100.0	100.0	100.0	100.0	100.0	97.2	99.6
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	100.0	100.0	-	100.0	-	100.0	-	100.0
	Construction	100.0	100.0	100.0	-	100.0	100.0	100.0	100.0
	Wholesale and retail trade	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Transportation and storage	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Accommodation and food service activities	98.1	98.1	100.0	98.6	99.1	95.4	98.2	98.1
	Information and communications	98.5	98.6	95.9	98.1	100.0	100.0	95.9	98.4
	Real estate activities; Professional, scientific and technical activities	100.0	98.3	100.0	100.0	99.0	100.0	100.0	99.8
	Administrative and support service activities; Repair of computers	100.0	83.9	97.7	89.3	100.0	89.9	100.0	92.9
Total		99.4	98.3	99.0	98.9	99.8	99.3	98.9	99.1
Eu countries									
Activity	Manufacturing	5.4	15.5	22.6	4.5	1.5	20.3	11.5	9.2
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage								
	Construction	-	40.1	-	-	100.0	-	-	6.4
	Wholesale and retail trade	15.7	11.0	17.0	22.7	11.3	-	6.2	14.9
	Transportation and storage	-	11.7	4.9	2.6	24.5	-	-	3.6
	Accommodation and food service activities	23.4	33.9	25.0	23.0	13.4	45.1	29.3	25.2
	Information and communications	21.8	5.2	17.6	17.1	4.3	44.5	40.1	17.2
	Real estate activities; Professional, scientific and technical activities	44.9	43.7	58.3	27.7	79.0	83.4	54.2	45.1
	Administrative and support service activities; Repair of computers	9.9	19.3	2.3	17.9	-	-	3.2	11.5
Total		17.8	17.1	16.0	20.2	18.9	12.8	12.7	17.5

B5: During 2023, did your enterprise have web sales to customers located in the following geographic areas? (continued)

%

Enterprises		Size class			Region				Total
		Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
Rest of the world									
Activity	Manufacturing	6.2	14.3	39.3	2.8	4.6	20.9	16.4	10.4
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	-	-	-	-	-	-	-	-
	Construction	-	40.1	-	-	100.0	-	-	6.4
	Wholesale and retail trade	5.4	3.4	17.5	7.0	1.7	-	14.4	5.7
	Transportation and storage	-	11.7	-	-	24.5	-	-	3.3
	Accommodation and food service activities	18.7	21.4	25.0	17.2	10.8	32.9	25.7	19.2
	Information and communications	21.8	6.9	21.8	18.2	4.3	44.5	39.3	17.9
	Real estate activities; Professional, scientific and technical activities	44.4	23.7	58.3	23.2	79.0	83.4	33.3	41.7
	Administrative and support service activities; Repair of computers	7.7	-	4.5	2.6	-	23.6	3.2	3.7
Total		13.5	11.0	19.4	12.3	16.1	11.8	15.3	13.3

B7: During 2023, did your enterprise have EDI-type sales of goods or services? %

Enterprises		Size class			Region				Total
		Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
YES									
Activity	Manufacturing	2.6	7.3	20.7	3.7	9.2	3.4	2.1	5.0
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	7.6	0.6	5.7	3.5	11.2	-	-	4.4
	Construction	7.2	-	-	-	-	27.3	-	5.9
	Wholesale and retail trade	-	5.3	18.7	2.5	0.1	0.3	0.8	1.3
	Transportation and storage	4.1	6.7	15.0	0.9	3.4	0.6	29.0	4.8
	Accommodation and food service activities	3.1	12.2	16.7	1.9	11.6	2.8	8.4	4.4
	Information and communications	12.7	5.6	32.1	15.2	.5	4.2	18.4	11.9
	Real estate activities; Professional, scientific and technical activities	0.4	2.7	4.5	0.5	1.9	-	1.3	0.8
Administrative and support service activities; Repair of computers	3.7	6.2	15.0	3.7	0.6	1.3	33.6	5.1	
Total		3.2	5.5	17.6	3.6	4.3	4.6	5.7	4.2

B8: What was the percentage of the total turnover generated by EDI-type sales of goods or services during 2023?¹⁾ %

	Enterprises							
	Size class			Region				Total
	Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
1–24%	82.8	70.0	80.3	81.4	85.9	90.2	40.8	78.6
25–49%	16.2	12.5	3.9	7.7	1.5	4.8	59.2	13.0
50–74%	0.9	5.1	2.7	4.0	2.6	1.4	-	2.5
75–100%	-	12.4	13.1	6.9	9.9	3.6	-	5.9

¹⁾ The results refer only to enterprises that answered “Yes” in question B7.

MODULE C: ICT SPECIALISTS AND SKILLS

C1: Does your enterprise employ ICT specialists? %

Enterprises		Size class			Region				Total
		Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
YES									
Activity	Manufacturing	9.7	27.8	73.6	23.0	17.2	17.5	17.2	18.6
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	4.6	37.0	77.1	24.0	14.6	48.6	11.1	25.2
	Construction	7.2	57.1	77.5	13.9	12.7	32.4	9.4	17.0
	Wholesale and retail trade	7.5	40.2	68.9	8.4	26.5	4.5	25.8	13.9
	Transportation and storage	17.5	26.2	84.3	5.8	28.3	33.4	10.3	20.8
	Accommodation and food service activities	15.5	25.5	66.7	25.7	1.9	10.9	4.4	17.2
	Information and communications	86.3	92.3	97.6	88.0	87.7	91.6	87.2	88.0
	Real estate activities; Professional, scientific and technical activities	31.5	67.7	95.5	42.4	33.7	8.7	58.5	38.1
	Administrative and support service activities; Repair of computers	25.0	29.5	62.3	34.0	25.9	6.4	26.0	28.8
Total		18.3	41.9	75.1	28.7	25.2	19.3	23.3	25.2

C2: Did your enterprise provide any types of training to develop ICT related skills of the persons employed, during 2023?

%

Enterprises	Size class			Region				Total
	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	

Training for ICT specialists

Activity	Manufacturing	4.4	15.9	43.8	11.8	11.3	8.1	9.0	10.0
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	-	22.4	40.0	20.5	3.0	29.7	2.5	13.3
	Construction	-	30.9	29.4	8.4	6.2	0.6	4.7	5.8
	Wholesale and retail trade	1.8	23.7	43.2	6.8	4.2	2.3	13.7	6.1
	Transportation and storage	-	-	47.3	4.0	0.4	-	0.8	1.4
	Accommodation and food service activities	1.7	11.8	66.7	3.4	0.6	9.9		3.5
	Information and communications	56.2	68.8	74.4	64.7	60.1	49.2	27.4	59.7
	Real estate activities; Professional, scientific and technical activities	3.0	40.5	59.1	11.9	6.4	1.4	11.1	9.6
	Administrative and support service activities; Repair of computers	22.5	6.2	40.4	24.2	20.0	1.3	16.8	20.4
Total		7.1	23.9	45.4	16.2	10.3	6.4	9.8	11.9

For for other persons employed

Activity	Manufacturing	11.4	14.1	46.4	18.1	17.4	10.1	12.9	14.5
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	0.5	23.4	31.4	22.2	14.1	15.3	2.5	13.2
	Construction	-	26.2	21.6	4.3	5.9	4.7	4.7	4.8
	Wholesale and retail trade	7.3	39.2	64.5	7.9	9.2	25.8	22.4	13.5
	Transportation and storage	61.0	20.9	40.9	82.1	44.6	33.1	58.0	54.4
	Accommodation and food service activities	19.0	27.3	100.0	22.2	12.3	23.5	23.9	20.7
	Information and communications	53.5	74.8	74.4	58.0	67.4	55.9	49.3	59.0
	Real estate activities; Professional, scientific and technical activities	37.2	66.8	63.6	46.5	33.9	50.6	9.2	42.1
	Administrative and support service activities; Repair of computers	40.0	15.3	86.1	35.8	41.8	32.8	53.9	38.2
Total		20.6	30.7	53.9	28.1	22.1	19.5	21.2	23.9

C3: Did your enterprise recruit or try to recruit ICT specialists during 2023?

%

Enterprises		Size class			Region				Total
		Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
YES									
Activity	Manufacturing	8.9	12.5	34.8	11.8	14.1	12.3	5.0	11.6
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	0.5	12.6	28.6	13.5	3.8	16.2	1.2	8.3
	Construction	-	23.1	40.2	8.9	0.9	0.3	4.7	4.7
	Wholesale and retail trade	7.2	27.2	42.9	6.1	13.4	22.0	7.0	11.0
	Transportation and storage	-	14.2	43.4	7.2	-	3.8	1.5	3.4
	Accommodation and food service activities	5.2	5.7	-	7.3	-	5.9	1.5	5.2
	Information and communications	62.9	79.6	79.7	74.1	58.2	41.0	53.9	67.3
	Real estate activities; Professional, scientific and technical activities	3.3	44.6	59.1	11.1	6.1	17.3	8.5	10.5
	Administrative and support service activities; Repair of computers	17.4	9.1	43.9	18.4	21.2	6.0	16.8	17.6
Total		10.1	24.2	41.2	17.1	12.6	12.9	8.2	14.0

C4: During 2023, did your enterprise have vacancies for ICT specialists that were difficult to fill?

%

Enterprises		Size class			Region				Total
		Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
YES									
Activity	Manufacturing	23.6	37.4	43.9	17.2	20.0	54.4	23.7	31.5
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	100.0	77.4	40.0	39.1	40.0	83.3	100.0	66.3
	Construction	-	-	19.5	2.8	33.3	-	-	3.7
	Wholesale and retail trade	23.0	15.6	55.5	35.1	46.7	2.4	19.3	24.2
	Transportation and storage	-	-	65.0	34.7	-	-	50.0	24.7
	Accommodation and food service activities	86.6	15.7	-	70.5	-	100.0	100.0	76.2
	Information and communications	53.0	75.0	57.7	70.0	24.6	44.0	38.3	59.0
	Real estate activities; Professional, scientific and technical activities	31.4	31.2	76.9	38.8	50.0	4.9	55.0	35.3
	Administrative and support service activities; Repair of computers	3.7	-	23.8	8.8	3.0	21.7	-	7.1
Total		37.6	38.5	47.3	48.7	28.0	30.4	28.0	39.1

C6: Who performed your enterprise's ICT functions in 2023?

%

Enterprises		Size class			Region				Total
		Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
Own employees (including persons employed in parent or affiliate enterprises)									
Activity	Manufacturing	32.6	41.9	82.0	41.6	41.8	34.0	36.0	38.4
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	29.7	46.5	88.6	32.7	57.7	51.8	11.1	42.3
	Construction	24.1	70.1	83.3	49.1	13.0	32.4	14.0	33.1
	Wholesale and retail trade	39.0	56.6	80.6	43.0	33.8	38.1	66.1	42.7
	Transportation and storage	38.3	56.0	88.2	42.2	52.4	33.4	39.3	42.5
	Accommodation and food service activities	19.3	26.2	100.0	25.5	6.8	16.8	28.2	20.8
	Information and communications	74.7	86.2	95.1	89.4	42.6	67.6	80.6	78.0
	Real estate activities; Professional, scientific and technical activities	24.3	72.2	95.5	25.5	36.5	61.0	49.6	32.8
	Administrative and support service activities; Repair of computers	38.1	15.3	49.7	30.0	59.0	6.0	35.3	34.1
Total		35.4	52.3	81.1	43.9	37.6	35.9	43.2	40.5
External suppliers									
Activity	Manufacturing	82.2	77.9	64.6	82.0	74.7	83.3	79.3	79.9
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	89.4	76.2	80.0	91.2	88.1	66.2	91.4	82.9
	Construction	83.1	54.0	67.6	60.4	91.0	95.2	86.0	77.9
	Wholesale and retail trade	75.7	84.2	84.0	84.1	80.9	77.5	43.8	77.1
	Transportation and storage	95.9	86.5	64.7	98.2	92.4	99.7	69.5	93.5
	Accommodation and food service activities	82.2	80.9	50.0	77.3	93.2	85.2	80.3	81.8
	Information and communications	35.7	53.5	53.3	32.3	64.0	47.2	41.5	40.3
	Real estate activities; Professional, scientific and technical activities	90.4	58.9	54.5	85.0	92.0	75.4	75.0	85.0
	Administrative and support service activities; Repair of computers	70.7	100.0	85.5	79.7	62.6	98.7	81.5	78.1
Total		78.8	75.1	69.8	75.2	81.0	83.7	68.6	77.7

MODULE D: ICT SECURITY

D1: Does your enterprise apply any of the following ICT security measures on its ICT systems?

%

Enterprises		Size class			Region				total
		Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
Athentication via strong password									
Activity	Manufacturing	90.2	90.6	98.5	96.4	84.7	91.7	92.6	90.9
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	55.8	59.3	85.7	75.4	79.2	67.0	8.6	60.1
	Construction	58.0	81.2	83.3	99.7	72.2	4.7	9.9	62.4
	Wholesale and retail trade	85.7	94.6	97.6	90.1	92.9	82.8	73.7	87.3
	Transportation and storage	88.5	93.3	92.9	99.7	75.8	100.0	71.0	89.3
	Accommodation and food service activities	69.4	69.1	83.3	69.3	49.5	83.7	91.6	69.5
	Information and communications	88.1	99.1	97.6	97.9	73.8	80.1	84.8	90.9
	Real estate activities; Professional, scientific and technical activities	94.6	83.5	100.0	93.1	97.7	81.2	95.3	93.0
	Administrative and support service activities; Repair of computers	77.2	81.3	89.6	85.3	75.6	46.4	83.2	79.1
Total		83.1	87.6	95.4	91.8	82.8	78.4	72.7	84.4
Authentication via biometric methods used to access the enterprise’s ICT system									
Activity	Manufacturing	2.8	10.5	22.5	9.3	8.3	2.7	4.2	6,1
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	9.7	9.8	2.9	12.3	-	24.0	1.2	9,1
	Construction	16.9	9.2	8.8	31.4	2.8	4.4	1.1	15,5
	Wholesale and retail trade	6.2	21.1	14.2	4.3	20.6	4.0	8.4	8,5
	Transportation and storage	-	13.5	9.1	0.9	6.8	-	-	2,3
	Accommodation and food service activities	4.6	12.8	16.7	3.5	4.9	13.8	9.9	5,8
	Information and communications	24.6	34.0	42.7	34.6	11.6	14.8	18.1	27,4
	Real estate activities; Professional, scientific and technical activities	10.7	25.2	27.3	18.2	2.3	3.4	15.4	13,2
	Administrative and support service activities; Repair of computers	2.5	3.3	11.5	2.2	-	-	26.0	3,4
Total		7.7	15.3	18.8	13.2	9.3	4.3	6.7	9.6

D1: Does your enterprise apply any of the following ICT security measures on its ICT systems? (continued)

%

Enterprises	Size class			Region				Total
	Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	

Authentication based on a combination of at least two authentication mechanisms

Activity	Manufacturing	16.6	26.4	53.9	20.1	21.3	25.0	17.2	21.6
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	21.8	16.1	20.0	46.8	12.7	25.8	1.2	19.2
	Construction	8.5	41.0	22.5	27.4	6.8	-	5.2	14.2
	Wholesale and retail trade	21.9	32.1	40.8	24.1	37.4	11.5	18.1	23.9
	Transportation and storage	17.5	34.4	52.0	32.8	10.1	4.1	59.5	21.1
	Accommodation and food service activities	8.6	20.5	16.7	9.5	4.9	22.8	4.4	10.2
	Information and communications	69.0	81.5	84.1	78.7	68.3	50.8	48.0	72.3
	Real estate activities; Professional, scientific and technical activities	26.9	64.7	63.6	41.3	14.7	22.1	32.9	33.3
	Administrative and support service activities; Repair of computers	16.8	29.5	45.0	15.9	43.7	6.8	26.0	21.7
Total		21.6	36.4	48.9	31.8	24.8	17.0	20.9	25.6

Encryption of data, documents or e-mails

Activity	Manufacturing	46.5	64.1	67.9	68.8	38.3	49.5	61.3	52.4
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	16.3	46.3	42.9	32.2	31.6	45.5	12.3	31.6
	Construction	30.4	38.2	32.4	40.1	2.8	31.7	57.0	31.7
	Wholesale and retail trade	38.6	29.8	48.6	37.3	14.9	56.6	51.3	37.7
	Transportation and storage	-	27.9	60.5	7.4	11.3	0.6	1.5	6.0
	Accommodation and food service activities	12.3	23.8	16.7	10.6	20.3	14.4	21.0	13.9
	Information and communications	64.5	77.5	84.6	72.4	61.6	47.5	65.3	68.2
	Real estate activities; Professional, scientific and technical activities	46.0	55.2	59.1	57.9	32.9	23.1	32.1	47.6
	Administrative and support service activities; Repair of computers	24.1	41.0	46.2	25.2	45.9	7.7	46.1	29.4
Total		36.2	49.7	58.8	44.4	27.2	40.4	48.0	39.7

D1: Does your enterprise apply any of the following ICT security measures on its ICT systems? (continued)

%

Enterprises		Size class			Region				Total
		Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
Data backup to a separate location (including backup to the cloud)									
Activity	Manufacturing	75.1	74.3	91.5	78.2	67.4	79.8	81.3	76.0
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	42.4	60.8	82.9	88.3	57.6	62.6	12.3	54.0
	Construction	46.7	85.5	60.8	67.5	41.3	35.7	57.0	53.4
	Wholesale and retail trade	78.0	87.5	89.5	78.4	89.7	63.7	91.6	79.7
	Transportation and storage	88.5	97.9	100.0	100.0	79.6	100.0	68.3	90.2
	Accommodation and food service activities	24.5	58.3	100.0	23.5	21.5	46.8	59.3	29.5
	Information and communications	83.5	92.4	89.4	92.2	69.8	70.1	84.0	85.7
	Real estate activities; Professional, scientific and technical activities	83.5	83.5	90.9	79.6	94.8	95.9	64.5	83.6
	Administrative and support service activities; Repair of computers	49.8	62.6	80.9	50.4	74.7	21.3	81.5	55.0
Total		70.3	79.3	88.3	73.8	71.5	70.7	75.6	72.8
Network access control (management of user rights in enterprise's network)									
Activity	Manufacturing	44.5	58.2	90.9	46.4	39.2	68.9	42.6	51.1
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	43.5	50.6	91.4	75.4	57.7	57.7	13.6	51.0
	Construction	47.3	68.4	68.6	83.7	4.8	32.0	56.5	51.2
	Wholesale and retail trade	62.8	64.9	82.5	67.2	58.3	50.1	83.2	63.7
	Transportation and storage	49.1	66.3	97.1	71.2	76.2	4.7	63.0	53.1
	Accommodation and food service activities	21.7	51.4	100.0	23.9	26.4	26.0	42.5	26.2
	Information and communications	81.5	82.9	94.7	83.7	88.7	61.7	70.6	82.3
	Real estate activities; Professional, scientific and technical activities	71.0	80.8	86.4	72.6	72.9	94.3	35.0	72.8
	Administrative and support service activities; Repair of computers	61.8	45.2	85.5	66.7	71.5	13.2	38.6	60.0
Total		54.9	63.3	88.2	65.6	51.1	51.7	55.7	57.8

D1: Does your enterprise apply any of the following ICT measures on its ICT systems? (continued)

%

Enterprises	Size class			Region				Total
	Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	

VPN (Virtual Private Network extends a private network across a public network to enable secure exchange of data over public network)

Activity	Manufacturing	26.2	58.6	82.7	42.5	27.1	44.8	38.8	38.2
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	10.9	19.3	74.3	38.0	19.5	19.8	9.9	20.3
	Construction	29.8	77.2	52.0	36.1	40.5	32.0	52.3	38.1
	Wholesale and retail trade	50.8	80.2	84.8	55.8	63.9	41.6	65.0	55.9
	Transportation and storage	30.1	84.7	94.1	75.0	35.1	8.2	39.3	40.2
	Accommodation and food service activities	20.8	44.6	100.0	21.9	18.4	39.2	31.1	24.6
	Information and communications	77.6	98.6	92.3	90.0	69.9	61.9	72.1	82.8
	Real estate activities; Professional, scientific and technical activities	51.8	65.9	81.8	70.3	17.1	42.5	38.0	54.4
	Administrative and support service activities; Repair of computers	33.8	24.8	68.2	35.3	45.9	11.1	27.7	34.5
Total		39.6	65.0	80.9	54.6	39.6	37.3	46.7	46.2

ICT security monitoring system used to detect suspicious activity in ICT systems and alert the enterprise, except antivirus software

Activity	Manufacturing	15.7	32.9	67.4	31.4	20.5	21.7	21.8	23.6
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	6.2	27.0	42.9	37.4	10.1	27.9	6.2	18.5
	Construction	23.1	51.5	41.2	47.4	1.7	4.4	52.3	28.2
	Wholesale and retail trade	32.7	56.9	63.4	47.0	29.6	25.6	33.5	37.1
	Transportation and storage	9.3	66.3	63.2	45.0	14.3	3.8	3.4	19.5
	Accommodation and food service activities	12.4	24.7	50.0	16.7	9.9	13.2	9.9	14.3
	Information and communications	66.1	72.2	84.6	75.8	63.3	32.1	45.2	68.1
	Real estate activities; Professional, scientific and technical activities	62.0	60.3	68.2	65.6	64.8	57.5	15.0	61.8
	Administrative and support service activities; Repair of computers	33.5	37.1	49.1	42.5	35.4	1.7	26.0	35.5
Total		29.5	46.1	62.8	48.0	26.2	20.1	26.5	34.1

D1: Does your enterprise apply any of the following ICT security measures on its ICT systems? (continued)

%

Enterprises	Size class			Region				Total
	Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	

Maintaining log files that enable analysis after ICT security incidents

Activity	Manufacturing	11.3	36.2	67.3	21.2	23.0	20.4	20.6	21.4
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	7.3	23.6	54.3	31.0	11.6	30.6	4.9	18.6
	Construction	14.7	35.2	52.0	24.6	4.3	4.7	52.3	18.9
	Wholesale and retail trade	36.0	47.3	56.3	50.2	34.0	17.9	35.4	38.2
	Transportation and storage	9.3	44.0	68.6	44.7	4.2	4.1	2.3	16.3
	Accommodation and food service activities	10.6	21.3	33.3	11.0	6.8	20.5	18.3	12.2
	Information and communications	63.0	73.1	89.4	69.9	61.6	47.5	61.7	66.2
	Real estate activities; Professional, scientific and technical activities	46.0	77.2	77.3	50.6	67.3	41.9	16.2	51.3
	Administrative and support service activities; Repair of computers	40.5	26.6	65.7	52.1	25.3	3.5	26.0	39.4
Total		26.7	43.1	65.2	42.2	26.9	18.0	27.7	31.5

ICT risk assessment, i.e. periodical assessment of probability and consequences of ICT security incidents

Activity	Manufacturing	3.7	18.9	43.4	14.0	9.6	8.9	9.0	10.3
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	2.2	13.8	34.3	22.2	2.3	17.1	4.9	10.1
	Construction	-	12.2	25.5	1.3	2.8	4.1	4.1	2.6
	Wholesale and retail trade	20.1	35.7	49.3	42.3	2.8	2.5	26.1	23.2
	Transportation and storage	9.3	29.8	53.9	40.9	4.2	-	-	13.7
	Accommodation and food service activities	5.2	7.3		7.8	4.9	-	-	5.5
	Information and communications	34.7	49.8	91.9	39.1	63.8	11.5	12.6	40.2
	Real estate activities; Professional, scientific and technical activities	9.9	18.5	27.3	12.1	7.8	18.1	6.0	11.5
	Administrative and support service activities; Repair of computers	8.9	20.4	13.9	7.9	23.1	-	26.0	11.8
Total		11.4	24.0	43.0	23.4	10.1	6.2	12.3	15.1

D1: Does your enterprise apply any of the following ICT security measures on its ICT systems? (continued)

%

Enterprises		Size class			Region				Total
		Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
ICT security tests (e.g. performing security alert system, review of security measures, testing of backup systems)									
Activity	Manufacturing	4.9	17.6	46.6	11.9	13.2	7.5	12.8	11.0
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	5.7	21.7	40.0	25.7	10.1	28.8	-	15.7
	Construction	-	18.3	40.2	5.1	.9	4.4	4.7	3.9
	Wholesale and retail trade	21.4	44.5	44.3	43.1	17.3	1.2	14.8	25.3
	Transportation and storage	9.3	38.4	60.0	40.9	4.2	3.8	3.4	15.2
	Accommodation and food service activities	8.1	13.4	16.7	8.4	4.9	15.8	8.4	8.9
	Information and communications	47.6	66.3	84.6	53.9	64.3	41.9	28.9	53.1
	Real estate activities; Professional, scientific and technical activities	50.6	75.6	72.7	55.4	64.4	54.7	11.8	54.8
	Administrative and support service activities; Repair of computers	20.1	26.6	51.9	34.1	5.3	1.3	26.0	23.9
Total		17.9	33.2	50.0	33.8	18.6	9.1	12.2	22.2

D2: Does your enterprise make persons employed aware of their obligations in ICT security related issues in the following ways?

%

Enterprises	Size class			Region				total
	Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i istočna Srbija	

Voluntary training or internally available information (e.g. information on the intranet)

Activity	Manufacturing	46.9	58.6	74.7	67.8	36.3	57.0	46.4	51.8
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	34.8	65.0	68.6	39.2	56.1	60.5	37.4	50.9
	Construction	47.3	76.3	87.3	68.6	65.7	5.5	57.0	53.0
	Wholesale and retail trade	50.1	56.8	83.4	60.2	32.2	51.1	61.5	52.1
	Transportation and storage	65.8	59.8	91.2	95.9	96.6	1.3	62.2	65.7
	Accommodation and food service activities	63.0	49.2	66.7	77.5	51.2	27.0	32.3	61.1
	Information and communications	59.4	71.9	79.3	65.6	46.3	53.6	87.2	62.9
	Real estate activities; Professional, scientific and technical activities	61.4	83.6	90.9	71.8	45.4	65.6	65.2	65.3
	Administrative and support service activities; Repair of computers	51.1	40.3	47.4	57.5	54.7	11.1	10.9	48.5
Total		52.9	62.0	75.8	67.5	47.5	42.7	53.5	55.5

Compulsory training courses or viewing compulsory material

Activity	Manufacturing	7.0	15.9	43.9	16.6	8.0	12.9	9.2	11.7
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	7.6	32.9	17.1	21.6	19.7	32.0	-	19.4
	Construction	-	10.1	21.6	4.3	0.9	-	0.6	2.2
	Wholesale and retail trade	10.4	14.4	36.9	19.6	1.9	1.3	19.0	11.7
	Transportation and storage	11.5	20.9	34.6	6.8	24.2	3.5	29.0	13.6
	Accommodation and food service activities	2.1	5.2	16.7	1.0	2.5	1.0	18.3	2.7
	Information and communications	30.3	58.6	61.8	43.1	14.0	53.4	43.4	37.8
	Real estate activities; Professional, scientific and technical activities	11.2	37.8	40.9	12.4	27.6	19.0	3.4	15.8
	Administrative and support service activities; Repair of computers	9.1	15.8	47.3	9.7	23.7	4.7	26.0	13.4
Total		9.4	21.4	40.4	16.3	10.3	9.0	14.5	13.0

D2: Does your enterprise make persons employed aware of their obligations in ICT security related issues in the following ways? (continued) %

Enterprises		Size class			Region				Total
		Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
By contract (e.g. contract of employment)									
Activity	Manufacturing	12.0	21.1	41.0	17.2	19.0	11.9	19.2	16.3
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	11.6	31.5	37.1	20.5	48.2	5.9	4.9	22.5
	Construction	39.5	43.3	69.6	64.8	28.9	0.8	47.7	40.8
	Wholesale and retail trade	5.2	21.8	30.6	14.5	0.9	1.7	10.6	8.3
	Transportation and storage	10.0	20.0	40.2	3.0	7.2	33.1	0.8	12.4
	Accommodation and food service activities	10.5	17.3	-	14.5	5.5	6.7	11.3	11.3
	Information and communications	55.0	72.2	63.4	65.4	39.4	57.6	58.5	59.1
	Real estate activities; Professional, scientific and technical activities	33.8	54.9	59.1	40.8	17.4	58.7	36.8	37.4
	Administrative and support service activities; Repair of computers	10.0	22.0	36.9	11.9	23.1	5.1	26.0	14.7
Total		18.3	30.8	41.9	29.4	16.5	13.0	20.8	21.6

D3: Does your enterprise make persons employed aware of their obligations in ICT security related issues in the following ways? (continued)

%

Enterprises	Size class			Region				Total
	Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	

YES

Activity	Manufacturing	31.1	58.5	77.0	47.9	40.9	39.6	34.6	41.1
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	39.2	55.1	74.3	50.3	29.1	68.8	54.7	49.3
	Construction	46.7	59.8	71.6	59.9	36.0	40.9	52.3	49.4
	Wholesale and retail trade	47.9	67.4	77.2	44.2	64.6	52.1	52.9	51.5
	Transportation and storage	75.9	54.0	94.1	92.4	93.2	34.1	64.9	73.1
	Accommodation and food service activities	39.3	70.1	66.7	48.2	36.2	34.8	45.1	43.6
	Information and communications	80.7	92.7	100.0	84.3	96.8	69.2	62.9	84.1
	Real estate activities; Professional, scientific and technical activities	60.1	88.7	90.9	74.1	45.8	63.1	38.9	65.0
	Administrative and support service activities; Repair of computers	44.5	59.4	76.3	53.0	50.9	34.9	46.3	50.1
Total		49.0	65.6	79.5	59.3	54.4	44.4	47.0	53.4

MODULE E: ARTIFICIAL INTELLIGENCE

E0: Does your enterprise Artificial Intelligence technologies (AI)? %

Enterprises		Size class			Region				Total
		Small (10–49)	Medium (50–249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
YES									
Activity	Manufacturing	5.4	6.5	11.7	2.9	9.6	5.8	4.7	6.1
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage	1.1	9.8	11.4	8.8	0.8	14.4	-	5.8
	Construction	-	2.9	5.9	-	-	0.6	4.1	0.6
	Wholesale and retail trade	3.6	5.0	21.7	1.9	11.9	0.3	5.0	4.3
	Transportation and storage	10.0	6.7	9.3	0.9	3.4	29.3	-	9.5
	Accommodation and food service activities	-	1.1	-	-	-	1.0	-	0.2
	Information and communications	29.5	26.2	34.6	32.7	24.1	4.9	27.4	29.0
	Real estate activities; Professional, scientific and technical activities	5.7	36.1	36.4	11.6	6.0	17.4	8.1	10.8
	Administrative and support service activities; Repair of computers	3.4	2.8	4.1	2.6	0.6	3.4	16.8	3.3
Total		6,0	9.7	14.6	6.8	8.1	7.0	5.8	7.0



Data from this questionnaire are confidential and are used for statistical purposes only
(Law on Official Statistics, "Official Gazette of the RS", number 104/09)

SURVEY ON ICT USAGE IN ENTERPRISES

MODULE A: ACCESS AND USE OF THE INTERNET

A1	Please, indicate an estimate of the percentage of persons employed who use the Internet for business purposes (percentage of the total number of persons employed):	<input type="text"/>	
A2	Does your enterprise use any type of fixed broadband Internet connection? (e.g. ADSL, SDSL, FTTP, cable Internet, public Wi-Fi)	Yes	No
		<input type="checkbox"/>	<input type="checkbox"/>
		→ Go to A6	
A3	What is the maximum contracted speed of the Internet connection in your enterprise? (tick only one)	Yes	No
a) Less than 30 Mbit/s		<input type="checkbox"/>	<input type="checkbox"/>
b) At least 30, but less than 100 Mbit/s		<input type="checkbox"/>	<input type="checkbox"/>
c) At least 100, but less than 500 Mbit/s		<input type="checkbox"/>	<input type="checkbox"/>
d) At least 500, but less than 1 Gbit/s		<input type="checkbox"/>	<input type="checkbox"/>
e) At least 1 Gbit/s		<input type="checkbox"/>	<input type="checkbox"/>
A4	Is the speed of your fixed Internet connection to the Internet sufficient for the actual needs of the enterprise?	Yes	No
		<input type="checkbox"/>	<input type="checkbox"/>
A6	Do any of the persons employed have remote access to the following? (via computers or portable devices, such as smartphones)	Yes	No
a) E-mail system of the enterprise		<input type="checkbox"/>	<input type="checkbox"/>
b) Documents of the enterprise (e.g. files, spreadsheets, presentations, charts, photos)		<input type="checkbox"/>	<input type="checkbox"/>
c) Business applications or software of the enterprise (e.g. access to accounting, sales, orders, CRM)		<input type="checkbox"/>	<input type="checkbox"/>
A7	Does your enterprise conduct remote meetings (via Skype, Zoom, MS Teams, WebEx)?	Yes	No
		<input type="checkbox"/>	<input type="checkbox"/>
A9_P	Does your enterprise have a website?	Yes	No
		<input type="checkbox"/>	<input type="checkbox"/>

MODULE B: E-COMMERCE

E-commerce is the sale or purchase of goods or services conducted over computer networks by methods specifically designed for the purpose of receiving or placing orders. The payment and the delivery of the goods or services do not have to be conducted online. E-commerce transactions **exclude** orders made by manually typed e-mail messages.

B1	During 2023, did your enterprise have web sales of goods/services via:	Yes	No
	a) Your enterprise's website or mobile app? (including extranet)	<input type="checkbox"/>	<input type="checkbox"/>
	b) e-commerce marketplace websites or apps used by several enterprises for trading goods? (Amazon, Alibaba, Limundo, Tehnomania)	<input type="checkbox"/>	<input type="checkbox"/>
If the answer is "No" in B1a) and B1b)-> go to B7			
B2	What was the percentage of total turnover that was generated by web sales of goods or services in 2023?	<input style="width: 100px;" type="text"/>	
If "Yes" is ticked under a) in question B1, write down 100% in question B3a), if only "Yes" under b) in question B1, write down 100% in question B3b), question B3 is to be answered by the respondents who answered "Yes" to offered answers in question B1a under a) and b) so that the sum of the answers is 100%			
B3	What was the percentage of the value of web sales in 2023 for the following:	Total 100%	
	a) via your enterprise's websites or apps? (including extranet)	<input style="width: 100px;" type="text"/>	
	b) via e-commerce websites or apps used by several enterprises for trading goods? (Amazon, Alibaba, Limundo, Tehnomanija)	<input style="width: 100px;" type="text"/>	
B4	What was the percentage of the value of web sales in 2023 by type of transactions?	Total 100%	
	a) Sales to end consumers (B2C)	<input style="width: 100px;" type="text"/>	
	b) Sales to other enterprises (B2B) and sales to government bodies (B2G)	<input style="width: 100px;" type="text"/>	
B5	During 2023, did your enterprise have web sales to customers located in the following geographic areas?	Yes	No
	a) Republic of Serbia	<input type="checkbox"/>	<input type="checkbox"/>
	b) Other EU countries	<input type="checkbox"/>	<input type="checkbox"/>
	c) Rest of the world	<input type="checkbox"/>	<input type="checkbox"/>
B7	During 2023, did your enterprise have EDI-type sales of goods or services?	Yes	No
EDI-type sales are sales made via electronic data interchange. This type of sale means that it is in an agreed or standard format suitable for automated processing (e.g. EDI-Fact XML-UBL); without manually typed individual messages (via e-mail).		<input type="checkbox"/>	<input type="checkbox"/>
		→ go to C1	
B8	What was the percentage of the total turnover generated in EDI-type sales of goods or services during 2023?	<input style="width: 100px;" type="text"/>	

MODULE C: ICT SPECIALISTS AND SKILLS

C1	Does your enterprise employ ICT specialists? (ICT specialist are persons employed for whom ICT is the main job. For example, to develop, operate or maintain ICT systems or applications)	Yes	No
		<input type="checkbox"/>	<input type="checkbox"/>
C2	Did your enterprise provide any types of training to develop ICT related skills of the persons employed, during 2023?	Yes	No
	a) Training for ICT specialists (Tick „No“ if the answer in question C1 is “No“)	<input type="checkbox"/>	<input type="checkbox"/>
	b) Training for other persons employed	<input type="checkbox"/>	<input type="checkbox"/>
C3	Dis your enterprise recruit or try to recruit ICT specialist during 2023?	Yes	No
		<input type="checkbox"/>	<input type="checkbox"/>
			→ Go to C6
C4	Did your enterprise have vacancies for ICT specialists that were difficult to fill during 2023?	Yes	No
		<input type="checkbox"/>	<input type="checkbox"/>
			→ Go to C6
C6	Who performed your enterprise's ICT functions in 2023? (maintenance of ICT infrastructure; support for office software; development or support of business management software/systems)	Yes	No
	a) own employees (including those employed in parent or affiliate enterprises)	<input type="checkbox"/>	<input type="checkbox"/>
	b) external suppliers	<input type="checkbox"/>	<input type="checkbox"/>

MODULE D: ICT SECURITY

D1	Does your enterprise apply any of the following ICT security measures on its ICT systems?	Yes	No
	a) Authentication via strong password (e.g. minimum length, use of numbers and special characters, changed periodically, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
	b) Authentication via biometric methods used to access the enterprise's ICT system (e.g. authentication based on fingerprints, voice, face)	<input type="checkbox"/>	<input type="checkbox"/>
	c) Authentication based on a combination of two authentication mechanisms (combination of e.g. one-time password, code generated via a security token or received via a smartphone, biometric method)	<input type="checkbox"/>	<input type="checkbox"/>
	g) Encryption of data, documents or e-mails	<input type="checkbox"/>	<input type="checkbox"/>
	h) Data backup to a separate location (including backup to the cloud)	<input type="checkbox"/>	<input type="checkbox"/>
	i) Network access control (management of user rights in your enterprise's network)	<input type="checkbox"/>	<input type="checkbox"/>
	j) VPN (Virtual Private Network extends a private network across a public network to enable secure exchange of data over public network)	<input type="checkbox"/>	<input type="checkbox"/>
	k) UCT security monitoring system used to detect suspicious activity in ICT systems and alerts the enterprises, except antivirus software	<input type="checkbox"/>	<input type="checkbox"/>
	l) Maintaining log files that enable analysis after ICT security incidents	<input type="checkbox"/>	<input type="checkbox"/>
	m) ICT security assessment, i.e. periodical assessment of probability and consequences of ICT security incidents		
	n) ICT security tests (e.g. testing security alert system, review of security measures, testing of backup systems)	<input type="checkbox"/>	<input type="checkbox"/>
D2	Does your enterprise make persons employed aware of their obligations in ICT security related issues in the following ways?	Yes	No
	a) Voluntary training or internally available information (e.g. information on the intranet)	<input type="checkbox"/>	<input type="checkbox"/>
	b) compulsory training courses or viewing compulsory material	<input type="checkbox"/>	<input type="checkbox"/>
	c) By contract (e.g. contract of employment)	<input type="checkbox"/>	<input type="checkbox"/>
D3	Does your enterprise have documents on measures, practices or procedures on ICT security? (documents on ICT security and confidentiality of data cover employee training in ICT use, ICT security measures, the evaluation on ICT security measures, plans for updating ICT security documents, etc.)	Yes	No
		<input type="checkbox"/>	<input type="checkbox"/>
			→ Go to D5

D5	During 2023, did your enterprise experience any ICT related security incident leading to the following consequences?	Yes	No
	a) Unavailability of ICT services due to hardware or software failures	<input type="checkbox"/>	<input type="checkbox"/>
	b) Unavailability of ICT services due to attack from outside, e.g. ransomware attacks, Denial of Service attacks	<input type="checkbox"/>	<input type="checkbox"/>
	c) Destruction or corruption of data due to hardware or software failures	<input type="checkbox"/>	<input type="checkbox"/>
	d) Destruction or corruption of data due to infection of malicious software or unauthorized intrusion (malicious software)	<input type="checkbox"/>	<input type="checkbox"/>
	e) Disclosure or confidential data due to intrusion, phishing, phishing attack, intentional actions by own employees	<input type="checkbox"/>	<input type="checkbox"/>
	f) Disclosure of confidential data due to unintentional actions by own employees	<input type="checkbox"/>	<input type="checkbox"/>

MODULE E: ARTIFICIAL INTELLIGENCE

Artificial intelligence (AI) refers to systems that use smart technologies such as: **text mining** (process of deriving high-quality information from text), **computer vision** (e.g. picture recognition), **speech recognition**, **natural language generation** (processing and understanding natural language), **machine learning**, **deep learning** to gather and/or use data to predict, recommend or decide on varying levels of autonomy, the best action to achieve specific goals.

E0	Does your enterprise use any of the following Artificial Intelligence technologies?	Yes	No
		<input type="checkbox"/>	<input type="checkbox"/>
If the answer is "No" in question E0 -> go to the end "Background information"; otherwise -> go to question E1			
E1	Does your enterprise use any of the following Artificial Intelligence (AI) technologies?	Yes	No
	a) AI technology performing analysis of written language (e.g. text mining)	<input type="checkbox"/>	<input type="checkbox"/>
	b) AI technology converting spoken language into machine-readable format (speech recognition)	<input type="checkbox"/>	<input type="checkbox"/>
	c) AI technology generating spoken or written language (natural language generation, speech synthesis)	<input type="checkbox"/>	<input type="checkbox"/>
	d) AI technologies identifying objects or persons on images or videos (image recognition and processing)	<input type="checkbox"/>	<input type="checkbox"/>
	e) Machine-learning (e.g. deep learning) for data analysis	<input type="checkbox"/>	<input type="checkbox"/>
	f) AI technologies automating different workflows or assisting in decision (AI based software robotic process automation)	<input type="checkbox"/>	<input type="checkbox"/>
	g) AI technologies enabling physical movement of machines via autonomous decisions based on observation or surroundings (autonomous robots, self-driving vehicles, autonomous drones)	<input type="checkbox"/>	<input type="checkbox"/>
If the answer is "No" in question from E1a) to E1d) -> go to E2; otherwise -> go to the end			

E2	Does your enterprise use Artificial Intelligence software or systems for any of the following purposes?	Yes	No
	a) Use of AI for marketing or sales (e.g. customer profiling, price optimization, personalized marketing offers, market analysis based on machine learning, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
	b) Use of AI for production or service processes (e.g. to classify or find defects in products, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
	c) Use of AI for organization or business administration processes or management (e.g. business virtual assistants based on machine learning and/or natural language processing, e.g. for document drafting)	<input type="checkbox"/>	<input type="checkbox"/>
	d) Use of AI for logistics (e.g. autonomous robots for pick-and-pack solutions in warehouses for parcel shipping, tracing, distribution or sorting, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
	e) Use of AI for ICT security (e.g. face recognition based on computer vision for authentication of ICT users, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
	f) Use of AI for accounting, controlling or finance management (e.g. machine learning to analyse data that helps to make financial decision, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
	g) Use of AI for research and development or innovation activity (excluding research on AI) (e.g. analysis of data for conducting research, solving research problems and developing a new or significantly improved product/service based on research, etc.)	<input type="checkbox"/>	<input type="checkbox"/>

Name of enterprise

Registration number of the enterprise

Name and surname

Function

Telephone number

e-mail

ADSL (Asymmetric Digital Subscriber Line):

A broadband digital transmission technology using an existing telephone line and allows at the same time data transmission and vocal communication. A larger part of the band serves to transmit data to users, and the speeds are up to 6 Mbps.

Bit (Binary Digit):

The smallest information unit processed by a computer. Bit is indicated with 1 or 0 in a binary representation, or *true or false* in a logical representation. The group of 8 bits makes up 1 byte.

Broadband:

A communication system which medium (e.g. optic cable) transmits data at the same time, and each of the data is modulated with separate frequency.

B2B (Business-to-Business):

Transactions between two enterprises that are carried out via networks based on IP address (*Internet Protocol address*) via other computer networks.

B2C (Business-to-Customer):

Transactions carried out between a business and private customer via IP networks and other computer networks.

CRM (Customer Relationship Management):

It represents a process or methodology used to learn more about our customers' needs and to develop closer relationships with them. *CRM* contains several technological components, but *CRM*, in organizational terms, is a set of processes that will help to collect necessary information about customers, sales, marketing efficiency, customers' reactions and market trends. *CRM* facilitate business use of technology and human resources to have an insight of customers' behaviour and value.

Download:

The electronic transfer of information from a remote computer to own computer. File download from an anonymous *FTP* (File Transfer Protocol) is a popular way of acquiring a free software in public ownership.

Dial-up connection:

When telephone network is used for connection to a network. This includes a modem and ordinary telephone line, *ISDN* (Integrated Services Digital Network) card or *ISDN* line. If you are a typical computer user, you have one or two dial-up connections: one to get connected to the Internet, and the other to connect to your enterprise's network.

DSL (Digital Subscriber Line):

Type of fast Internet connection using standard telephone pairs. It can also be a type of broadband connection.

xDSL, ADSL, etc:

Transmissions over Internet networks based on protocols and via other computer networks. Orders of goods and services are placed via those networks, but payment and final delivery of goods or services can be made online or offline. Orders placed by phone, fax or e-mails are excluded from the category of electronic commerce.

Digital goods or services:

Goods-services that can ordered and delivered directly via computer, i.e. the Internet, e.g. music, video-films, games, computer software, online newspapers, consultancy services, etc.

E-mail:

Electronic transmission of messages, including text and attachments, from one computer to another located within or outside of the organisation. This includes electronic mail by internet or other computer networks.

Extranet:

Secure extension that allows external users to access some parts of the Intranet in the organisation.

Electronic commerce: E-commerce is the purchase or sale of goods or services over the Internet, particularly via the service *World Wide Web*. In practice this concept is often use instead the most recent one - e-business, which means running business over the Internet.

Electronic (digital) signature:

An electronic signature is a technology that is used in e-commerce and that allows to check the authenticity of the signatory, protect the integrity of data transmitted, the authenticity of the electronic signature of a given message or document. Thus, as in wet signature in standard business, the electronic signature is used in electronic business. Moreover, the electronic signature protects the integrity of the signed message, which is not provided by the wet signature.

ERP (Enterprise Resource Planning)

ERP is, briefly, a software system that uses all aspects of business functions of an enterprise. The implemented ERP system integrates the business functions of different parts of an enterprise (such as accounting, sales, production, etc.) in one unique whole. Thus, one obtains a system via which it is possible to manage all human and material resources on the one hand, and on the other one to plan and monitor business processes and processes.

Firewall:

A combination of hardware and software which maintains the system secure. It is usually used to prevent unauthorised access to the internal local network from outside. Firewall prevents direct communication of the network with external computers.

Hardware:

A physical unit of a computer system, including also external units, printers, modems, mice, etc.

Internet:

A worldwide computer network.

Internet address:

The address of a resource on the Internet. It typically reads for instance:

<http://www.stat.gov.rs>

Intranet

A network within an organisation, based on Internet technologies and protocols, but available only for a selected group of people, such as the employees.

ISDN (Integrated Services Digital Network):

A fast digital telephone service, which speed ranges up to Kbps, which is several times faster than the analogue modem.

Local Area Network (LAN):

A local network that covers and connects a group of computers, printers and other units in a relatively limited area (e.g. building). Every connected LAN unit is allowed to communicate with other networks, if needed.

Network:

A group of computers or other devices, such as printers, scanners, etc. connected to the communication link, which allows all the devices to be interconnected. It can be small or large, connected via cables, wireless, permanently connected or temporarily connected, etc. The biggest network is the Internet, the largest group of all interconnected worldwide networks.

Server:

A computer, in a network environment, containing shared resources used by network users.

Virus:

A computer programme that, when executed, damages or erases data on a computer.

Wide Area Network (WAN):

A communication network that connects geographically separated computers, printers and other devices.

Window:

A part of the monitor screen from which programs and processes can be opened. The user can open several windows at the same time.

Communication and information section

Phone: +38111 2401284

Email: stat@stat.gov.rs

Library

Phone: +38111 2412922, ext. 251

Email: biblioteka@stat.gov.rs

Number of pages: 124



Usage of information and communication
technologies in the Republic of Serbia, 2024

