



USAGE OF INFORMATION AND COMMUNICATION
TECHNOLOGIES IN THE REPUBLIC OF SERBIA, 2019

Households/Individuals
Enterprises



Belgrade, 2019



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TECHNOLOGIES IN THE REPUBLIC OF SERBIA, 2019

HOUSEHOLDS/INDIVIDUALS
ENTERPRISES



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Usage of information and communication technologies in the Republic of Serbia, 2019

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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 thirteen 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 2019 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 preceding the telephone interview were taken to be the reference period, which was, for most of the questions asked to enterprises, January 2019, while selected ones referred to the entire 2018.

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 1 597 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.


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HOUSEHOLDS/INDIVIDUALS



1.1. Methodology

Survey period	<ul style="list-style-type: none">• The survey was carried out from 18 March 2019 to 31 March 2019.
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: target population is made of all households with at least one member aged between 16 and 74• For individuals: target population is made of all individuals aged between 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)

1.1. Methodology

Survey period	<ul style="list-style-type: none">• The survey was carried out from 18 March 2019 to 31 March 2019.
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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 conducted on a representative sample of 2 800 households on the territory of the Republic of Serbia. The response rate was 93.8% (2 627 households).

Households

Sample (households)	Income			Region				Type of households		Total
	From 300 euros	300 - 600 euros	More than 600 euros	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i istočna Srbija	Urban	Other	
Number	910	798	537	652	727	721	527	1638	989	2627
%	40.5	35.5	23.9	24.8	27.7	27.4	20.1	62.4	37.6	100

The same sample was used both for households and individuals aged between 16 to 74 living on the territory of the Republic of Serbia. The sample included 2 800 individuals. The response rate was 93.8% (2 627 persons).

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	
Bpoj	220	209	332	442	599	825	987	1640	391	1343	893	885	465	68	1209	2627
%	8.4	8.0	12.6	16.8	22.8	31.4	37.6	62.4	14.9	51.1	34.0	33.7	17.7	2.6	46.0	100

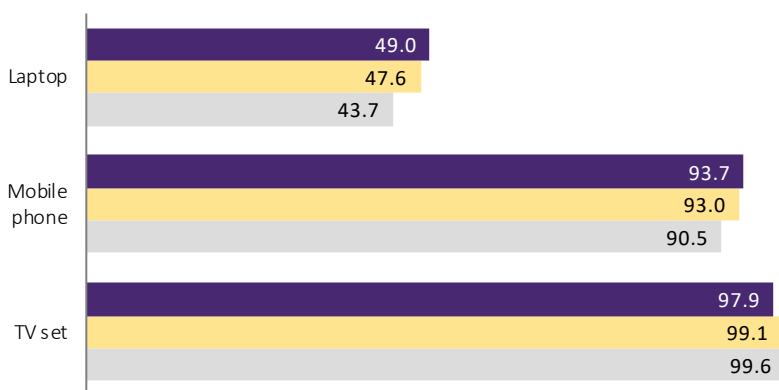
1.3. Main findings

1.3.1. Devices available in households

Households were offered to give more than one answers to the question relative to the devices available in households. The survey shows that 97.9% of households have a TV set, and 93.7% a mobile phone.

There are 49.0% of households that have a laptop, which is an increase of 1.4% and 5.3% in relation to 2018 and 2017, respectively.

Chart 1.1. Devices available in households (%)



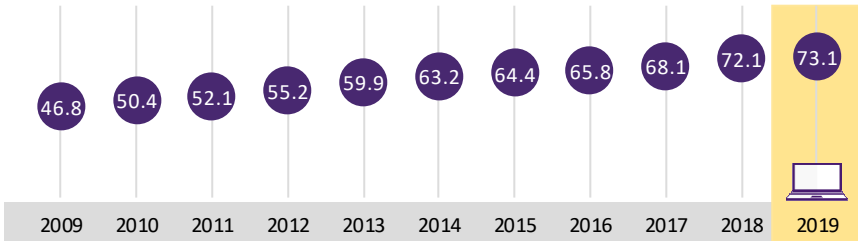
93.7% of households have a mobile phone

● 2019 ● 2018 ● 2017

1.3.2. Computers in households

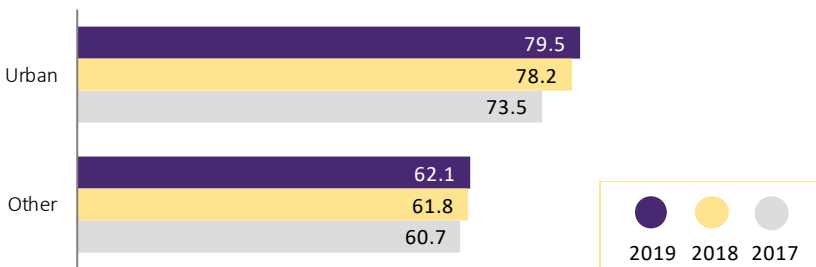
The main findings of the survey show that 73.1% of households in the Republic of Serbia, which is an increase of 1% and 5% in relation to 2018 and 2017, respectively. The percentage of computers in households varies depending on the territory: in Belgrade it amounts to 85.4%, in Vojvodina 72.8%, in Šumadija i Zapadna Srbija 66.7% and in Južna i Istočna Srbija 66.3%.

Chart 1.2. Computer in households (%)



The difference are visible when comparing the availability of computers in urban and other parts of Serbia: 79.5 versus 62.1%. In relation to 2018, this gap has slightly increased, which is backed by growth rates of computer availability in urban and other parts of Serbia. The growth rate in the urban parts of Serbia is 1.3%, while this increase amounts to 0.3% in the other parts of Serbia, when compared to 2018.

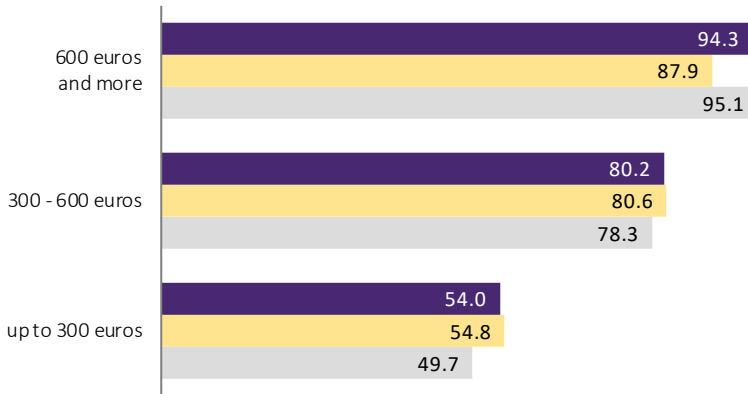
Graph 1.3. Percentage of households having a computer, by type of settlements (%)



The structure of households by monthly income is expressive of the gap as to the availability of computers in households. Computers are mostly available in households with a monthly income of more than 600 euros (94.3%), while households with an income up to 300 euros account for 54.0%.

When looking at the data for 2018, growth rates in certain income classes for 2019, compared to the previous year indicate that the availability of computers in households, according to income level, increased. As for households with an income of more than 600 euros the decrease was 6.4%, while for households with in an income from 300 to 600 euros saw a decrease of 0.4% in relation to 2018. For households with an income of less than 300 euros amounts to 0.8%.

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



54.0% of households with an income up to 300 euros have a computer



2019

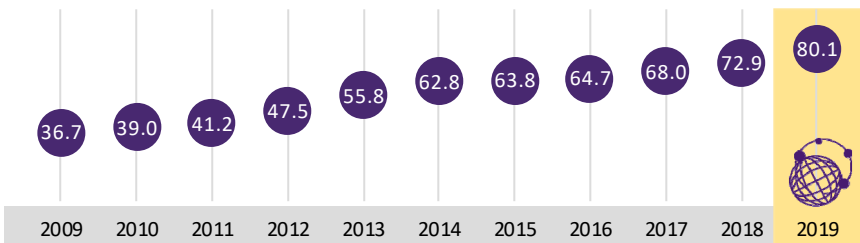
2018

2017

1.3.3. Internet in households

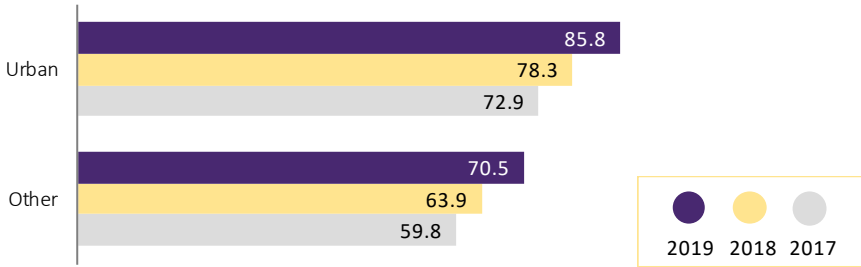
In the Republic of Serbia 80.1% of households have an Internet connection, which is an increase of 7.2% and 12.1%, when compared to 2018 and 2017, respectively.

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



The highest percentage of Internet connection availability was observed in Belgrade, amounting to 89.7%. In Vojvodina it is 81.6%, in Šumadija i Zapadna Srbija 75.6% and in Južna i Istočna Srbija 72.2%.

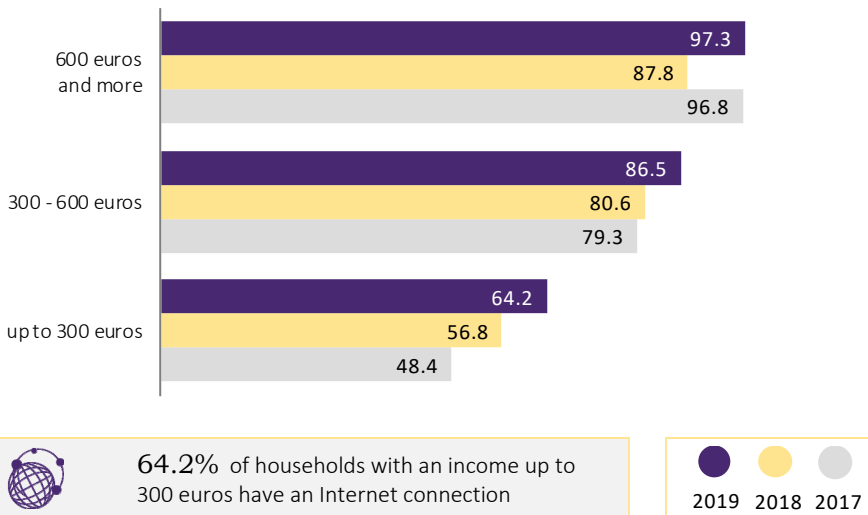
Chart 1.6. Households having an Internet connection, by type of settlement (%)



There are also considerable difference as to the percentage of Internet connection in urban and other settlements of Serbia: 85.8 versus 70.5%. When compared to 2018, the growth rate in urban settlements of Serbia is 7.5%, and in rural parts 6.6%.

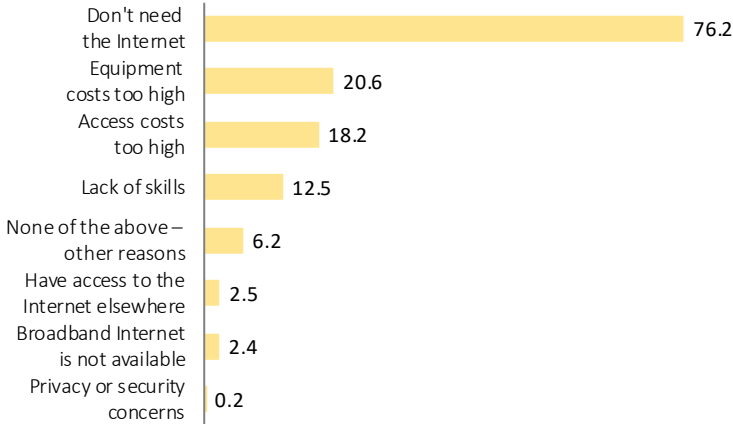
As in computer availability in households, there is a large gap as regard Internet connection. When looking at the structure of households according to their monthly income level, Internet connection is mostly used by households which monthly income exceeds 600 euros (97.3%), while the share of households with an income up to 300 euros is 64.2%.

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



As regard the reasons for not having an Internet connection at home 76.2% said not needing the Internet, 20.6% indicated that equipment costs were too high, while 12.5% of households mentioned the lack of skills.

Chart 1.8. Reasons of households for not having an Internet connection at home (%)



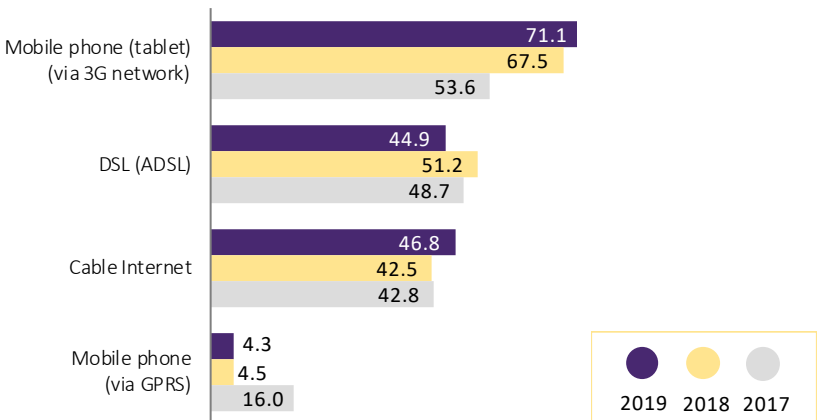
Households were offered several answers to the question relative to the type of connection used to access the Internet. The obtained results show that of the total number of households having an Internet connection, 44.9% have *DSL (ADSL)*, 46.8% cable Internet and 71.1% of households use a mobile phone via 3G network.



44.9% of households having an Internet connection use *DSL (ADSL)*

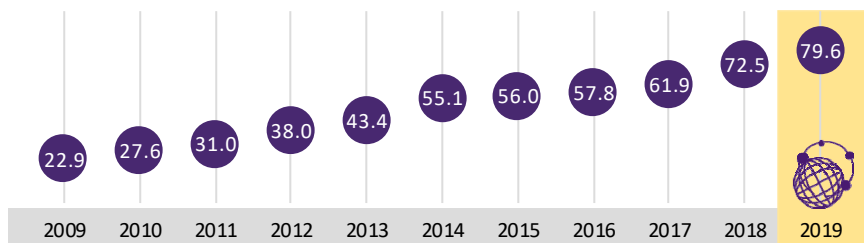
The results of the survey show that only 0.7% of households have an dial-up connection. This is due primarily to larger use of broadband connection.

Chart 1.9. Type of Internet connection (%)



The broadband Internet connection, besides providing faster access, changes the entire way of using the Internet since it allows quicker download of information from the Internet compared to the classic dial-up modem connection. Accordingly, from 2005 the percentage of households having this type of Internet connection is taken to be one of the main indicators of ICT usage development in the European Union. In Serbia, 79.6% of households have an broadband connection, which is an increase of 7.1 and 17.7% in relation to 2018 and 2017, respectively. This type of Internet connection is most used in Belgrade, 89.0%, in Vojvodina, 81.7%, in Šumadija i Zapadna Srbija, 75.0% and in Južna i Istočna Srbija, 71.1%.

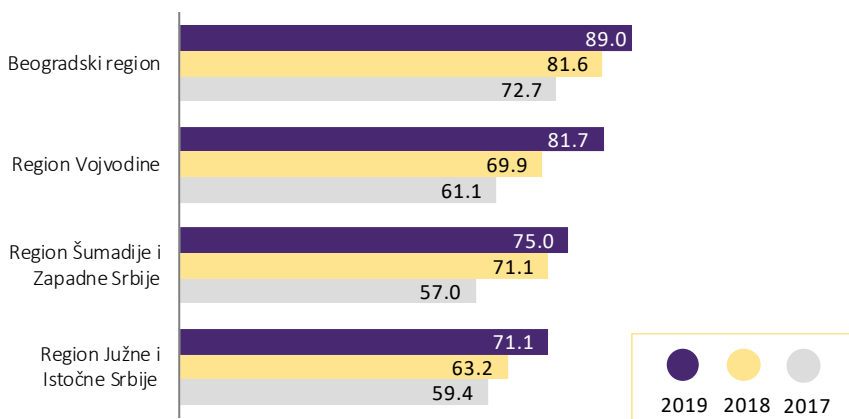
Chart 1.10. Broadband Internet connection in households (%)



Broadband Internet connection is mostly available in households having a monthly income of more than 600 euros (98.0%), while the share of those with an income of up to 300 euros is 63.5%.

Large differences are also observed when comparing the use of this type of Internet connection in urban and other settlements of Serbia: 85.6 versus 69.5%.

Chart 1.11. Broadband Internet connection in households, by territory (%)



1.3.4. Individuals: use of computers

In the Republic of Serbia, 71.9% of individuals used a computer in the last three months, 1.4% more than three months ago and 5.0% more than one year ago. There are even 21.7% of individuals who have never used a computer. The number of computer users increased by 1.1, 4.4 and 5.6% in relation to 2018, 2017 and 2016, respectively.



The number of users increased by **1.1%** in relation to 2018

When compared to 2018, the number of persons who have used a computer in the last three months increased by more than 44 000.



More than **3 790 000** persons have used a computer in the last three months

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

- 92.9% of persons with tertiary educational level;
- 80.1% of persons with secondary educational level;
- 45.9% of persons with lower than secondary educational level.

Chart 1.12. When did you last use a computer? (%)

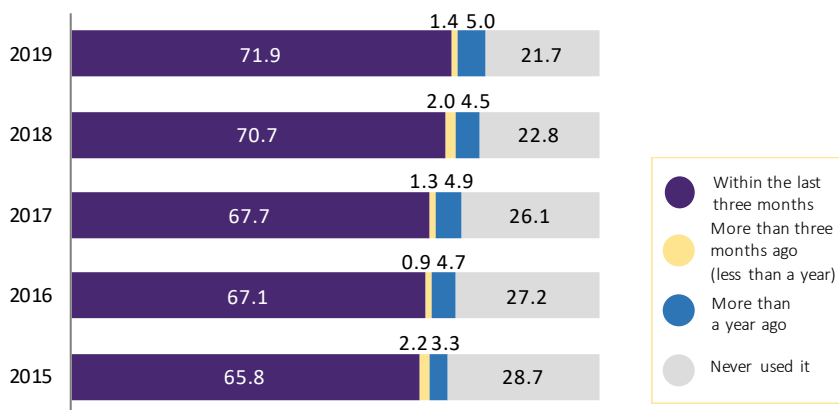
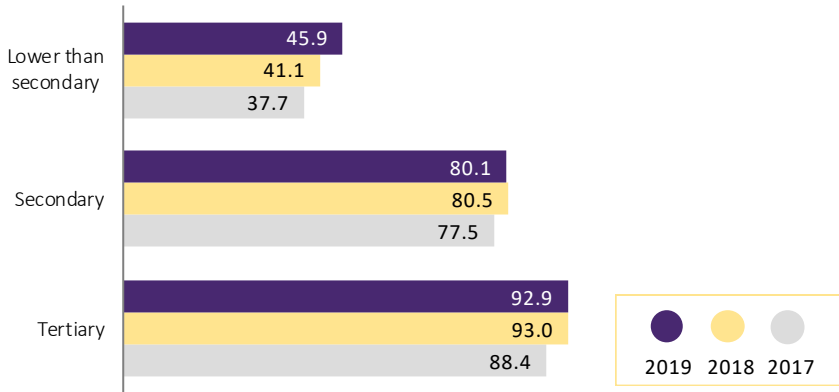
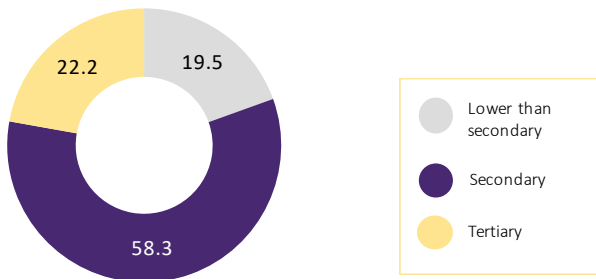


Chart 1.13. Share of computer users (in the last three months), by educational level (%)



Among computer users, 58.2% have secondary educational level, 19.5% lower than secondary level, and 22.2% tertiary educational level.

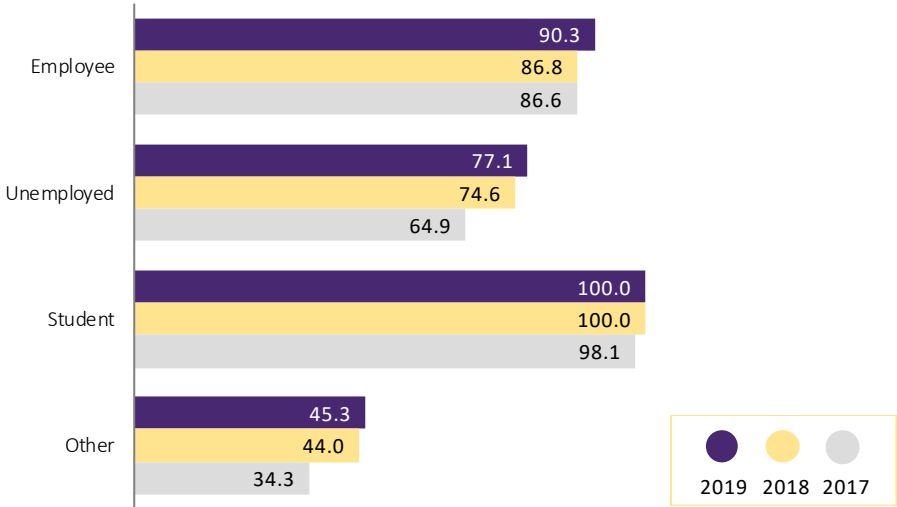
Chart 1.14. Educational structure of computer users (%)



The share of computer users (in the last three months), according to employment status:

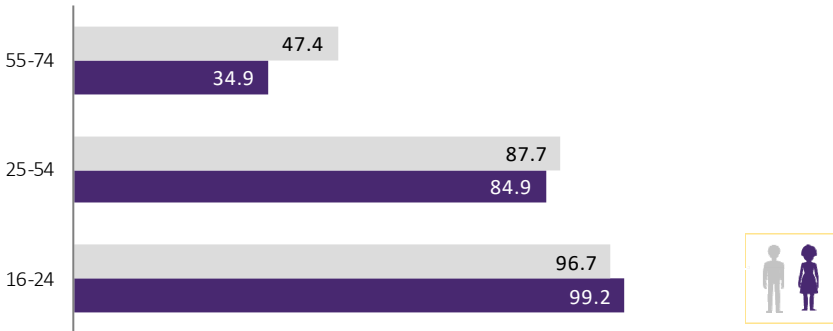
- 100.0% of students;
- 90.3% of employees;
- 77.1% of unemployed persons;
- 45.3% of others (retired persons, persons serving military service, etc.).

Chart 1.15. Share of computer users (in the last three months), by employment status (%)



The analysis of the respondents by sex indicates that in the last three months 75.6% of men and 68.3% of women have used a computer.

Chart 1.16. Use of computers (in the last three months), by sex and age (%)



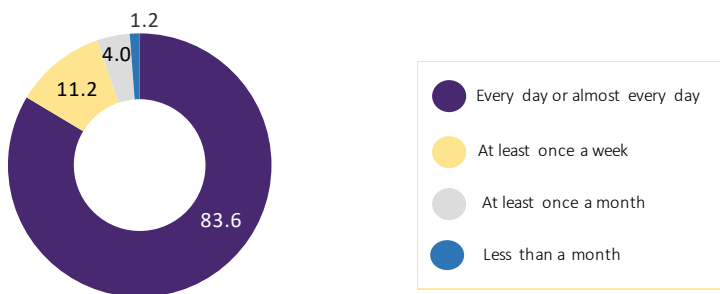
When asked how often, on average, the respondents have used a computer in the last three months, 83.6% said having used a computer every day or almost every day, 11.2% at least once a week, 4.0% at least once a month, and 1.2% less than once a month.



More than 3 170 000 persons use a computer every day or almost every day

When compared to 2018, the number of persons who used a computer every day or almost every days increased by some 64 000.

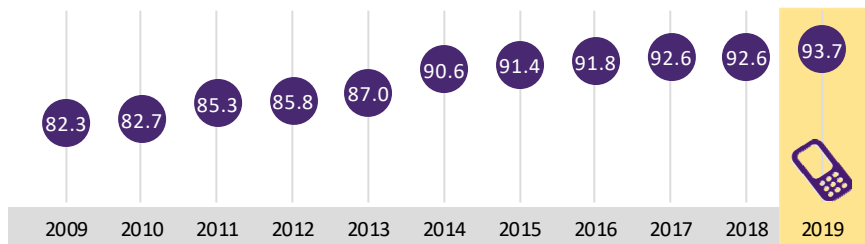
Chart 1.17. How often, on average, have you used a computer in the last three months? (%)



1.3.5. Individuals: use of mobile phones

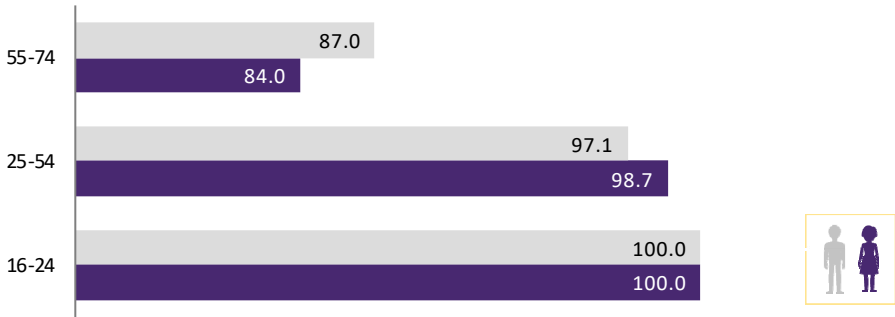
The survey indicates that 93.7% of persons use a mobile phone, while for 2018 this percentage is 92.6%.

Chart 1.18. Use of mobile phones (%)



More than 4 950 000 persons use a mobile phone

Chart 1.19. Use of mobile phones, by sex and age (%)



1.3.6. Individuals: use of the Internet

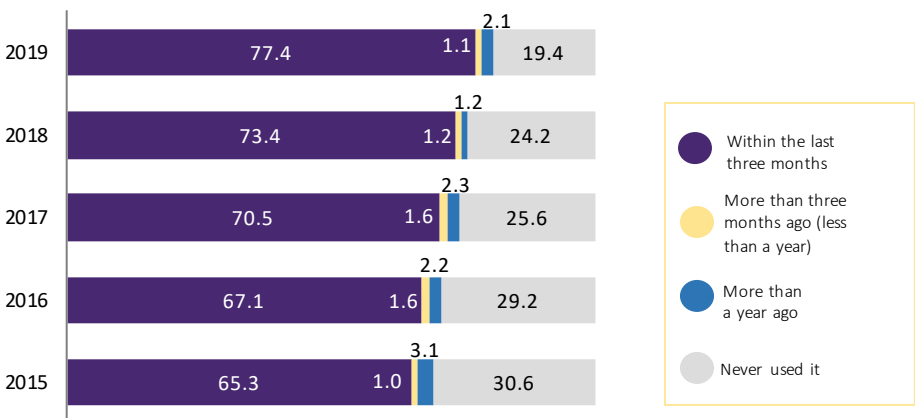
In Serbia, 77.4% of persons have used the Internet in the last three months, 1.1% of respondents used the Internet more than three months ago, and 2.1% more than one year ago. There were 19.4% of respondents that had never used the Internet.

The number of Internet users increased by 4.8, 6.2 and 9.7% in relation to 2018, 2017 and 2016, respectively.



The number of Internet users increased by **4.8%** compared to 2018

Chart 1.20. When did you last use the Internet? (%)





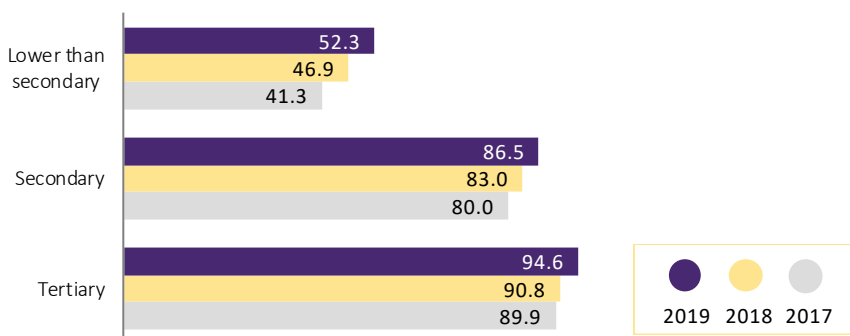
More than 4 080 000 persons have used the Internet in the last three months

Compared with 2018, the number of persons who have used the Internet in the last three months increased by some 190 000.

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

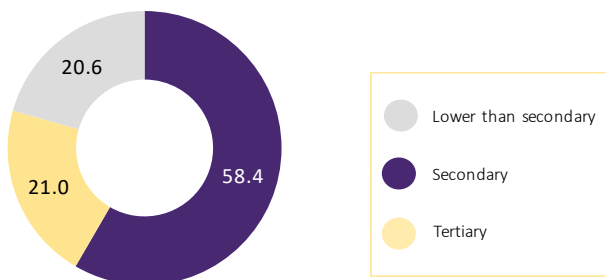
- 94.6% of persons with tertiary educational level;
- 86.5% of persons with secondary educational level;
- 52.3% of persons with lower than secondary educational level.

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



Among Internet users, 58.4% have secondary educational level, 20.6% lower than secondary educational level, and 21.0% tertiary educational level.

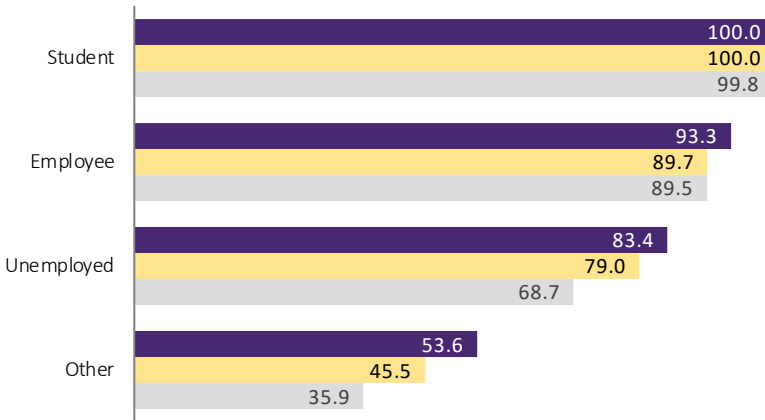
Chart 1.22. Educational structure of Internet users (%)



The share of Internet users (in the last three months), by employment status:

- 100.0% of students;
- 93.3% of employees;
- 83.4% of unemployed persons;
- 53.6% of others (retired persons, persons serving military service...).

Chart 1.23. Share of Internet users (in the last three months), by employment status (%)



More than **3 810 000** persons use the Internet every day or almost every day



When asked how often, on average, they have used the Internet in the last three months, 93.3% of respondents said: every day or almost every day.

When compared with 2018, the number of persons who used the Internet every day or almost every day increased by some 220 000.

Chart 1.24. How often, on average, have you used the Internet in the last three months? (%)

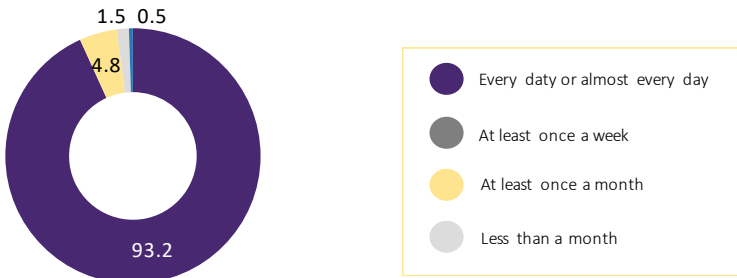
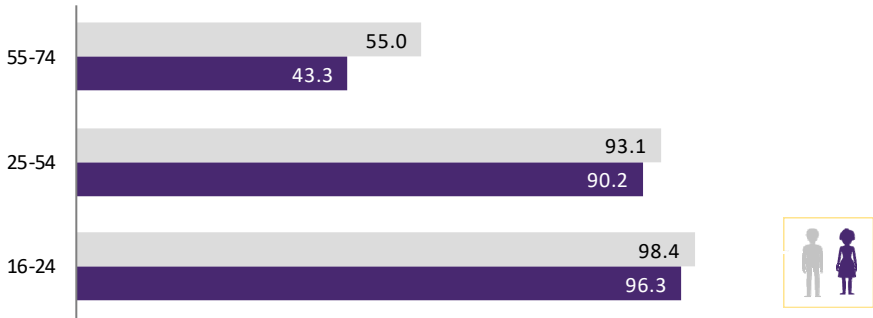


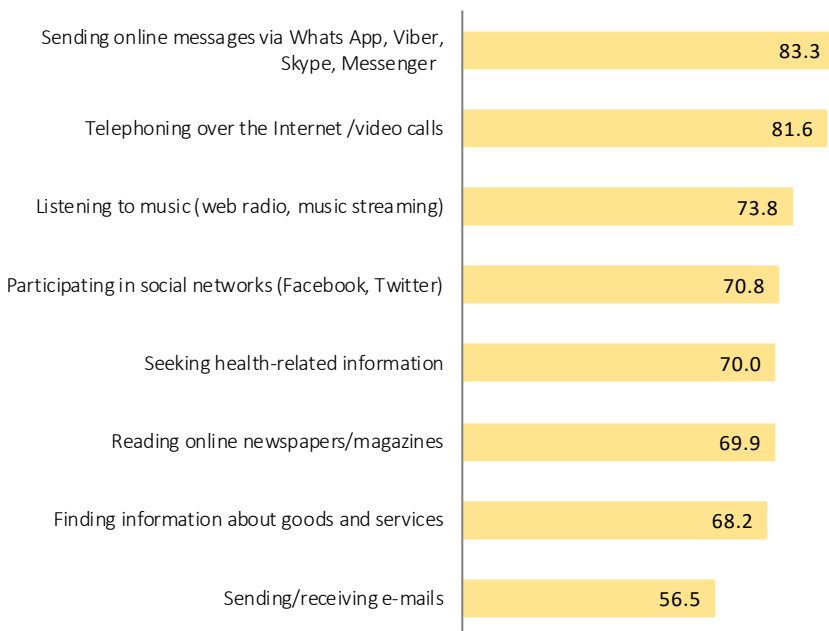
Chart 1.25. Internet use (in the last three months), by sex and age (%)



The analysis of respondents by sex indicate that in the last three months 81.2% of men and 73.7% of women have used the Internet in the last three months.

In the last three months the respondents have used the Internet mostly for sending online messages via *WhatsApp, Viber, Skype, Messenger* (83.3%), as well as for telephoning via the Internet/video-calls (81.6%).

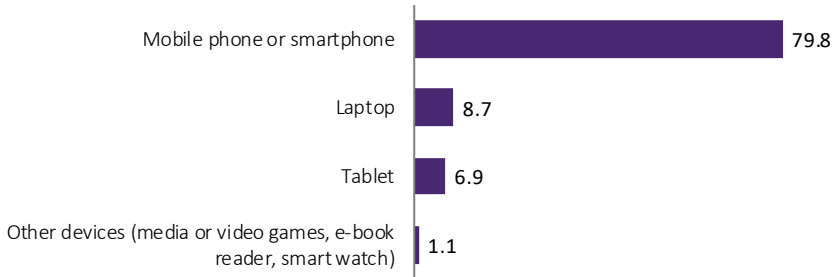
Chart 1.26. Types of Internet use (for private purposes) in the last three months (%)





70.8% of Internet population had an account on social networks
(Facebook, Twitter)

Chart 1.27. Do you use any of the following mobile devices to access the Internet away from home or work? (%)



1.3.7. E-government

The survey indicate that 37.5% of Internet population use the Internet instead of personal contacts or for visiting public institutions or public authorities.



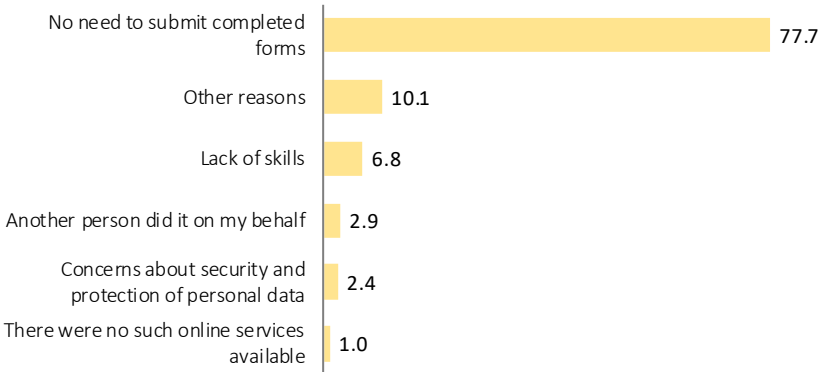
More than 1 550 000 persons use public authorities' electronic services

Chart 1.28. For which of the following public authorities' services did you use the Internet? (%)



The survey indicates that 34.2% of Internet population used the Internet for obtaining information from public authorities' websites, and 21.1% for downloading official forms.

Chart 1.29. Reason for not having submitted completed forms to public authorities over the Internet (%)

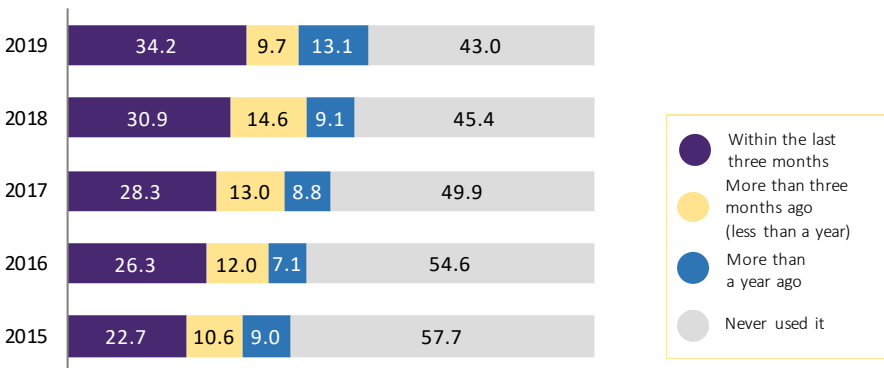


1.3.8. E-commerce

As regard the period when Internet users have bought/ordered goods or services via the Internet, 34.2% of users have bought/ordered goods/services in the last three months, 9.7% did it more than three months ago, and 13.1% more than a year ago.

43.0% of Internet users have never bought/ordered goods or services over the Internet.

Chart 1.30. When did you last (for private purposes) buy/order goods or services over the Internet? (%)

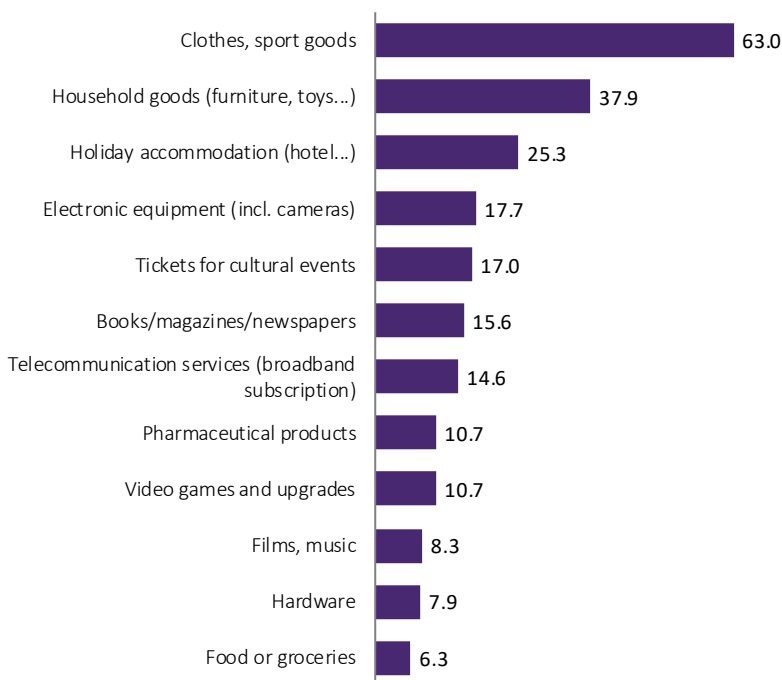




More than **1 820 000** persons have bought or delivered goods/services over the Internet in the last twelve months

When compared to 2018, the number of persons who bought or ordered goods/services over the Internet increased by some 20 000.

Chart 1.31. Which of the following goods or services have you ordered (for private services) over the Internet in the last twelve months? (%)



The largest number of users buy/order clothes and sports goods over the Internet (63.0%) and household goods (37.9%).

Chart 1.32. How often have you bought/ordered goods or services over the Internet for private purposes in the last three months? (%)

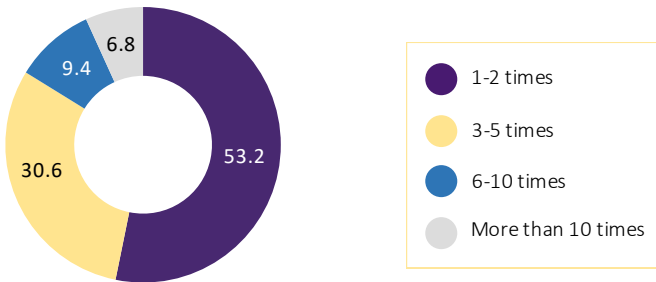
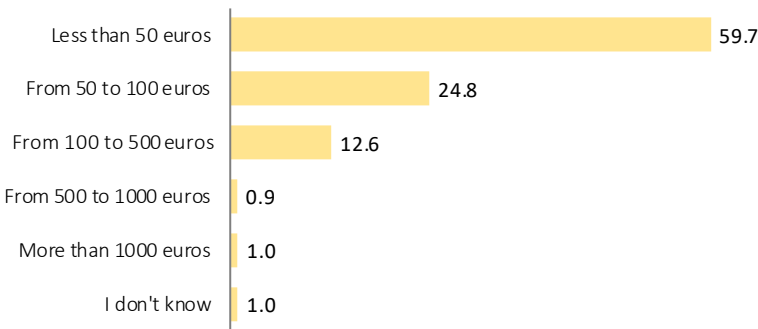


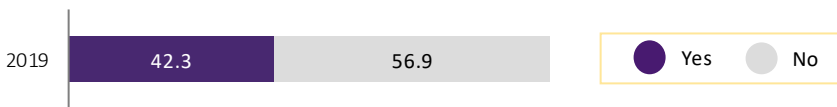
Chart 1.33. How much have you spent when buying/ordering goods or services over the Internet for private purposes in the last three months? (%)



1.3.9. Trust, security and privacy

The survey indicates that 42.3% of the Internet population makes back-up copies on an external storage device or cloud services.

Chart 1.34. Do you make back-up copies of your files on an external storage device or cloud services? (%)



TABULAR PRESENTATION



1.4. Survey results

MODULE 1.A: Access to information and communication technologies

%

Answer (households)	Income			Region				Type of household		Total
	Up to 300 euros	300 - 600 euros	More than 600 euros	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	Urban	Other	

A1_N: Devices available in households (tick all that apply)

Desktop computer (PC)	54.0	80.2	94.3	85.4	72.8	66.7	66.3	79.5	62.1	73.1
Laptop	31.2	52.3	74.8	64.8	44.8	42.9	43.3	54.9	38.9	49.0
TV	98.3	97.8	98.1	96.1	98.5	99.0	98.0	97.3	99.1	97.9
Mobile phone	87.1	97.3	99.4	97.7	92.8	92.9	91.1	95.0	91.4	93.7

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

Yes	64.2	86.5	97.3	89.7	81.6	75.6	72.2	85.8	70.5	80.1
No	34.8	12.7	2.7	10.1	17.7	23.8	27.0	13.7	28.8	19.3

A2: Type of Internet connection (tick all that apply)¹⁾

DSL (ADSL)	45.4	44.8	44.8	28.5	52.3	50.8	50.0	40.2	54.4	44.9
Cable Internet	43.7	47.0	50.4	62.9	42.7	38.1	40.5	52.7	34.6	46.8
Mobile phone (tablet, USB) via 3G network	61.9	69.9	82.7	75.9	68.3	72.9	65.9	72.7	67.8	71.1
Dial-up access over telephone (ISDN)	0.7	0.6	0.3	0.8	0.5	1.2	0.4	0.5	1.2	0.7
Mobile phone (via GPRS)	4.5	5.3	4.0	4.3	4.7	4.9	3.0	3.5	6.0	4.3

¹⁾ Data refer to households that in question A1 said "Yes".

MODULE 1.A: Access to information and communication technologies

%

Answer (households)	Income			Region				Type of household		Total
	Up to 300 euros	300 - 600 euros	More than 600 euros	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	Urban	Other	

A3: What are the reasons for not having access to the Internet at home (tick all that apply)²⁾

Have access to the Internet elsewhere	1.9	3.9	13.3	0.0	3.9	2.0	3.1	1.9	3.1	2.5
Don't need the Internet	75.7	73.7	71.7	75.4	83.6	72.6	73.8	78.4	74.4	76.2
Equipment costs too high	22.1	11.2	32.4	11.9	20.6	22.7	22.4	19.4	21.6	20.6
Access costs too high	20.0	11.2	41.7	6.6	13.9	23.1	22.1	16.4	19.7	18.2
Lack of skills	11.2	17.8	13.3	7.2	8.9	16.4	13.7	13.2	11.9	12.5
Privacy or security concerns	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.4	0.0	0.2
Broadband Internet is not available	2.7	3.2	0.0	2.4	0.7	2.2	4.2	0.7	3.8	2.4
None of the above, other reasons	6.7	5.2	4.6	11.8	3.0	6.4	6.1	6.5	5.9	6.2

²⁾ Data refer to households that in question A1 said "No".

MODULE B_N: Use of computers

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

B1_N: When did you last

Within the last three months	97.9	93.5	93.3	71.8	53.4	25.2	75.6	68.3
More than three months ago (less than a year)	1.3	0.0	0.0	2.9	3.3	0.5	1.9	0.8
More than a year ago	0.4	0.5	1.9	7.9	9.7	8.3	5.7	4.4
Never used it	0.4	6.0	4.7	17.4	33.6	66.0	16.8	26.5

B2_N: How often, on average, have you used

Every day or almost every day	91.0	85.4	83.9	79.9	78.8	76.2	85.7	81.4
At least once a week	4.1	9.8	11.2	14.8	15.7	15.7	10.1	12.4
At least once a month	4.0	4.3	2.8	4.3	4.9	5.0	3.2	4.9
Less than once a month	0.9	0.5	2.1	1.0	0.6	3.0	1.0	1.4

¹⁾ Data refer to individuals who in question B1_N said "Within the last three months" .

Education			Employment situation				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employee	Unemployed	Student	Other		

use a computer?

45.9	80.1	92.9	90.3	77.1	100.0	45.3	71.9	Within the last three months
1.4	1.8	0.2	1.0	2.0	0.0	1.5	1.4	More than three months ago (less than a year)
4.4	6.2	2.6	2.8	3.5	0.0	9.0	5.0	More than a year ago
48.3	11.9	4.3	5.9	17.4	0.0	44.1	21.7	Never used it

a computer in the last three months?¹⁾

79.7	82.3	90.4	84.2	83.9	94.7	79.4	83.6	Every day or almost every day
14.2	12.0	6.7	11.0	11.7	2.5	13.2	11.2	At least once a week
4.7	4.5	2.0	3.8	3.6	1.2	5.6	4.0	At least once a month
1.4	1.2	1.0	1.0	0.9	1.7	1.8	1.2	Less than once a month

MODULE B: Use of the Internet

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

B1: When did you last

Within the last three months	97.4	96.3	95.2	83.2	63.9	30.1	81.2	73.7
More than three months ago (less than a year)	0.7	1.2	0.3	0.6	2.8	0.7	1.3	1.0
More than a year ago	0.8	0.0	1.9	1.7	3.6	4.3	2.2	2.0
Never used it	1.1	2.5	2.5	14.4	29.6	64.9	15.3	23.3

B2: How often, on average, have you

Every day or almost every day	98.2	97.0	96.5	88.7	87.4	84.8	94.0	92.4
At least once a week	1.2	1.8	1.6	9.1	9.7	9.9	4.7	4.9
Less than once a month	0.6	0.6	0.8	2.3	2.7	4.4	1.2	1.8
Less than once a month	0.0	0.5	1.1	0.0	0.3	1.0	0.1	0.9

B2.1: Did you use the Internet

Yes	98.8	97.7	94.1	94.0	86.0	86.1	94.5	93.5
No	1.2	2.3	5.9	6.0	14.0	13.9	5.5	6.5

B3: Have you used one of the following mobile devices to access the Internet

Mobile phone or smartphone	93.0	89.7	85.3	75.4	60.5	55.8	81.7	77.8
Laptop	14.0	7.3	9.0	9.0	6.0	4.7	8.6	8.8
Tablet	7.9	7.1	8.0	7.1	4.7	4.3	7.3	6.4
Other devices (media or video games, e-book reader, smart watch)	2.5	1.7	0.9	0.4	0.4	0.8	1.5	0.8
Don't have access to the Internet via any mobile devices away from home or work	6.4	10.1	14.5	24.3	38.4	43.1	17.8	21.7

¹⁾ Data refer to individuals who in question B1 said "Within the last three months".

²⁾ Data refer to individuals who in question B2 said "Every day or almost every day".

Education			Employment situation				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employee	Unemployed	Student	Other		

use the Internet?

52.3	86.5	94.6	93.3	83.4	100.0	53.6	77.4	Within the last three months
1.5	1.2	0.3	0.4	1.7	0.0	1.6	1.1	More than three months ago (less than a year)
2.0	2.5	1.1	1.5	1.7	0.0	3.3	2.1	More than a year ago
44.2	9.9	4.0	4.8	13.2	0.0	41.5	19.4	Never used it

used the Internet in the last three months? ¹⁾

89.9	92.8	97.7	95.2	94.8	98.8	86.8	93.3	Every day or almost every day
7.5	5.0	1.5	3.8	2.9	1.2	9.4	4.8	At least once a week
1.6	1.8	0.5	0.8	1.8	0.0	2.8	1.5	Less than once a month
0.9	0.4	0.3	0.2	0.5	0.0	1.0	0.5	Less than once a month

several times during the day²⁾

91.4	94.0	96.4	95.6	94.5	98.5	89.2	94.0	Yes
8.6	6.0	3.6	4.4	5.5	1.5	10.8	6.0	No

away from home or work in the last three months? (tick all that apply) ¹⁾

71.2	80.7	86.0	88.0	76.3	97.8	64.8	79.8	Mobile phone or smartphone
3.4	6.8	19.0	12.3	4.3	17.8	4.9	8.7	Laptop
2.5	6.4	12.5	10.3	3.5	7.9	4.1	6.9	Tablet
1.2	0.8	1.9	1.1	0.7	2.2	1.4	1.1	Other devices (media or video games, e-book reader, smart watch)
28.4	19.0	12.9	11.6	23.1	0.0	34.9	19.7	Don't have access to the Internet via any mobile devices away from home or work

MODULE B: Use of the Internet

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

B4: Which of the following activities have you performed

Sending/receiving e-mails	55.1	64.8	62.4	58.2	42.7	39.1	56.5	56.4
Telephoning over the Internet/video calls	89.9	89.7	81.9	78.0	72.7	64.8	79.9	83.3
Participating in social networks (<i>Facebook, Twitter</i>)	94.8	82.5	77.9	63.2	43.8	36.5	71.1	70.5
Sending online messages via <i>WhatsApp, Viber, Skype, Messenger</i>	93.7	88.6	85.1	79.4	72.5	71.1	82.4	84.2
Reading online newspapers/magazines	55.2	69.9	71.8	73.7	78.5	66.3	69.0	70.9
Seeking health-related information	58.5	76.4	74.5	72.7	69.7	53.1	62.4	78.1
Finding information about goods and services	57.1	77.4	73.9	69.8	65.9	43.9	68.7	67.6
Posting opinions on civic or political issues via websites	10.2	9.5	8.6	11.8	8.1	4.5	9.6	9.0
Taking part on online consultations or voting to define civic or political issues	4.7	2.2	3.0	4.4	2.3	2.4	3.8	2.5
Looking for a job or sending a job application	13.0	32.5	22.6	17.6	7.1	1.3	19.8	17.2
Uploading self-created content (text, photos, music, videos, software, etc.)	72.9	66.2	43.6	29.5	21.3	12.2	44.3	45.3
Listening to music (web radio, music streaming)	91.1	86.3	80.1	64.3	54.8	42.2	76.3	71.2
Selling goods or services, e.g. via auctions (e.g. eBay)	12.8	17.7	22.2	10.9	11.7	5.5	20.5	9.1
Internet banking	12.8	26.9	29.1	28.6	17.4	10.6	23.9	22.2

B6: Have you used cloud services for storage of files (documents, pictures, music or video files)

Yes	29.6	30.3	27.4	20.9	13.8	9.8	23.7	24.2
No	70.4	69.7	72.6	79.1	86.2	90.2	76.3	75.8

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

Education			Employment situation				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employee	Unemployed	Student	Other		

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

31.1	55.2	85.0	70.1	47.2	76.5	37.1	56.5	Sending/receiving e-mails
78.9	80.9	86.1	84.0	83.3	94.6	72.5	81.6	Telephoning over the Internet/video calls
75.9	70.4	66.8	72.2	74.2	89.8	60.7	70.8	Participating in social networks (<i>Facebook, Twitter</i>)
79.9	83.3	86.4	84.4	84.4	97.4	77.1	83.3	Sending online messages via <i>WhatsApp, Viber, Skype, Messenger</i>
46.5	72.9	84.4	78.3	61.7	72.6	62.7	69.9	Reading online newspapers/magazines
64.0	70.4	75.0	72.2	72.9	83.6	60.1	70.0	Seeking health-related information
59.6	67.7	77.9	77.0	64.2	81.4	53.3	68.2	Finding information about goods and services
7.9	8.0	14.2	9.7	7.5	20.3	8.3	9.3	Posting opinions on civic or political issues via websites
2.6	2.6	5.4	3.3	1.6	8.9	3.7	3.2	Taking part on online consultations or voting to define civic or political issues
16.2	17.5	23.6	18.5	31.4	19.3	4.1	18.5	Looking for a job or sending a job application
55.3	42.0	42.2	43.1	47.4	76.3	38.7	44.8	Uploading self-created content (text, photos, music, videos, software, etc.)
75.3	72.3	76.6	75.5	79.1	96.3	60.4	73.8	Listening to music (web radio, music streaming)
18.0	13.5	16.2	17.3	16.9	12.0	9.3	15.0	Selling goods or services, e.g. via auctions (e.g. eBay)
8.4	20.5	44.4	37.6	9.1	26.9	10.6	23.1	Internet banking

for private purposes in the last three months? (e.g. Google drive, Dropbox, Windows OneDrive, ...)

15.6	23.2	34.1	29.3	21.6	35.3	14.2	23.9	Yes
84.4	76.8	65.9	70.7	78.4	64.7	85.8	76.1	No

MODULE B: Use of the Internet

Answer (in individuals)	Age						Sex	
	16 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	Men	Women

B7: Which of the following learning activities have you carried out over the

Doing an online course	14.0	6.0	6.0	7.2	3.4	1.0	5.9	7.7
Finding online learning material (audio-visual materials, online learning software, electronic textbooks...)	57.8	36.6	39.1	30.6	19.5	19.1	35.5	35.7
Communicating with instructors or students using websites or portals	14.5	8.7	6.0	5.4	1.7	0.6	5.5	8.1
Other	41.2	62.0	59.9	68.2	78.8	80.4	63.7	62.7

B8: Have you used any website or application to book an accommodation

Yes, intermediary websites or applications dedicated to booking accommodation (e.g. <i>Airbnb</i> or other)	11.5	18.1	16.9	14.8	8.7	6.1	13.9	14.0
Yes, other websites or applications (including social networks)	5.4	7.3	5.9	7.6	6.0	3.5	6.8	5.8
No, I have not	83.5	75.9	78.5	78.7	85.5	90.4	80.4	80.9

B9: Have you used any website or application to arrange transport

Yes, dedicated website or application	8.7	13.0	5.0	8.8	5.9	6.5	8.1	8.3
Yes, other websites and applications (including social networks)	2.2	3.6	3.2	2.7	2.2	1.2	2.2	3.4
No I have not	89.2	84.1	92.1	89.5	92.0	92.4	90.2	88.7

B10: Have you performed paid work using an intermediary website *Amazon Mechanical Turk*)

Yes	2.6	4.0	4.1	4.1	0.9	0.3	3.0	3.2
No	97.4	96.0	95.9	95.9	99.1	99.7	97.0	96.8

B10.1: Could you please specify

The main source of income	24.1	48.8	34.6	45.7	0.0	0.0	37.4	38.7
An additional source of income	75.9	51.2	65.4	54.3	100.0	100.0	62.6	61.3

¹⁾ Data refer to individuals who in question B1 said "Within the last three months."

³⁾ Data refer to individuals who in question B1 said "Within the last three months" or "More than three months ago (less than a year)."

Education			Employment situation				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employee	Unemployed	Student	Other		

Internet for educational, private or professional purposes in the last three months? ¹⁾

4.4	5.3	12.9	8.0	4.2	18.3	4.9	6.7	Doing an online course
23.8	34.6	49.9	39.0	33.0	68.2	25.5	35.6	Finding online learning material (audio-visual materials, online learning software, electronic textbooks...)
3.4	5.8	12.8	7.8	3.2	32.0	3.7	6.8	Communicating with instructors or students using websites or portals
77.1	63.6	48.6	59.0	66.8	31.2	73.6	63.2	Other

(room, apartment, holiday cottage)? (tick all that apply) ³⁾

1.7	11.3	33.2	22.2	6.0	24.5	5.2	14.0	Yes, intermediary websites or applications dedicated to booking accommodation (e.g. <i>Airbnb</i> or other)
2.8	6.4	9.4	6.7	6.3	12.1	4.4	6.4	Yes, other websites or applications (including social networks)
95.5	82.7	60.1	72.6	88.1	63.4	90.7	80.6	No, I have not

(by car...) in the last 12 months? ³⁾ (tick all that apply)

5.2	5.9	17.4	9.1	7.8	25.0	3.7	8.2	Yes, dedicated website or application
0.6	2.5	5.7	3.6	2.8	1.9	1.4	2.8	Yes, other websites and applications (including social networks)
94.2	91.8	78.4	88.0	89.6	73.5	95.5	89.5	No I have not

or application (e.g. *Upwork*, *TaskRabbit*, *Freelancer*), in the last 12 months? ³⁾

1.3	2.4	6.7	4.2	2.4	7.2	1.0	3.1	Yes
98.7	97.6	93.3	95.8	97.6	92.8	99.0	96.9	No

if the income of this work is:

100.0	45.5	18.3	27.1	56.8	57.4	47.7	38.1	The main source of income
0.0	54.5	81.7	72.9	43.2	42.6	52.3	61.9	An additional source of income

MODLUE C: Use of e-government

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

C1: In the last 12 months, have you used public authorities' or public services

Obtaining information from websites or applications	29.6	38.6	35.2	41.0	27.8	22.8	34.2	34.1
Downloading/printing official forms	16.7	23.0	24.2	26.3	16.2	12.4	23.3	18.8
Sending completed forms online	12.5	15.6	20.0	21.7	13.0	9.4	18.1	14.7

C2: What were the reasons for not submitting completed forms

No need to submit completed forms	79.4	84.3	83.8	76.2	66.7	64.6	80.4	74.9
There were no such online services available	0.6	0.5	1.2	1.5	1.3	0.5	0.8	1.1
Lack of skills	3.3	3.2	4.0	10.5	9.8	19.1	4.5	9.2
Concerns about security and protection of personal data	0.4	4.0	2.0	1.9	3.5	1.3	2.1	2.6
Another person did it on my behalf	6.7	1.0	0.3	2.4	4.6	5.0	3.1	2.7
Other reasons	10.0	7.3	9.2	8.0	16.9	11.0	9.5	10.8

¹⁾ Data refer to individuals who in question C1 said "Within the last three months" or "More than three months ago (less than a year)".

²⁾ Data refer to individuals who in question C1 did not said "Submittine completed forms".

Education			Employment situation				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employee	Unemployed	Student	Other		

over the Internet, for private purposes, for the following activities?¹⁾ (tick all that apply)

19.1	32.3	54.6	42.9	24.0	43.8	27.4	34.2	Obtaining information from websites or applications
8.8	18.4	41.4	30.8	10.9	37.4	11.6	21.1	Downloading/printing official forms
7.3	14.1	32.3	23.6	9.6	26.0	9.1	16.5	Sending completed forms online

to public authorities over the Internet, for private purposes in the last 12 months?²⁾

73.9	79.0	78.2	81.8	77.4	77.2	71.8	77.7	No need to submit completed forms
0.0	0.7	3.2	1.3	1.3	0.0	0.3	1.0	There were no such online services available
10.3	6.7	2.5	3.5	5.7	4.3	13.5	6.8	Lack of skills
0.0	3.1	3.1	3.4	2.2	1.6	1.1	2.4	Concerns about security and protection of personal data
3.5	2.6	2.9	1.9	1.9	3.8	5.3	2.9	Another person did it on my behalf
12.7	8.7	11.8	9.1	12.3	13.1	9.0	10.1	Other reasons

MODULE D: E-commerce¹⁾

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

D1: When did you last buy or order goods or services

Within the last three months	38.3	42.9	38.1	34.1	21.8	12.8	34.7	33.7
More than three months ago (less than a year)	12.6	9.1	11.9	11.1	5.6	3.4	9.1	10.4
More than a year ago	14.1	16.8	16.1	12.7	6.1	7.2	14.9	11.2
Never used it	35.0	31.2	33.9	42.1	66.5	76.6	41.3	44.8

D2: What types of goods or services have you bought or ordered

Food or groceries	15.8	5.8	2.9	4.5	3.0	5.8	7.5	5.0
Household goods (furniture, toys...)	25.9	39.8	38.2	39.0	50.8	40.7	44.0	31.4
Pharmaceutical products	10.5	12.4	7.6	10.4	14.4	13.8	7.9	13.6
Clothes, sport goods	66.5	76.3	63.7	52.6	49.7	30.5	54.7	71.8
Hardware	3.8	11.8	6.6	8.5	8.6	6.5	12.9	2.7
Electronic equipment (including cameras)	15.5	18.1	14.9	20.0	21.1	28.3	25.4	9.5
Telecommunication services (broadband subscription...)	15.7	13.9	17.9	12.7	8.6	19.0	17.4	11.6
Holiday accommodation (hotel...)	17.8	31.9	23.7	29.0	21.6	15.8	26.2	24.3
Other travel arrangements (transport tickets, car hire...)	11.4	26.6	12.0	19.0	20.1	12.3	18.1	17.2
Tickets for cultural events	14.1	27.6	14.9	12.3	12.4	9.2	18.2	15.8
Films, music	12.1	12.3	4.2	7.7	4.6	2.1	9.6	6.8
Books/magazines/newspapers	16.4	14.5	13.4	19.7	16.2	7.9	13.9	17.4
E-learning materials	3.5	4.1	1.1	4.2	3.2	1.3	4.5	1.5
Video games and upgrades	23.1	12.1	7.8	5.8	3.7	2.7	14.1	7.1
Other	15.3	13.6	23.4	30.0	13.5	31.9	26.0	13.5

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

²⁾ Data refer to individuals who in question D1 said "Within the last three months" or "More than three months ago (less than a year)".

Education			Employment situation				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employee	Unemployed	Student	Other		

over the Internet for private purposes?

23.5	35.1	42.5	42.1	33.0	41.9	19.6	34.2	Within the last three months
8.0	9.8	11.3	10.2	10.1	12.8	7.9	9.7	More than three months ago (less than a year)
11.3	14.5	11.0	12.6	13.9	20.9	11.6	13.1	More than a year ago
57.1	40.7	35.2	35.1	42.9	24.4	60.9	43.0	Never used it

over the Internet in the last 12 months, for private purposes? (tick all that apply)²⁾

8.3	5.0	8.0	5.9	2.6	11.1	12.2	6.3	Food or groceries
49.2	36.4	34.7	38.3	35.4	29.0	44.2	37.9	Household goods (furniture, toys...)
5.4	10.5	14.1	11.3	9.6	7.2	11.7	10.7	Pharmaceutical products
76.5	59.3	63.6	61.2	70.2	64.7	56.2	63.0	Clothes, sport goods
10.4	6.0	11.1	8.2	11.1	0.0	4.9	7.9	Hardware
11.2	17.4	22.2	18.4	16.2	21.5	16.3	17.7	Electronic equipment (including cameras)
20.5	11.8	17.7	17.0	8.7	22.4	13.4	14.6	Telecommunication services (broadband subscription...)
5.7	20.3	48.5	33.8	14.2	42.2	8.2	25.3	Holiday accommodation (hotel...)
15.3	12.2	31.7	19.0	16.9	32.0	9.0	17.7	Other travel arrangements (transport tickets, car hire...)
6.6	14.0	30.3	22.8	2.9	37.4	13.5	17.0	Tickets for cultural events
9.0	5.3	14.8	7.8	7.0	19.2	8.0	8.3	Films, music
14.9	11.3	25.9	17.7	9.6	6.9	22.1	15.6	Books/magazines/newspapers
0.0	2.5	6.3	3.8	1.8	7.1	1.2	3.1	E-learning materials
13.5	9.0	12.9	10.4	5.7	19.1	17.1	10.7	Video games and upgrades
10.5	24.3	15.5	21.3	19.9	12.1	18.4	20.0	Other

MODULE D: E-commerce¹⁾

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

D3: Were any of the following products that you bought or ordered over the Internet, for private purposes,

Film, music	34.9	24.3	6.7	20.7	11.5	19.6	24.6	18.2
E-books	8.6	17.7	28.8	23.1	22.0	55.2	23.8	14.3
E-magazines/e-newspapers	15.5	11.5	5.1	19.7	16.5	19.6	12.2	14.8
Computer software	21.2	20.2	28.4	9.4	18.1	12.7	28.1	9.1
None of the above	41.4	59.0	58.2	47.4	60.1	25.0	42.7	63.4

D4: From whom have you bought/ordered goods or services

National sellers	74.0	79.4	86.1	87.6	90.0	85.3	82.4	83.5
Sellers from EU countries	14.4	19.6	12.5	9.0	7.7	6.2	13.0	13.6
Sellers from the rest of the world	20.7	22.8	18.1	19.3	17.7	16.7	21.7	18.0
Country of origin of sellers is unknown	4.3	2.2	0.5	1.9	0.9	1.6	1.9	1.9

D5: How many times have you bought/ordered goods or services

1-2 times	56.4	56.7	45.1	54.4	56.6	52.8	56.1	50.0
3-5 times	28.6	26.7	33.4	34.6	28.1	38.2	27.5	34.0
6-10 times	8.2	10.4	11.7	7.5	7.8	5.8	8.7	10.3
More than 10 times	6.7	6.1	9.8	3.5	7.6	3.3	7.8	5.7

D6: How much have you spent buying/ordering goods or services

Less than 50 euros	71.4	57.7	55.8	60.8	55.3	48.3	52.9	67.1
Up to 50 to 100 euros	19.5	22.6	31.7	24.1	21.3	37.8	28.0	21.4
Up to 100 to 500 eurost	8.6	17.1	7.5	12.4	20.8	12.2	15.3	9.6
Up to 500 to 1000 euros	0.0	0.6	1.7	0.3	1.9	0.0	1.3	0.4
More than 1000 euros	0.0	1.9	0.0	2.0	0.7	1.7	1.1	0.9
Don't know	0.5	0.0	3.3	0.5	0.0	0.0	1.4	0.6

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

²⁾ Data refer to individuals who in question D1 said "Within the last three months" or "More than three months ago (less than a year)".

³⁾ Data refer to individuals who in question D1 said "Within the last three months" (less than a year)".

Education			Employment situation				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employee	Unemployed	Student	Other		

downloaded from a website or applications in the last three months? (tick all that apply)²⁾

34.4	17.3	21.9	17.1	19.2	50.6	23.8	21.7	Film, music
0.0	17.8	29.2	31.0	7.1	2.1	7.8	19.5	E-books
10.6	8.8	20.1	15.8	12.0	2.1	13.3	13.4	E-magazines/e-newspapers
6.9	23.5	19.5	25.6	10.4	15.2	13.6	19.5	Computer software
48.1	54.5	50.9	50.3	63.3	36.3	53.0	52.1	None of the above

over the internet, for private use, in the last 12 months? (tick all that apply)²⁾

92.1	82.2	79.3	80.2	89.7	68.8	86.3	82.9	National sellers
7.0	11.8	20.5	16.6	5.1	27.3	10.4	13.3	Sellers from EU countries
5.3	19.7	29.1	23.7	11.8	37.2	14.0	19.9	Sellers from the rest of the world
1.6	1.9	2.1	2.1	1.1	2.2	2.8	1.9	Country of origin of sellers is unknown

over the Internet for private purposes in the last three months³⁾

46.8	57.5	46.8	51.4	50.5	80.7	53.9	53.2	1-2 times
26.4	29.3	35.9	33.4	30.6	8.9	28.6	30.6	3-5 times
16.1	7.7	9.7	6.3	16.3	3.6	11.6	9.4	6-10 times
10.7	5.5	7.6	8.9	2.6	6.8	6.0	6.8	More than 10 times

over the Internet for private purposes in the last three months³⁾

77.9	57.9	53.7	56.5	61.3	84.7	58.9	59.7	Less than 50 euros
8.2	28.0	26.8	26.8	22.8	7.8	28.1	24.8	Up to 50 to 100 euros
14.0	11.2	15.2	13.9	12.7	7.5	9.6	12.6	Up to 100 to 500 euros
0.0	0.8	1.4	0.7	0.6	0.0	2.5	0.9	Up to 500 to 1000 euros
0.0	1.2	1.1	0.5	2.3	0.0	0.8	1.0	More than 1000 euros
0.0	0.9	1.9	1.7	0.3	0.0	0.0	1.0	Don't know

MODULE D: E-commerce¹⁾

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

D7: Which of the following problems have you encountered when buying/ordering

Technical failure of website during ordering or payment	0.0	1.6	1.0	0.4	2.0	0.0	1.1	0.7
Difficulties in finding information concerning guarantees	0.0	0.0	1.3	0.6	0.6	0.0	0.5	0.5
Speed delivery slower than indicated	14.0	18.1	4.1	5.4	8.1	2.1	10.9	9.0
Final costs higher than indicated	1.5	2.8	2.0	1.7	2.5	0.0	1.4	2.8
Wrong or damaged goods/services delivered	6.5	9.6	4.0	3.5	6.8	8.1	5.3	7.0
Problems with fraud (e.g. no goods/services received at all, misuse of credit details, etc.)	0.4	1.5	2.4	0.7	2.7	1.0	0.6	2.4
Complaints and redress were difficult or no satisfactory after complaints	0.7	1.4	1.5	1.2	1.1	0.0	0.5	1.9
Foreign retailer does not sell to the Republic of Serbia	0.0	0.4	0.0	0.3	0.7	0.0	0.0	0.4
Other	0.0	0.4	4.1	0.9	1.4	1.5	1.2	1.8
I have not encountered any problem	79.0	71.7	87.3	89.4	82.4	89.6	82.8	81.0

D8: Have you carried out any of the following financial activities over

Buying/renewing insurance policies	0.2	3.2	2.4	1.9	0.7	0.2	1.4	2.0
Taking a loan, mortgage or credit from banks or other financial institutions	0.0	0.2	0.2	0.0	0.6	0.1	0.1	0.2
Buying or selling shares, bonds, funds or other investments services	0.0	0.9	0.3	0.0	0.0	0.1	0.4	0.1
None of the above	99.8	95.9	97.2	98.1	99.0	99.7	98.1	97.8

¹⁾ Data refer to individuals who in question D1 said "Within the last three months" or "More than three months ago (less than a year)".

²⁾ Data refer to individuals who in question D1 said "Within the last three months" or "More than three months ago (less than a year)".

Education			Employment situation				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employee	Unemployed	Student	Other		

over the Internet in the last 12 months? (tick all that apply)³⁾

0.0	1.0	1.4	1.4	0.2	0.0	0.8	0.9	Technical failure of website during ordering or payment
0.0	0.7	0.4	0.7	0.3	0.0	0.4	0.5	Difficulties in finding information concerning guarantees
12.7	10.5	7.0	7.9	11.0	28.2	8.1	10.0	Speed delivery slower than indicated
0.0	1.8	4.0	2.4	2.8	0.0	0.6	2.1	Final costs higher than indicated
3.7	7.6	4.1	6.5	3.8	5.2	9.1	6.1	Wrong or damaged goods/services delivered
0.0	1.8	1.5	2.1	0.5	1.1	1.1	1.5	Problems with fraud (e.g. no goods/services received at all, misuse of credit details, etc.)
0.0	1.5	1.3	1.7	0.7	0.0	0.7	1.2	Complaints and redress were difficult or no satisfactory after complaints
0.0	0.0	0.8	0.3	0.0	0.0	0.2	0.2	Foreign retailer does not sell to the Republic of Serbia
3.0	0.8	2.3	1.8	0.6	0.0	2.9	1.5	Other
80.6	81.7	83.3	83.6	82.5	67.7	80.4	81.9	I have not encountered any problem

Internet (excluding e-mails) for private purposes in the last 12 months?⁴⁾

0.0	1.4	4.3	3.2	0.4	3.1	0.2	1.7	Buying/renewing insurance policies
0.0	0.1	0.6	0.3	0.0	0.0	0.2	0.2	Taking a loan, mortgage or credit from banks or other financial institutions
0.0	0.3	0.3	0.4	0.2	0.0	0.0	0.3	Buying or selling shares, bonds, funds or other investments services
100.0	98.2	95.1	96.2	99.4	96.9	99.7	97.9	None of the above

MODULE D: E-commerce¹⁾

Answer (individuals)	Age						Sex	
	16 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	Men	Women
D9: What are the reasons for not buying/ordering any goods or services for private use,								
Prefer to shop in person, like to see the product, loyalty to shops, force of habit	59.0	68.6	72.5	67.4	70.1	66.3	63.4	72.8
Lack of skills (do not know to use website or use was too complicated)	5.3	7.3	11.4	13.5	14.1	24.9	10.2	14.0
Delivery of goods ordered over the Internet is a problem	2.6	9.7	6.3	5.5	3.7	2.5	5.5	5.2
Payment security or privacy concerns (e.g. giving credit cards details or personal information)	11.2	9.6	15.5	12.8	14.2	13.6	10.7	15.3
Concerns about receiving or returning goods, complaint / redress concerns	11.2	16.9	15.7	13.7	14.0	14.7	12.5	16.6
Don't have a payment card allowing to pay over the Internet	12.7	10.8	19.2	9.2	8.1	8.4	11.3	12.1
Foreign retailer did not sell to the Republic of Serbia	1.7	0.0	0.0	0.7	0.2	0.0	0.6	0.1
Someone else did it on my behalf	6.1	1.0	5.6	6.2	7.1	5.4	4.8	5.8
Other	12.2	16.4	15.0	21.5	12.1	17.3	22.2	8.6

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

³⁾ Data refer to individuals who in question D1 said "Within the last three months".

⁴⁾ Data refer to individuals who in question B1 said "Within the last three months".

Education			Employment situation				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employee	Unemployed	Student	Other		
58.6	70.7	72.8	73.0	66.2	52.6	65.3	68.0	Prefer to shop in person, like to see the product, loyalty to shops, force of habit
18.6	10.6	7.0	9.1	8.5	2.7	19.7	12.0	Lack of skills (do not know to use website or use was too complicated)
3.0	6.3	5.9	4.3	8.1	6.3	4.2	5.4	Delivery of goods ordered over the Internet is a problem
8.3	13.7	17.0	10.7	16.1	10.3	13.2	12.9	Payment security or privacy concerns (e.g. giving credit cards details or personal information)
10.5	15.5	17.0	13.6	15.7	15.9	14.4	14.5	Concerns about receiving or returning goods, complaint / redress concerns
14.4	11.3	8.9	9.9	15.6	10.0	10.7	11.7	Don't have a payment card allowing to pay over the Internet
0.0	0.4	1.0	0.5	0.8	0.0	0.0	0.4	Foreign retailer did not sell to the Republic of Serbia
2.9	6.0	6.5	5.1	4.3	7.0	6.0	5.3	Someone else did it on my behalf
20.0	14.2	13.8	13.4	18.1	27.4	14.7	15.6	Other

MODULE E: E-SKILLS¹⁾

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

E1: Which of the following activities have you carried out with a computer

Transferring files between computers or other devices	83.4	74.3	62.5	39.1	24.4	19.0	57.5	52.3
Installing software or applications	69.4	60.7	49.7	33.3	21.2	13.6	50.2	39.7
Changing the settings of any software, including operating system or security programs (antivirus)	60.2	52.8	40.1	30.5	19.4	15.3	43.9	34.2
None of the above	9.7	20.6	24.1	53.7	65.9	74.8	32.6	40.8

E2: Which of the following IT related activities

Copying or moving files or folders	86.3	81.7	88.3	71.5	44.5	50.1	74.5	73.5
Using word processing software (<i>Word</i>)	74.7	56.4	67.4	49.3	32.3	18.7	54.4	53.8
Creating presentations or documents integrating text, pictures, tables or charts	63.2	39.8	34.9	28.5	14.6	8.5	34.3	34.0
Using spread sheet software	45.3	37.7	36.9	29.0	20.6	8.5	34.4	30.5
Using software to edit photos, video or audio files	39.3	27.8	22.9	17.9	9.5	6.4	23.0	21.7
Writing code in a programming language	13.0	5.1	5.3	5.4	2.2	1.6	7.1	4.2
None of the above	6.7	8.5	3.4	16.4	52.4	44.0	17.4	18.4

¹⁾ Data refer to individuals who in question B1 said " More than a year ago" or "Never used it"

Education			Employment situation				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employee	Unemployed	Student	Other		

or a mobile phone in the last 12 months? (tick all that apply)

44.5	54.9	65.6	61.1	55.4	76.9	39.1	55.0	Transferring files between computers or other devices
38.0	44.5	54.0	51.0	44.7	62.8	31.6	45.1	Installing software or applications
26.4	39.2	52.1	47.3	31.2	65.8	27.9	39.2	Changing the settings of any software, including operating system or security programs (antivirus)
47.6	35.5	28.4	28.8	35.9	13.1	56.0	36.5	None of the above

have you carried out in the last 12 months?

59.0	76.8	81.6	81.9	73.1	93.4	57.0	74.0	Copying or moving files or folders
33.0	53.0	78.7	65.1	46.6	87.4	35.8	54.1	Using word processing software (<i>Word</i>)
23.9	30.9	53.7	40.3	27.0	73.1	23.3	34.2	Creating presentations or documents integrating text, pictures, tables or charts
21.4	28.7	54.3	42.7	22.1	48.5	22.1	32.5	Using spread sheet software
15.8	20.4	34.3	26.2	16.9	47.4	16.4	22.3	Using software to edit photos, video or audio files
4.7	4.5	10.1	7.1	3.8	12.1	4.0	5.7	Writing code in a programming language
31.4	15.8	10.1	9.5	18.6	0.0	35.8	17.9	None of the above

MODULE F: Trust, security and privacy¹⁾

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

F1: Have you experienced any of the following security related

Fraudulent credit or debit card use	0.1	0.4	0.7	0.2	0.1	0.3	0.2	0.4
Loss of documents, pictures or other data due to a virus or other infection	2.2	0.9	2.1	0.9	2.7	1.0	1.4	2.0
Misuse of your personal information available on the Internet resulting from e.g. discrimination, harassment, bullying	0.0	0.0	0.9	0.2	0.2	0.6	0.3	0.3
Your social network or e-mail account being hacked and content being posted or sent without your knowledge	3.5	7.5	3.1	3.2	2.1	0.1	3.9	3.6
Online identity theft (somebody stealing your personal data and impersonating you, e.g. shipping under you name)	0.0	0.0	0.3	1.0	1.7	0.0	0.6	0.4
Receiving fraudulent messages (phishing)	5.8	9.2	9.5	8.1	7.8	6.0	9.8	6.3
Getting redirected to fake websites asking for personal information (pharming)	5.3	7.8	8.8	7.3	5.4	4.6	8.6	5.2
Children accessing inappropriate websites	0.0	0.3	0.8	0.7	0.3	0.0	0.6	0.2
None of the above	88.2	82.6	82.7	84.7	85.3	90.4	82.2	87.5

F2: Have you experienced financial loss, in the last 12 months, resulting from identity

Yes	0.0	1.8	5.1	12.7	8.7	13.9	8.3	3.3
No	100.0	98.2	94.9	87.3	91.3	86.1	91.7	96.7

¹⁾ Data refer to individuals who in question B1 said "More than a year ago" or "Never used it"

²⁾ Data refer to individuals who in question F1e), f) or g) said "Yes".

Education			Employment situation				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employee	Unemployed	Student	Other		

problems through using the Internet for private purposes in the last 12 months

0.0	0.2	1.0	0.7	0.0	0.4	0.1	0.3	Fraudulent credit or debit card use
2.5	1.3	1.9	1.5	1.1	1.2	2.8	1.7	Loss of documents, pictures or other data due to a virus or other infection
0.0	0.4	0.3	0.2	0.7	0.0	0.2	0.3	Misuse of your personal information available on the Internet resulting from e.g. discrimination, harassment, bullying
4.2	3.7	3.4	3.9	3.4	6.2	3.3	3.8	Your social network or e-mail account being hacked and content being posted or sent without your knowledge
0.7	0.4	0.6	0.6	0.7	0.0	0.2	0.5	Online identity theft (somebody stealing your personal data and impersonating you, e.g. shipping under your name)
4.8	8.0	11.8	10.9	6.4	5.6	5.5	8.1	Receiving fraudulent messages (phishing)
4.2	6.4	11.2	9.2	4.8	5.6	5.5	7.0	Getting redirected to fake websites asking for personal information (pharming)
0.0	0.5	0.5	0.7	0.3	0.0	0.1	0.4	Children accessing inappropriate websites
87.1	85.6	80.1	82.2	86.8	86.8	87.0	84.8	None of the above

theft, receiving fraudulent messages or being redirected to fake websites²⁾

0.0	9.3	4.7	8.5	2.1	0.0	6.6	6.5	Yes
100.0	90.7	95.3	91.5	97.9	100.0	93.4	93.5	No

MODULE F: Trust, security and privacy¹⁾

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

F3: Have security concerns limited or prevented you from doing the following

Ordering or buying goods or services	11.8	15.6	21.7	16.7	21.0	15.7	14.5	20.6
Internet banking	10.5	12.4	23.0	18.0	18.9	14.5	15.8	17.7
Providing personal information to social or professional networking services	12.2	13.8	22.9	15.5	18.7	12.7	16.3	17.0
Communicating with public service or administrations	3.4	4.7	12.0	8.7	9.2	4.3	8.6	6.6
Downloading software or applications, music, video files, games or other data files	3.5	3.3	7.9	6.5	6.2	2.0	4.9	5.8
Using the Internet via a public <i>Wi-Fi</i>	2.3	2.4	5.5	5.0	3.7	1.7	4.2	3.3
Other	79.1	77.5	68.2	76.7	72.9	81.1	77.3	72.4

F4: Do you make back-up copies of your files (documents, pictures, etc.) on any

Yes, automatically or manually	49.5	50.5	46.6	41.1	29.1	18.6	44.6	39.8
No	49.7	49.5	53.1	57.6	69.4	79.8	55.2	58.8
Don't know	0.7	0.0	0.3	1.4	1.5	1.6	0.1	1.4

¹⁾ Data refer to individuals who in question B1 said "More than a year ago" or "Never used it"

Education			Employment situation				Total	Answer (individuals)
Lower than secondary	Secondary	Tertiary	Employee	Unemployed	Student	Other		

activities via the Internet for private purposes in the last 12 months?

14.3	18.2	18.6	19.1	15.9	18.8	15.9	17.5	Ordering or buying goods or services
13.8	17.7	17.2	19.0	14.1	14.4	16.1	16.8	Internet banking
12.3	16.8	20.7	19.6	14.7	14.9	13.7	16.6	Providing personal information to social or professional networking services
7.5	8.3	5.9	9.5	7.5	4.1	5.1	7.6	Communicating with public service or administrations
6.5	4.9	5.5	6.4	5.8	3.8	3.4	5.4	Downloading software or applications, music, video files, games or other data files
2.4	3.9	4.7	5.1	3.7	1.2	1.8	3.8	Using the Internet via a public <i>Wi-Fi</i>
80.9	74.4	70.7	71.6	78.9	69.4	77.9	75.0	Other

external storage device or to Internet storage space (cloud services) for private purposes

22.3	42.0	63.2	53.0	36.5	57.9	26.1	42.3	Yes, automatically or manually
76.8	57.1	36.4	46.6	63.1	42.1	72.0	56.9	No
0.9	0.9	0.3	0.5	0.4	0.0	1.9	0.8	Don't know

QUESTIONNAIRE





Data in this questionnaire are considered official secret and are to be 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	
	b) Laptop (notebook)	
	c) Tablet	
	d) TV	
	d1) Satellite TV	
	d2) Cable TV	
	d3) Digital TV	
	d4) IPTV	
	e) Radio-receiver (including mobile phone, car radio...)	
	e1) Radio-receiver at home	
	e2) Car radio	
	e3) Mobile phone	
	e4) Computer	
	f) Mobile phone	
	g) None of the above	
	→ Go to A1	
A1	Do you or anyone in your household have access to the Internet at home? (on any device)	
	(tick only one)	
	a) Yes	→ Go to A2
	b) No	→ Go to A3
	c) Don't know	→ Go to B1_N
A2	What type of Internet connection do you use at home?	
	(tick all that apply)	
	a) Broadband connection – ADSL (DSL)	
	b) Broadband connection – cable Internet	
	c) Mobile broadband connection (3G network) via a device	
	d) Mobile broadband connection (3G network) via a card (integrated in the computer) or USB key	
	e) Dial-up access over telephone line or ISDN	
	f) Mobile phone narrowband connection (2G or GPRS), using SIM card or USB modem	
	→ Go to B1_N	

A3	What are the reasons for not having access to the Internet at home?		
(tick all that apply)			
a)	Have access to the Internet elsewhere		
b)	Don't need the Internet		
c)	Equipment costs too high		
d)	Access costs too high (Internet subscription, telephone)		
e)	Lack of skills		
f)	Privacy or security concerns		
g)	Broadband Internet is not available		
h)	None of the above; other reasons		

-> Go to B1_N

MODULE B_N: USE OF COMPUTERS

B1_N	When did you last use a computer (at home, at work or at any other place)? (desktop, laptop, notebook, tablet, excluding smartphone)		
(tick only one)			
a)	Within the last three months		→ Go to B2_N
b)	More than three months ago (less than a year)		→ Go to B1
c)	More than a year ago		→ Go to B1
d)	Never used it		→ Go to B1

B2_N	How often, on average, have you used a computer in the last three months?		
(tick only one)			
a)	Every day or almost every day		
b)	At least once a week		
c)	At least once a month		
d)	Less than once a month		

-> Go to B1

MODULE B: USE OF THE INTERNET

B1	When did you last use the Internet? (using desktop, laptop, mobile phone, smartphone)		
(tick only one)			
a)	Within the last three months		→ Go to B2
b)	More than three months ago (less than a year)		→ Go to C1
c)	More than a year ago		→ Go to G1
d)	Never used it		→ Go to G1

B2	How often, on average, did you use the Internet in the last three months?		
(tick only one)			
a)	Every day or almost every day		→ Go to B2.1
b)	At least once a week		→ Go to B3
c)	At least once a month		→ Go to B3
d)	Less than once a month		→ Go to B3

B2.1	Do you use the Internet several times during the day?		
(tick only one)			
	a) Yes	<input type="checkbox"/>	<input type="checkbox"/>
	b) No	<input type="checkbox"/>	<input type="checkbox"/>
-> Go to B3			
B3	Have you used any of the following mobile devices to access the Internet away from home or work in the last three months?		
(tick all that apply)			
	a) Mobile phone or smartphone	<input type="checkbox"/>	<input type="checkbox"/>
	b) Laptop	<input type="checkbox"/>	<input type="checkbox"/>
	c) Tablet	<input type="checkbox"/>	<input type="checkbox"/>
	d) Other devices (media or video games, e-book reader, smart watch)	<input type="checkbox"/>	<input type="checkbox"/>
	e) Don't have access to the Internet via any mobile devices away from home or work	<input type="checkbox"/>	<input type="checkbox"/>
-> Go to B4			
B4	Which of the following activities have you performed over the Internet for private purposes in the last months?		
(tick all that apply)			
Communication			
	a) Sending/receiving e-mails	<input type="checkbox"/>	<input type="checkbox"/>
	b) Telephoning over the Internet /video calls (via webcam) (using applications, such as <i>Skype</i> and <i>FaceTime</i>)	<input type="checkbox"/>	<input type="checkbox"/>
	c) Participating in social networks (creating user profile, posting messages or other contributions to Facebook, Twitter, Instagram, Snapchat, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
	d) Sending online messages via <i>WhatsApp</i> , <i>Viber</i> , <i>Skype</i> , <i>Messenger</i>	<input type="checkbox"/>	<input type="checkbox"/>
Access to information			
	e) Reading online newspapers/magazines	<input type="checkbox"/>	<input type="checkbox"/>
	f) Seeking health-related information (e.g. injuries, diseases, nutrition, improving health, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
	g) Finding information about goods and services	<input type="checkbox"/>	<input type="checkbox"/>
Civic and political participation			
	h) Posting opinions on civic or political issues via websites (e.g. blogs, social networks, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
	i) Taking part in online consultations or voting to define civic or political issues (e.g. urban planning, signing a petition)	<input type="checkbox"/>	<input type="checkbox"/>
Professional life			
	j) Looking for a job or sending a job application	<input type="checkbox"/>	<input type="checkbox"/>
Creativity			
	k) Uploading self-created content (text, photos, music, videos, software, etc.) to any website to be shared	<input type="checkbox"/>	<input type="checkbox"/>
Use of the Internet for entertainment			
	l) Listening to music (web radio, music streaming)	<input type="checkbox"/>	<input type="checkbox"/>
Other online services			
	m) Selling goods or services, e.g. via auctions (e.g. eBay)	<input type="checkbox"/>	<input type="checkbox"/>
	n) Internet banking	<input type="checkbox"/>	<input type="checkbox"/>
-> Go to B6			
B6	Have you used cloud services for storage of files (documents, pictures, music or video files) for private purposes in the last three months? (e.g. Google drive, Dropbox, Windows OneDrive, iCloud, Amazon Cloud Drive)		
(tick only one)			
	a) Yes	<input type="checkbox"/>	<input type="checkbox"/>
	b) No	<input type="checkbox"/>	<input type="checkbox"/>
-> Go to B7			

B7	Which of the following learning activities have you carried out over the Internet for educational, private or professional purposes in the last three months?		
(for persons who answered „Yes“ in question B1 under a)			
(tick all that apply)			
a) Doing an online course			
b) Finding online learning material (audio-visuals materials, online learning software, electronic textbooks...)			
c) Communicating with instructors or students using websites or portals			
d) Other			
-> Go to B8			
B8	Have you used any website or application to book an accommodation (room, apartment, holiday cottage...) in the last 12 months?		
(tick all that apply)			
a) Yes, intermediary websites or applications dedicated to booking accommodation (e.g. Airbnb or other)			
b) Yes, other websites and applications (including social networks)			
c) No, I have not			
-> Go to B9			
B9	Have you used any website or application to arrange transport services (by car...) in the last 12 months?		
(tick all that apply)			
a) Yes, intermediary websites or applications dedicated to arranging transport services			
b) Yes, other websites or applications (including social networks)			
c) No, I have not			
-> Go to B10			
B10	Have you obtained paid work using an intermediary websites or applications (e.g. <i>Upwork, TaskRabbit, Freelancer, Amazon Mechanical Turk</i>)? Websites of employment agencies are excluded.		
(tick only one)			
a) Yes			→ Go to B10.1
b) No			→ Go to C1
B10.1	Could you please specify if the income of this work is:		
(tick only one)			
a) The main source of income			
b) An additional source of income			
-> Go to C1			
MODULE C: USE OF E-GOVERNMENT			
C1	In the last 12 months, have you used public authorities' or public services over the Internet, for private purposes, for the following activities?		
(tick all that apply)			
a) Obtaining information from websites or applications			
b) Downloading/printing official forms			
c) Sending completed forms online			
If the answer is "No" in C1c) -> god to C2; otherwise god to D1			

C2	What were the reasons for not submitting completed forms to public authorities over the Internet, for private purposes, in the last 12 months?		
	(tick all that apply)		
	a) No need to submit completed forms (whether online or in hard copies)		
	If the answer is "Yes" in a) -> go to D1; otherwise, go to b-f in question C2		
	b) There were no such online services available (did not exist)		
	c) Lack of skills (don't know how to use website or use is too complicated)		
	d) Concerns about security and protection of personal data		
	e) Another person did it on my behalf		
	f) Other reasons		
	-> 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 applications from any device: desktop computer, laptop, mobile phone, smartphone)		
	(for persons who have used the Internet in the last 12 months – who answered "Yes" in question B1a or B1b)		
	a) Within the last three months		→ Go to D2
	b) More than three months ago (less than a year)		→ Go to D2
	c) More than a year ago		→ Go to D8
	d) Never		→ Go to D9
D2	What types of goods or services have you bought or ordered over the Internet in the last 12 months, for private purposes?		
	(tick all that apply)		
	a) Food or groceries		
	b) Household goods (furniture, toys...)		
	c) Pharmaceutical products		
	d) Clothes, sport goods		
	e) Hardware		
	f) Electronic equipment (including cameras)		
	g) Telecommunication services (broadband subscription, uploading money on prepaid phone cards...)		
	h) Holiday accommodation (hotel...)		
	i) Other travel arrangements (transport tickets, car hire...)		
	j) Tickets for cultural events		
	k) Films, music		
	l) Book/magazines/newspapers (including e-books)		
	m) E-learning material		
	n) video games and upgrades, computer software and software upgrades		
	o) Other		
	-> If the answer is "Yes" in questionso D2k, D2l and D2n, go to -> D3; otherwise, go to D4		
D3	Were any of the following products that you bought or ordered over the internet, for private use, downloaded from a website or applications in the last 12 months?		
	(tick all that apply)		
	a) Films, music		
	b) E-books		
	c) E-magazines/e-newspapers		
	d) Computer software (including computer and video games and software upgrades)		
	e) None above the above were downloaded online		
	-> Go to D4		

D4	From whom have you bought/ordered goods or services over the Internet, private use, in the last 12 months?		
	(tick all that apply)		
	a) National sellers		
	b) Sellers from EU countries		
	c) Sellers from the rest of the world		
	d) Country of origin of sellers is unknown		
	->If the answer in question D1 is "Within the last three months", go to D5; otherwise, go to D7		
D5	How many times have you bought/ordered goods or services over the Internet for private purposes in the last 12 months?		
	For persons who answered "Within the last three months" in question D1		
	a) 1–2 times		
	b) 3–5 times		
	c) 6–10 times		
	d) More than 10 times		
	-> Go to D6		
D6	How much have you spent buying/ordering goods or services over the Internet (excluding shares or other financial services), for private purposes, in the last three months?		
	For persons who answered "Within the last three months" in question D1		
	a) Less than 50 euros		
	b) From 50 to 100 euros		
	c) From 100 to 500 euros		
	d) From 500 to 1000 euros		
	e) More than 1000 euros		
	f) Don't know		
	-> Go to D7		
D7	Which of the following problems have you encountered when buying or ordering goods or services over the Internet in the last 12 months?		
	For persons who answered "Within the last three months" or "More than three months ago (less than a year ago)" in question G1		
	(tick all that apply)		
	a) Technical failure of website during ordering or payment		
	b) Difficulties in finding information concerning guarantees and other legal rights		
	c) Speed delivery slower than indicated		
	d) Final costs higher than indicated		
	e) Wrong or damaged goods/services delivered		
	f) Problems with fraud (e.g. no goods/services received at all, misuse of credit details, etc.)		
	g) Complaints and redress were difficult or no satisfactory after complaints		
	h) Foreign retailer does not sell to the Republic of Serbia		
	i) Other		
	j) I have not encountered any problem		
	-> Go to D8		
D8	Have you carried out any of the following financial activities over the Internet (excluding e-mails) for private purposes in the last 12 months?		
	For persons who answered "Within the last three months" in question B1		
	(tick all that apply)		
	a) Buying/renewing insurance policies, including those as a package together with another service (e.g. travel insurance together with an airplane ticket)		
	b) Taking a loan, mortgage or credit from banks or other financial institutions		
	c) Buying or selling shares, bonds, funds or other investments services		
	For services who answered "Within the last three months" or " More than three months ago (less than a year)" in question D1-> do to E1; otherwise, go to D9		

D9	What were the reasons for not buying/ordering any goods or services for private use over the Internet in the last 12 months?		
(tick all that apply)			
a) Prefer to shop in person, like to see product, loyalty to shops, force of habit			
b) Lack of skills or knowledge (do not know how to use website or use was too complicated)			
c) Delivery of goods ordered over the Internet is a problem			
d) Payment security or privacy concerns (e.g. giving credit cards details or personal information)			
e) Concerns about receiving or returning goods, complaint / redress concerns			
f) Don't have a payment card allowing to pay over the internet			
g) Foreign retailer did not sell to the Republic of Serbia			
h) Someone else did it on my behalf			
i) Other			
For persons who answered "Within the last three months" or "More than three months ago (less than a year)" in question B1 -> go to E1; otherwise, go to G1			
MODULE E: E-SKILLS			
E1	Which of the following computer of mobile device related activities have you carried out in the last 12 months?		
(for persons who DID NOT answer „More than a year ago“ or „Never used it“ in question B1)			
(tick all that apply)			
a) Transferring files between computers or other devices			
b) Installing software or applications			
c) Changing the settings of any software, including operating system or security programs (antivirus)			
-> Go to E2			
E2	Which of the following IT related activities have you in the last 12 months?		
(tick all that apply)			
a) Copying or moving files or folders			
b) Using word processing software (<i>Word</i>)			
c) Creating presentations or documents integrating text, pictures, tables or charts			
d) Using spread sheet software			
If the answer is "Yes" -> go to d1			
d1) Using advancing functions to organize and analyze data, such as sorting, filtering, using formulas, creating charts			
e) Using software to edit photos, video or audio files			
f) Writing code in a programming language			
-> Go to F1			
MODULE F: TRUST, SECURITY AND PRIVACY			
F1	Have you experienced any of the following security related problems through using the Internet for private purposes in the last 12 months?		
(for persons who DID NOT answer „More than a year ago“ or „Never used it“ in question B1)			
(tick all that apply)			
a) Fraudulent credit or debit card use			
b) Loss of documents, pictures or other data due to a virus or other infection			
c) Misuse of your personal information available on the Internet resulting from e.g. discrimination, harassment, bullying			

	d) Your social network or e-mail account being hacked and content being posted or sent without your knowledge		
	e) Online identity theft (somebody stealing your personal data and impersonating you, e.g. shopping under your name)		
	f) Receiving fraudulent messages (Phishing)		
	g) Getting redirected to fake websites asking for personal information (Pharming)		
	h) Children accessing inappropriate websites		
If the answer is “Yes” to any proposed answers e), f) или g) -> go to F2, otherwise go to F3			
F2	Have you experienced financial loss, in the last 12 months, resulting from identity theft, receiving fraudulent messages or being redirected to fake websites?		
	(tick only one)		
	a) Yes		
	b) No		
-> Go to F3			
F3	Have security concerns limited or prevented you from doing the following activities via the Internet for private purposes in the last 12 months?		
	(tick all that apply)		
	a) Ordering or buying goods or services		
	b) Internet banking		
	c) Providing personal information to social or professional networking services		
	d) Communicating with public services or administrations		
	e) Downloading software or applications, music, video files, games or other data files		
	f) Using the Internet via a public <i>Wi-F</i>		
	g) Other		
-> Go to F4			
F4	Do you make back-up copies of your files (documents, pictures, etc.) on any external storage device or to Internet storage space (cloud services) for private purposes?		
	(tick only one)		
	a) Yes, automatically or manually		
	b) No		
	c) Don't know		
-> Go to G1			
MODULE G: RESPONDENT'S BACKGROUND INFORMATION			
G1	Respondent's age		
G2	Respondent's sex		
	a) Man		
	b) Women		
-> Go to G3			
G3	Country of birth		
	(tick only one)		
	a) Serbia		
	b) EU countries		
	c) Other country of the rest of the world		
-> Go to G4			


G4	Citizenship		
(tick only one)			
a) Serbian			
b) EU country			
c) Other country of the rest of the world			
-> Go to G5			
G5	Respondent's educational level		
(tick only one)			
a) Without education			
b) 1–4 grades of primary school			
c) 5–8 grades of primary school			
d) Secondary vocational school, grammar school			
e) Specialization after secondary school, school for highly qualified workers			
f) High school			
g) Faculty / higher school / academy			
h) Master degree			
i) Doctor degree			
-> Go to G6			
G6	Employment situation?		
(tick only one)			
a) Employee or self-employed			→ Go to G6a
a1) Employee			
a2) Self-employed			
b) Unemployed			→ Go to G12
c) Student			→ Go to G12
d) Other not in the labor force			→ Go to G12
d1) Retired person			
d2) Disability (permanently disabled)			
d3) Persons in compulsory military service			
d4) Housewife			
d5) Other			
G6a	Type of employment contract? (this question is for persons who answered EMPLOYEE in question G6)		
(tick only one)			
a) Contract of unlimited duration			
b) Contract of limited duration			
-> Go to G6b			
G6b	Working hours? (this question is for persons who answered EMPLOYEE or SELF-EMPLOYED in question G6)		
(tick only one)			
a) Full-time			
b) Part-time			
-> Go to G6c			

G6c	Economic sector?		
(tick only one)			
a) Agriculture, forestry, fishing		<input type="checkbox"/>	<input type="checkbox"/>
b) Mining and quarrying, manufacturing		<input type="checkbox"/>	<input type="checkbox"/>
c) Construction		<input type="checkbox"/>	<input type="checkbox"/>
d) Wholesale and retail trade, transport, accommodation and food service activities		<input type="checkbox"/>	<input type="checkbox"/>
e) Information and communications		<input type="checkbox"/>	<input type="checkbox"/>
f) Financial and insurance activities		<input type="checkbox"/>	<input type="checkbox"/>
g) Real estate activities		<input type="checkbox"/>	<input type="checkbox"/>
h) Professional, scientific, innovation and technical activities		<input type="checkbox"/>	<input type="checkbox"/>
i) Public administration and defense, compulsory social work activities, education, health		<input type="checkbox"/>	<input type="checkbox"/>
j) Other service activities		<input type="checkbox"/>	<input type="checkbox"/>
-> Go to G7			
G7	Occupation?		
(tick only one)			
a) ICT specialists		<input type="checkbox"/>	<input type="checkbox"/>
b) Managers, specialists, administrative staff and other		<input type="checkbox"/>	<input type="checkbox"/>
c) Farmers, craftsmen and similar occupations		<input type="checkbox"/>	<input type="checkbox"/>
-> Go to G12			
G12	Number of household members		→ Go to G13
G13	Of which, number of children aged under 18		→ Go to G14
G14	Household income (average net monthly income)		
(tick only one)			
a) Up to 300 euros		<input type="checkbox"/>	<input type="checkbox"/>
b) From 300 to 600 euros		<input type="checkbox"/>	<input type="checkbox"/>
c) More than 600 euros		<input type="checkbox"/>	<input type="checkbox"/>

ENTERPRISES



2.1. Methodology

Survey period	<ul style="list-style-type: none"> The survey was carried out from 15 April to 30 April 2019
Type of survey	<ul style="list-style-type: none"> Telephone interview 
Sample size	<ul style="list-style-type: none"> 1 597 enterprises
Target population ¹⁾	<ul style="list-style-type: none"> Enterprises with 10 and more employees Section C: Manufacturing Sections D and E: Electricity, gas, steam and air conditioning supply; Water supply, sewerage Section F: Construction Section G: Wholesale and retail trade Section H: Transportation, storage and communications Section I: Accommodation and food service activities Section J: Information and communications Sections L and M: Real estate activities; Professional, scientific and technical activities Section N and Division 95: Administrative and support service activities; Repair of computers Banks and insurance companies
Type of sample	<ul style="list-style-type: none"> Stratified sample
Geographic 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 Journal of the RS”, No 54/2010). This classification is harmonised with *NACE rev.2*.

2.2. Sample

The survey on ICT usage in enterprises was carried out on a representative sample of 1 597 enterprises on the territory of the Republic of Serbia. The response rate was 85.1% (1 359 enterprises).

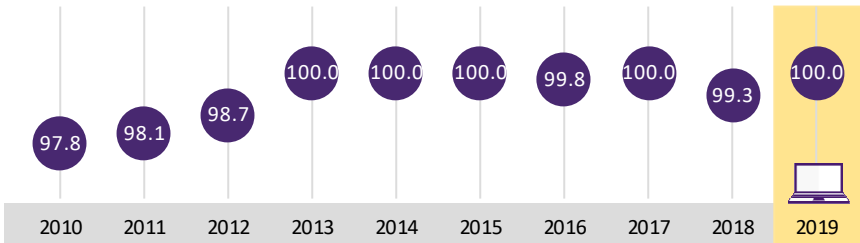
Sample (enterprises)	Size class			Region				Total
	Small (10-49)	Medium(50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i istočna Srbija	
Manufacturing	188	177	158	127	152	146	98	523
Electricity, gas, steam and air conditioning supply; Water supply and sewage	20	23	25	13	18	21	16	68
Construction	27	27	26	26	21	18	15	80
Wholesale and retail trade	95	58	45	46	58	55	39	198
Transportation and storage	27	27	20	17	23	19	15	74
Accommodation and food service activities	60	30	2	31	24	18	19	92
Information and communications	60	38	15	52	26	17	18	113
Real estate activities; Professional, scientific and technical activities	50	47	12	50	22	22	15	109
Administrative and support service activities; Repair of computers	47	24	31	53	24	15	10	102
Number	574	451	334	415	368	331	245	1359
Percentage	42.2	33.2	24.6	30.6	27.1	24.3	18.0	100

2.3. Main findings

2.3.1. Computers and computer networks in enterprises

The results of the survey indicate that 100.0% of enterprises on the territory of the Republic of Serbia use a computer for business.

Chart 2.1. Does your enterprise use computers for business purposes? (%)



In 30.5% of enterprises from 1 to 24% employees use a computer at least once a week, while 37.7% enterprises from 75 to 100% employees use computers at least once a week.

Chart 2.2. Enterprises by the percentage of employees using a computer at least once a week (%)

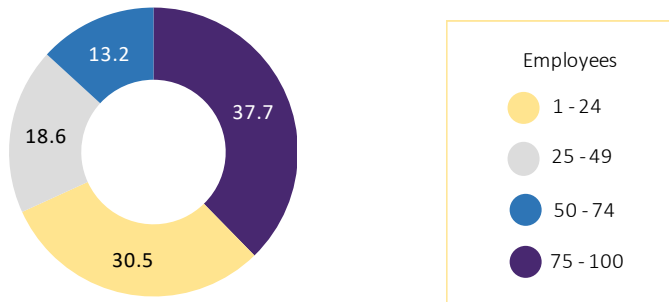
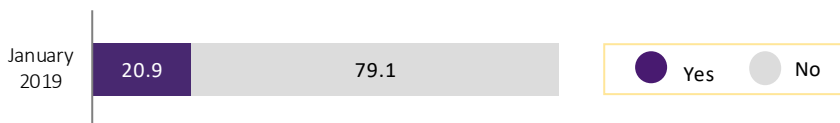


Chart 2.3. Does your enterprise employ ICT specialists? (%)

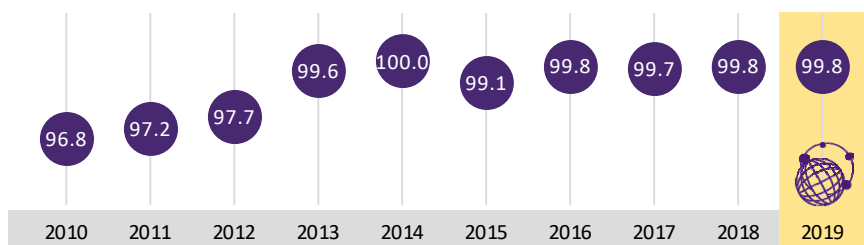


The survey indicates that 20.9% of enterprises employ ICT specialists. 77.9% of large enterprises employ ICT specialists, this percentage being 13.4% for small enterprises.

2.3.2. Internet in enterprises

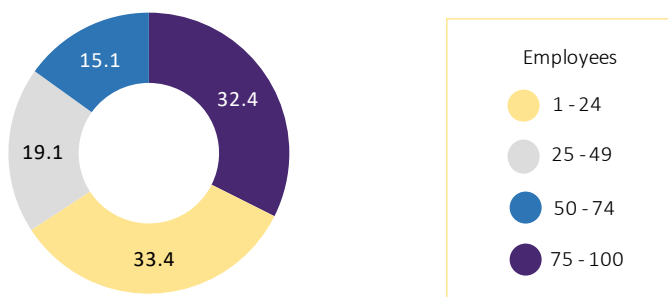
In the Republic of Serbia, 99.8% of enterprises have an internet connection.

Chart 2.4. Does your enterprise has access to the Internet? (%)



In 33.4% of enterprises from 1 to 24% of employees use the Internet at least once a week, while in 32.4% of enterprises from 75 to 100% of employees use the Internet at least once a week.

Chart 2.5. Enterprises by the percentage of employees using the Internet at least once a week (%)



As regard the type of connection, enterprises were given the possibility to choose several answers among the proposed ones.

The results indicate that of the total number of enterprises having an Internet connection, 97.1% have broadband Internet connection.

Chart 2.6. Broadband Internet connection in enterprises (%)

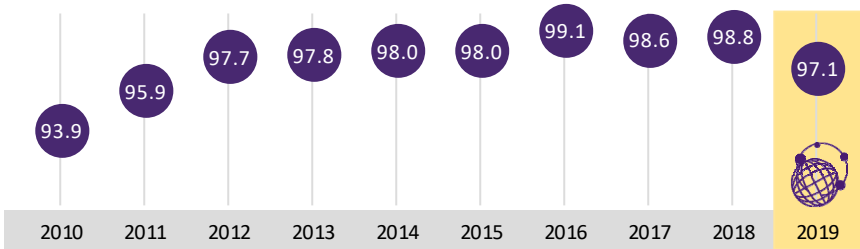
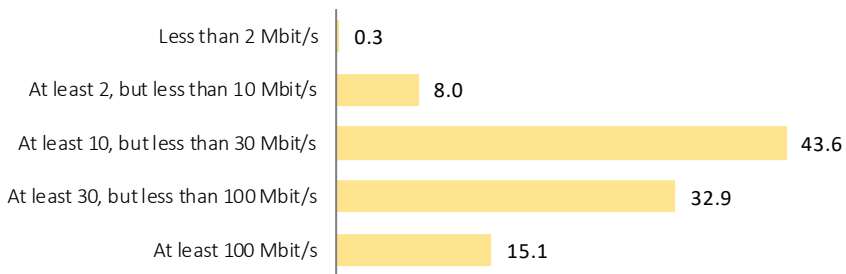


Chart 2.7. What is the maximum contracted speed of the Internet connection in your enterprise? (%)



2.3.3. Use of mobile Internet for business purposes

On the territory of the Republic of Serbia 79.1% of enterprises use a mobile Internet connection via portable devices (smartphone, laptop, tablet...).

Chart 2.8. Does your enterprise provide portable devices that allow a mobile connection using mobile telephone networks for business purposes? (%)

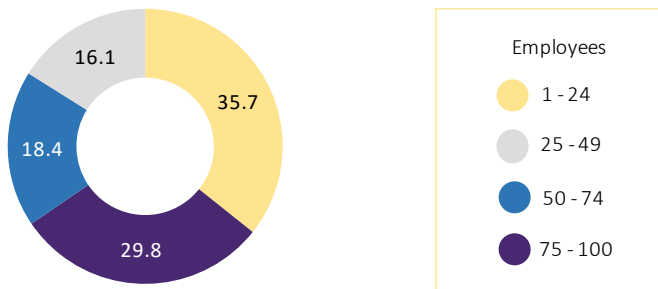


79.1% of enterprises provide portable devices that allow a mobile Internet connection using mobile telephone networks

The analysis of enterprises by size indicate that large enterprises are the major users of mobile broadband Internet connections (90.1%).

In 35.8% of enterprises from 1 to 24% of employees use portable devices for business purposes, while in 29.8% of enterprises from 75 to 100% of employees use portable devices for business purposes.

Chart 2.9. Enterprises by the percentage of employees who use portable devices for business purposes? (%)



2.3.4. Website

There are 83.6% of enterprises have a website, an increase of 1.0% in relation to 2018 and of 3.2% in relation 2017.

When looking at the structure of enterprises by size class, the following results are obtained:

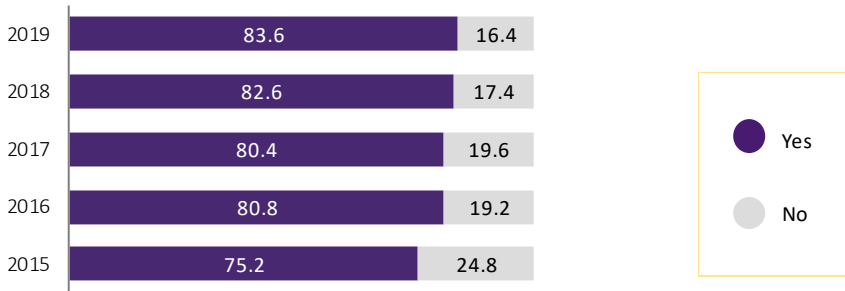
- 93.1% of large enterprises have a website;
- 93.7% of medium enterprises have a website;
- 80.5% of small enterprises have a website.



83.6% of enterprises have a website

There are differences also by territory. In Belgrade, there are 84.0% of enterprises that have a website, in Vojvodina 91.0%, in Region Šumadija i Zapadna Srbija 78.9% and in Region Južna i Istočna Srbija 75.4%.

Chart 2.10. Does your enterprise have its own website? (%)



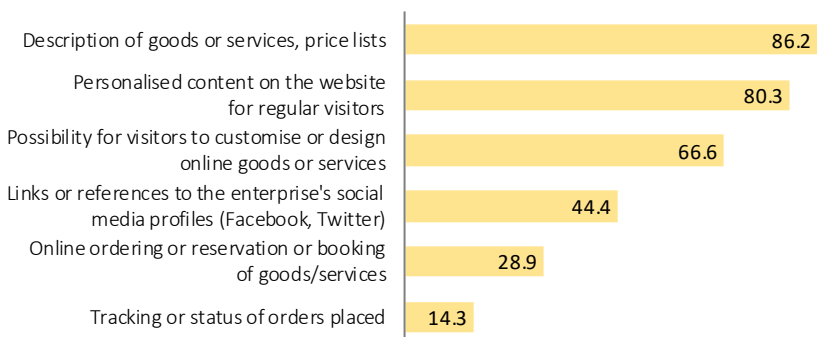
Website available in enterprises by activities:

- Information and communications (98.1%)
- Administrative and support service activities; Repair of computers (85.3%)
- Real estate activities; Professional, scientific and technical activities (92.3%)
- Manufacturing (86.4%)
- Accommodation and food service activities (90.5%)
- Wholesale and retail trade (79.0%)
- Construction (77.1%)
- Electricity, gas, steam and air conditioning supply; Water supply and sewage (78.3%)
- Transportation and storage (74.5%)

Enterprises having a website provide mostly the following services:

- Personalised content in the website for regular/repeated visitors (79.3%);
- Description of goods or services, pricelist (86.2%);
- Possibility for visitors to customise or design the products (66.6%).

Chart 2.11. Does your enterprise provide via its website any of the following services? (%)



2.3.5. E-commerce

In 2018, 42.3% of enterprises in the Republic of Serbia ordered goods/services over the Internet, an increase of 0.4 and 0.9% in relation to 2017 and 2016, respectively.

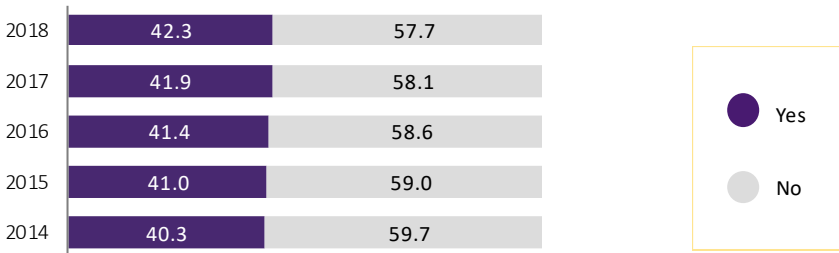
When looking at the structure of enterprises by size class, the following results are obtained:

- 40.3% of large enterprises ordered goods/services over the Internet;
- 37.4% of medium enterprises ordered goods/services over the Internet;
- 43.6% of small enterprises ordered goods/services over the Internet.



42.3% of enterprises ordered goods/services over the Internet

Chart 2.12. Did your enterprise order goods/services over the Internet? (%)

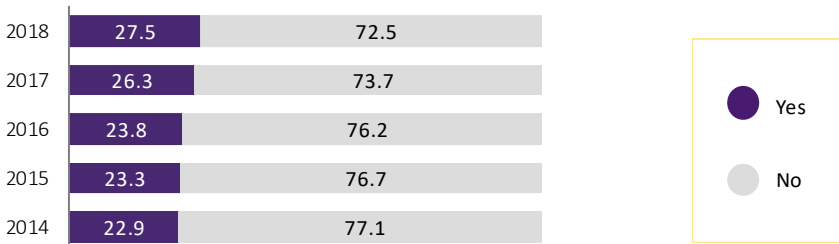


The results of the survey indicate that only 27.5% of enterprises received orders during 2018 (except manually-type e-mails) over the Internet.



27.5% of enterprises received orders over the Internet

Chart 2.13. Did you enterprise receive orders over the Internet? (%)



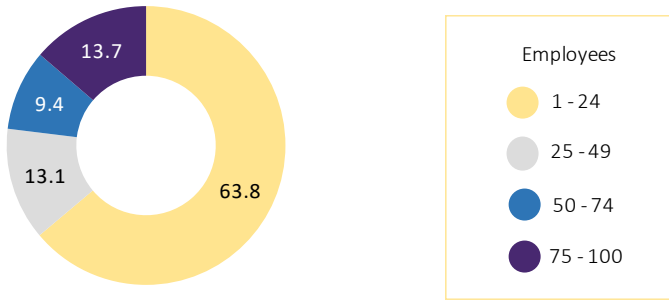
When looking at the structure of enterprises by size, the following results are obtained:

- 28.5% of large enterprises received orders over the Internet;
- 28.7% of medium enterprises received orders over the Internet;
- 27.1% of small enterprises received orders over the Internet.

To the question about the percentage of the total turnover from orders received over the Internet, the enterprises gave the following answers:

- „Less than 24%“ (63.8% of enterprises)
- „More than 24%, and less than 50%“ (13.1% of enterprises)
- „More than 50%, and less than 75%“ (9.4 % of enterprises)
- „75 % and more“ (13.7% of enterprises).

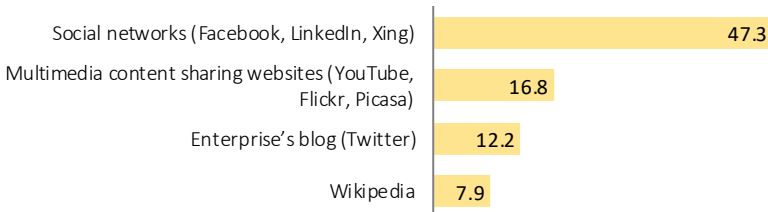
Chart 2.14. Percentage of the total turnover in 2018 from orders received over the Internet (%)



2.3.6. Enterprises and social media

Social media are growing more available in enterprises for business purposes. This is backed by the results of the survey indicating that 47.4% of enterprises used any of the social media for business use.

Chart 2.15. Did your enterprise use any of the social media for business purposes? (%)



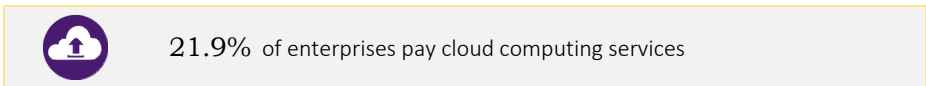
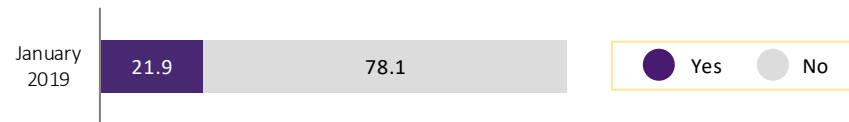
2.3.7. Use of cloud computing services

Cloud computing services are paid over the Internet by 21.9% of enterprises.

Cloud services imply ICT services accessed over the Internet for the purpose of using software, storage space, etc. The services have the following characteristics:

- delivered from servers and service providers;
- can be used on-demand by the user;
- are paid per user, capacity used.

Chart 2.16. Does your enterprise pay cloud computing services over the Internet? (%)



TABULAR PRESENTATION



2.4. Survey results

Module 2.A: Use of computers

A1: Does your enterprise use computers 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	
Activities	Manufacturing	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Electricity, gas, steam, air conditioning supply; Water supply, sewage	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	

A2: Percentage of employees who use computers for business¹⁾ %

	Enterprises								Total
	Size class			Region					
	Small (10-49)	Small (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija		
1- 24%	31.0	29.5	26.1	23.5	31.1	39.1	36.1	30.5	
25- 49%	17.9	20.0	24.8	14.1	24.2	22.5	14.3	18.6	
50-74%	12.0	16.7	19.0	10.8	11.4	15.8	19.3	13.2	
75-100%	39.1	33.8	30.2	51.5	33.3	22.7	30.3	37.7	

¹⁾ The results in table A2 refer to enterprises that said "Yes" in question A1.

MODULE 2B: ICT specialists and skills

B1: 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									
Activities	Manufacturing	12.6	35.5	80.8	28.2	23.0	14.0	25.8	21.8
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	25.9	25.7	91.1	54.6	33.5	33.2	11.8	31.8
	Construction	10.7	32.6	69.9	18.5	11.6	11.4	28.2	16.7
	Wholesale and retail trade	7.8	38.8	88.2	10.5	23.4	7.7	16.8	13.8
	Transportation and storage	-	30.1	71.4	12.3	1.0	10.0	6.4	7.4
	Accommodation and food service activities	6.0	45.1	-	12.3	10.1	5.6	10.3	10.7
	Information and communications	72.0	90.3	100.0	79.2	75.8	61.5	67.9	76.1
	Real estate activities; Professional, scientific and technical activities	9.1	65.2	86.9	21.4	26.0	28.4	29.1	23.5
	Administrative and support service activities; Repair of computers	28.9	13.2	35.4	28.5	15.7	32.9	32.0	26.4
Total	13.4	39.5	77.9	23.4	22.2	14.3	22.6	20.9	

B2: Did you enterprise provide any type of training to develop ICT related skills for employees for ICT skills improvement in 2018?

%

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 specialists¹⁾

Activities	Manufacturing	31.3	47.6	64.3	28.7	52.5	55.9	46.2	44.5
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	22.9	66.6	42.7	17.8	40.2	51.8	100.0	43.1
	Construction	81.1	29.0	37.3	72.2	50.0	35.7	41.2	56.1
	Wholesale and retail trade	52.5	40.0	60.1	62.7	33.2	62.2	54.2	49.3
	Transportation and storage	-	46.0	64.4	33.3	-	77.1	75.5	52.3
	Accommodation and food service activities	39.1	46.2	-	42.8	-	100.0	74.6	42.7
	Information and communications	60.2	81.5	84.1	64.9	71.8	53.8	64.6	65.6
	Real estate activities; Professional, scientific and technical activities	70.5	41.1	56.4	39.8	76.8	59.8	44.7	50.6
	Administrative and support service activities; Repair of computers	64.5	71.5	36.4	79.0	5.3	26.9	79.5	62.1
	Total	51.8	48.3	59.6	52.1	48.5	55.4	52.8	51.7

Training for other persons employed

Activities	Manufacturing	14.7	30.7	58.6	30.6	22.4	16.8	11.3	20.9
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	4.4	25.5	28.4	18.5	28.2	9.1	2.5	15.5
	Construction	16.5	27.9	52.8	20.0	6.3	21.5	38.7	19.7
	Wholesale and retail trade	26.8	33.7	57.3	34.7	26.1	16.5	29.9	28.4
	Transportation and storage	24.8	24.0	65.2	30.4	37.1	12.9	16.8	26.1
	Accommodation and food service activities	14.3	20.1	50.0	17.3	10.3	5.0	28.4	15.2
	Information and communications	42.3	66.6	74.6	45.2	65.0	32.8	35.8	47.5
	Real estate activities; Professional, scientific and technical activities	30.6	30.7	37.3	38.6	16.2	19.3	14.6	30.8
	Administrative and support service activities; Repair of computers	17.9	22.1	27.0	20.4	20.0	8.9	25.4	19.4
	Total	21.9	31.1	53.2	31.4	24.6	16.3	20.9	24.9

¹⁾ Data refer to enterprises that employ ICT specialists.

B3: Did your enterprise recruit or try to recruit ICT specialists in 2018?

%

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

YES

Activities	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i istočna Srbija	Total
	Manufacturing	4.6	12.0	30.0	13.3	4.9	6.7	6.5
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	11.9	2.0	13.7	9.7	18.1	1.0	-	7.9
Construction	-	8.3	26.1	1.4	2.9	3.7	2.5	2.4
Wholesale and retail trade	2.7	10.6	44.7	4.1	3.9	5.3	7.8	4.8
Transportation and storage	-	14.4	41.3	4.7	1.6	7.3	-	3.8
Accommodation and food service activities	10.4	10.7	50.0	15.6	6.5	3.8	-	10.6
Information and communications	57.9	74.8	76.2	63.8	67.7	33.1	55.7	61.5
Real estate activities; Professional, scientific and technical activities	1.9	22.0	17.6	6.8	8.2	7.8	1.5	6.8
Administrative and support service activities; Repair of computers	6.3	1.3	25.7	7.8	1.7	17.3	-	6.9
Total	6.3	14.2	33.2	11.7	7.5	6.6	6.7	8.9

B4: Did your enterprise have vacancies for ICT specialists that were difficult to fill, during 2018?¹⁾

%

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

YES

Activities	Manufacturing	44.7	57.6	53.4	38.0	70.2	53.3	64.1	51.2
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	50.0	-	65.1	38.1	46.4	100.0	-	47.0
	Construction	-	44.8	23.9	32.3	-	88.9	-	38.1
	Wholesale and retail trade	68.1	42.6	47.4	15.6	60.5	87.3	91.6	55.9
	Transportation and storage	-	26.1	92.4	100.0	-	31.4	-	51.7
	Accommodation and food service activities	17.4	19.5	-	17.8	20.8	-	-	17.2
	Information and communications	76.0	58.7	83.3	62.5	92.8	74.8	96.6	72.8
	Real estate activities; Professional, scientific and technical activities	43.4	25.6	-	31.9	33.3	-	-	28.1
	Administrative and support service activities; Repair of computers	49.6	100.0	49.8	32.4	50.0	100.0	-	51.6
	Total	60.7	46.7	55.3	45.0	67.0	61.1	79.2	55.7

¹⁾The results refer only to enterprises that said "Yes" in question B3.

**B5A: Who performed ICT functions in your enterprise during 2018
(enterprise's employees)**

%

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

YES

Activities	Manufacturing	43.8	59.1	84.0	53.6	50.1	46.0	50.2	49.7
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	57.7	51.0	83.5	69.4	40.6	66.1	63.1	57.2
	Construction	48.4	38.1	76.1	56.1	31.6	27.6	78.5	47.2
	Wholesale and retail trade	43.5	64.1	88.2	37.3	55.4	52.8	58.2	47.3
	Transportation and storage	40.3	52.1	92.2	38.1	36.1	41.1	82.4	44.0
	Accommodation and food service activities	27.7	54.0	100.0	28.6	38.0	23.8	46.1	31.3
	Information and communications	85.7	92.3	90.5	89.5	86.4	72.7	84.0	87.0
	Real estate activities; Professional, scientific and technical activities	30.8	83.5	86.9	33.4	53.7	63.6	89.0	44.0
	Administrative and support service activities; Repair of computers	43.0	37.9	56.2	39.5	47.6	46.2	54.2	43.1
Total	44.4	59.9	82.6	45.8	49.4	46.8	61.2	48.9	

B5B: Who mainly performed ICT functions in your enterprise during 2018 (external suppliers)

%

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

YES

Activities	Manufacturing	68.0	64.0	66.4	70.0	64.3	69.1	62.6	67.0
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	73.4	72.7	77.1	58.8	98.7	64.2	55.9	73.4
	Construction	66.9	77.0	60.8	55.0	86.6	95.9	35.6	68.7
	Wholesale and retail trade	79.0	81.2	81.4	91.4	84.8	63.4	52.1	79.4
	Transportation and storage	61.5	69.8	59.6	48.2	75.2	63.8	62.5	62.8
	Accommodation and food service activities	84.5	60.8	100.0	87.6	79.5	80.0	54.1	81.7
	Information and communications	40.2	45.4	57.1	34.8	67.5	56.0	16.0	41.7
	Real estate activities; Professional, scientific and technical activities	77.7	40.1	80.4	80.9	50.2	58.3	23.5	68.9
	Administrative and support service activities; Repair of computers	67.9	74.8	68.9	85.5	36.0	64.6	45.8	69.3
Total	71.0	66.5	69.5	74.6	72.6	69.1	52.7	70.1	

MODULE 2.C: Access to and use of the Internet

C1: Does your enterprise have access to the Internet? %

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

YES

Activities	Manufacturing	99.0	100.0	100.0	100.0	100.0	97.7	100.0	99.3
	Electricity, gas, steam and air conditioning supply; Water supply and 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	99.7	100.0	100.0	100.0	100.0	99.0	100.0	99.8	

C2: Percentage of persons employed who use the Internet for business purposes¹⁾ %

	Enterprises								Total
	Size class			Region					
	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i istočna Srbija		
1-24%	33.3	33.2	34.4	27.0	33.2	40.9	40.2	33.4	
25-49%	18.4	21.3	22.8	14.5	25.1	24.1	12.8	19.1	
50-74%	14.9	15.0	19.6	15.6	9.8	14.4	25.4	15.1	
75-100%	33.4	30.4	23.3	42.9	31.9	20.6	21.6	32.4	

¹⁾ Data refer to enterprises that in question C1 said "Yes".

C3: Does your enterprise use voice or video call applications over the Internet (*Skype, WhatsApp, Viber, FaceTime*) ?

%

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

YES

Activities	Manufacturing	56.6	58.2	69.5	50.8	52.0	60.1	74.7	57.7
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	46.7	22.5	33.0	45.4	38.6	35.7	22.0	35.2
	Construction	59.4	33.1	60.5	45.7	56.8	73.6	44.8	54.3
	Wholesale and retail trade	67.0	68.5	72.3	77.7	72.7	60.5	31.3	67.3
	Transportation and storage	64.6	83.0	38.8	46.8	79.3	75.9	60.8	66.6
	Accommodation and food service activities	48.9	40.8	100.0	49.3	61.2	37.5	33.2	48.2
	Information and communications	74.3	85.0	79.4	76.4	75.0	85.7	70.3	76.3
	Real estate activities; Professional, scientific and technical activities	68.9	72.2	67.3	66.6	95.5	45.6	60.4	69.7
	Administrative and support service activities; Repair of computers	57.6	30.8	54.6	56.1	47.6	51.8	34.0	52.2
Total	62.0	57.7	63.9	62.6	63.7	60.9	53.0	61.3	

C4: Does your enterprise use any type of fixed broadband connection to the Internet (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	
Activities	Manufacturing	97.8	96.0	98.5	95.5	100.0	99.5	91.6	97.4
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	96.3	96.6	100.0	100.0	100.0	100.0	84.8	96.8
	Construction	100.0	98.3	100.0	100.0	100.0	100.0	97.5	99.7
	Wholesale and retail trade	96.3	100.0	100.0	100.0	100.0	100.0	75.1	96.9
	Transportation and storage	97.7	100.0	100.0	100.0	100.0	100.0	85.6	98.1
	Accommodation and food service activities	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Information and communications	98.0	100.0	100.0	97.4	100.0	100.0	100.0	98.4
	Real estate activities; Professional, scientific and technical activities	88.4	100.0	100.0	86.5	100.0	100.0	100.0	91.3
	Administrative and support service activities; Repair of computers	96.1	93.3	100.0	97.8	87.6	100.0	100.0	95.9
	Total	96.8	97.8	99.3	97.0	99.5	99.8	88.1	97.1

C5: What is the maximum contracted speed of the Internet connection in your enterprise?¹⁾ %

	Enterprises								Total
	Size class			Region					
	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i istočna Srbija		
Less than 2 Mbit/s	0.4	0.2	-	0.1	-	1.1	0.4	0.3	
At least 2, but less than 10 Mbit/s	8.6	6.6	4.5	6.7	5.3	10.4	13.8	8.0	
At least 10, but less than 30 Mbit/s	47.6	31.7	23.9	39.3	48.4	43.9	47.4	43.6	
At least 30, but less than 100 Mbit/s	30.8	40.1	40.3	33.5	32.5	33.5	30.8	32.9	
At least 100 Mbit/s	12.6	21.4	31.3	20.4	13.8	11.0	7.7	15.1	

¹⁾ Data refer to enterprises that in question C1 said "Yes".

C6: Does your enterprise provide portable devices that allow a mobile connection to the Internet, using mobile telephone networks, 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	

YES

Activities	Manufacturing	73.7	82.7	90.3	76.8	89.7	64.1	79.0	76.7
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	88.3	75.8	87.9	73.1	91.9	98.1	53.4	82.9
	Construction	80.0	97.1	96.6	74.7	87.5	87.0	100.0	83.8
	Wholesale and retail trade	74.0	90.5	95.8	72.6	97.7	69.6	61.4	76.7
	Transportation and storage	89.5	89.9	93.8	100.0	91.0	95.4	51.9	89.7
	Accommodation and food service activities	72.8	68.8	100.0	80.3	54.0	61.3	79.7	72.5
	Information and communications	84.5	85.3	100.0	82.5	97.9	60.4	96.2	85.2
	Real estate activities; Professional, scientific and technical activities	83.9	85.6	86.9	88.4	71.8	74.0	98.5	84.4
	Administrative and support service activities; Repair of computers	68.2	71.9	68.1	81.5	35.2	69.5	69.3	68.9
	Total	77.1	85.0	90.1	79.1	87.7	72.2	74.1	79.1

C7: Percentage of persons employed who use portable devices (provided by the enterprise) for business purposes¹⁾

%

	Enterprises								Total
	Size class			Region					
	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i istočna Srbija		
1- 24%	31.8	46.1	55.4	32.8	40.5	32.7	39.6	35.8	
25- 49%	15.8	16.5	18.2	15.1	16.4	16.7	17.4	16.1	
50-74%	19.6	15.2	11.7	18.7	16.4	20.3	18.6	18.4	
75-100%	32.8	22.2	14.7	33.4	26.7	30.3	24.4	29.8	

¹⁾ The results in table C7 refer to enterprises that in question C6 said "Yes".

C8: 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	

YES

Activities	Manufacturing	83.0	95.5	91.2	94.9	94.8	81.0	68.0	86.4
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	59.2	96.6	94.3	81.5	91.6	75.0	59.4	78.3
	Construction	72.2	94.5	90.6	62.4	100.0	83.3	73.0	77.1
	Wholesale and retail trade	77.6	85.1	96.6	74.1	87.3	77.4	82.9	79.0
	Transportation and storage	70.2	90.5	100.0	75.6	77.1	71.9	71.2	74.5
	Accommodation and food service activities	89.8	95.5	100.0	87.5	94.9	100.0	84.8	90.5
	Information and communications	98.2	100.0	87.3	99.3	98.0	87.8	100.0	98.1
	Real estate activities; Professional, scientific and technical activities	89.7	100.0	100.0	93.2	99.3	67.4	100.0	92.3
	Administrative and support service activities; Repair of computers	83.1	91.1	91.6	97.3	72.7	56.7	68.6	85.3
	Total	80.5	93.7	93.1	84.0	91.0	78.9	75.4	83.6

C9: Does the website of your enterprise provide the following services
(your enterprise as Internet service provider)?¹⁾

%

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

Description of goods or services, price lists

Activities	Manufacturing	92.9	89.4	71.8	92.8	90.1	92.1	84.0	90.7
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	100.0	96.5	85.9	95.5	98.6	98.8	88.6	96.6
	Construction	97.2	82.6	84.8	88.8	100.0	100.0	77.3	93.3
	Wholesale and retail trade	84.9	86.4	78.9	84.4	98.3	71.7	78.3	84.9
	Transportation and storage	75.5	82.1	83.9	56.9	100.0	70.8	77.6	77.2
	Accommodation and food service activities	95.3	94.0	100.0	100.0	94.6	83.8	87.9	95.2
	Information and communications	70.5	74.2	68.2	67.3	75.1	58.5	98.1	71.1
	Real estate activities; Professional, scientific and technical activities	77.5	81.4	93.5	69.7	100.0	100.0	76.5	78.7
	Administrative and support service activities; Repair of computers	84.3	75.6	74.8	78.2	85.9	100.0	85.6	81.7
	Total	86.8	86.2	77.0	82.0	94.3	86.0	81.8	86.2

Online ordering or reservation or booking of goods/services

Activities	Manufacturing	21.7	23.1	15.6	21.0	18.4	21.3	32.2	21.7
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	26.3	6.8	16.8	18.2	20.9	13.7	-	15.0
	Construction	12.0	7.9	10.7	21.1	4.9	-	19.3	11.0
	Wholesale and retail trade	32.3	57.9	47.2	12.8	64.2	41.2	45.6	36.3
	Transportation and storage	39.1	30.6	49.3	36.7	32.2	50.9	29.3	37.9
	Accommodation and food service activities	47.2	68.0	50.0	51.3	49.0	60.0	24.3	49.9
	Information and communications	29.7	38.3	36.4	34.5	26.5	23.1	28.3	31.4
	Real estate activities; Professional, scientific and technical activities	29.9	55.1	31.4	35.7	30.9	46.4	47.4	36.3
	Administrative and support service activities; Repair of computers	29.5	16.0	14.0	22.3	22.7	46.1	44.7	25.3
	Total	28.3	32.0	25.0	25.2	32.4	28.7	34.1	28.9

¹⁾ The results refer only to enterprises that in question C8 said "Yes".

C9: Does the website of your enterprise provide the following services
(your enterprise as Internet service provider)?¹⁾

%

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

Possibility for visitors to customise or design online goods or services

Activities	Manufacturing	84.7	79.1	54.3	87.9	84.2	78.9	65.4	81.4
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	59.9	64.6	55.6	78.4	39.0	100.0	34.3	61.9
	Construction	48.7	69.7	36.7	71.0	18.3	79.5	38.6	53.3
	Wholesale and retail trade	55.6	75.1	65.4	57.5	66.2	58.3	46.9	58.6
	Transportation and storage	37.3	45.8	36.8	43.4	25.1	50.3	41.7	39.0
	Accommodation and food service activities	89.1	57.3	100.0	89.9	80.2	81.9	72.6	85.1
	Information and communications	48.5	67.0	55.5	46.3	57.8	31.5	93.9	51.9
	Real estate activities; Professional, scientific and technical activities	67.1	79.5	42.5	67.4	83.4	56.1	65.6	69.8
	Administrative and support service activities; Repair of computers	84.7	50.3	29.6	74.2	66.6	57.5	95.2	72.8
	Total	65.9	71.9	51.7	68.4	64.9	70.7	56.6	66.6

Tracking or status of orders placed

Activities	Manufacturing	13.8	10.1	8.3	13.3	12.3	11.5	13.8	12.5
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	16.2	-	5.1	18.2	1.4	11.1	-	6.5
	Construction	12.0	6.1	-	20.0	4.9	-	15.9	10.2
	Wholesale and retail trade	13.8	38.2	38.6	8.7	35.8	8.0	24.8	17.9
	Transportation and storage	-	10.4	37.7	5.1	6.2	1.2	-	3.8
	Accommodation and food service activities	30.8	34.5	-	42.8	18.4	15.6	15.2	31.0
	Information and communications	20.0	17.4	25.5	24.9	15.1	-	10.4	19.7
	Real estate activities; Professional, scientific and technical activities	2.0	51.1	13.1	13.6	2.7	38.7	34.4	14.6
	Administrative and support service activities; Repair of computers	12.6	3.0	5.6	5.0	21.6	34.8	-	10.0
	Total	12.9	18.9	15.7	14.6	16.5	9.9	16.4	14.3

¹⁾ The results refer only to enterprises that in question C8 said "Yes".

C9: Does the website of your enterprise provide the following services
(your enterprise as Internet service provider)?¹⁾

%

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

Personalised content on the website for regular visitors

Activities	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	Total
Manufacturing	83.7	83.0	72.9	79.1	84.4	89.9	69.8	82.8
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	100.0	82.4	75.3	93.2	97.3	100.0	38.6	88.0
Construction	86.4	75.0	81.5	88.8	99.5	80.5	38.6	83.6
Wholesale and retail trade	75.3	82.9	85.4	73.3	99.0	76.4	41.4	76.6
Transportation and storage	85.7	64.0	86.6	89.6	95.9	80.6	26.0	81.5
Accommodation and food service activities	89.0	93.5	100.0	95.9	86.9	75.0	84.8	89.7
Information and communications	76.3	87.0	94.5	72.1	92.7	83.4	88.2	78.7
Real estate activities; Professional, scientific and technical activities	61.9	91.0	86.9	65.2	71.6	98.1	76.5	69.7
Administrative and support service activities; Repair of computers	83.5	85.7	77.8	80.8	100.0	91.5	48.6	83.4
Total	79.7	82.5	78.9	77.5	91.0	85.0	55.2	80.3

Links or references to the enterprise's social media profiles(Facebook, Twitter)

Activities	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	Total
Manufacturing	40.4	59.1	50.0	56.9	43.0	43.4	33.3	45.7
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	33.6	30.2	58.4	60.8	43.9	20.2	13.6	34.6
Construction	29.2	32.4	33.2	47.5	10.7	23.4	42.0	30.1
Wholesale and retail trade	31.9	61.1	77.0	23.0	55.9	44.6	33.4	37.3
Transportation and storage	34.7	31.8	54.5	45.2	28.5	37.3	23.8	35.1
Accommodation and food service activities	81.5	69.9	100.0	95.0	78.5	51.9	45.3	80.1
Information and communications	79.4	84.5	100.0	75.6	97.1	90.5	72.2	80.9
Real estate activities; Professional, scientific and technical activities	23.7	73.4	62.1	37.4	21.1	56.0	59.9	37.0
Administrative and support service activities; Repair of computers	56.8	31.3	67.6	62.6	17.3	53.2	49.5	52.4
Total	40.5	54.9	59.2	48.5	43.4	42.1	36.8	44.4

¹⁾ The results refer only to enterprises that in question C8 said "Yes".

C10: Does your enterprise use information about visitors' behaviour on its website (e.g. clicks, items viewed), for advertising or improving customer satisfaction?

%

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

YES

Activities	Manufacturing	30.1	34.7	31.7	36.3	26.9	34.5	23.8	31.4
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	36.3	18.5	31.8	25.6	32.5	25.8	13.6	26.5
	Construction	22.3	20.8	14.5	26.4	4.9	39.0	15.9	21.7
	Wholesale and retail trade	31.4	29.5	48.7	16.9	50.4	37.9	30.8	31.7
	Transportation and storage	10.1	19.5	22.8	2.2	33.1	3.2	2.2	12.6
	Accommodation and food service activities	65.8	40.3	50.0	72.1	51.6	57.5	36.0	62.4
	Information and communications	35.3	62.8	57.3	30.6	61.3	55.5	51.9	40.7
	Real estate activities; Professional, scientific and technical activities	16.4	68.6	31.4	32.3	7.6	51.7	51.0	29.9
	Administrative and support service activities; Repair of computers	47.5	13.1	45.7	45.9	5.7	72.3	49.5	40.2
	Total	30.4	34.6	35.4	30.6	31.9	35.3	27.0	31.5

C11: Does your enterprise use any of the following social media?

%

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

Social networks (*Facebook, LinkedIn, Xing*)

Activities	Manufacturing	40.2	55.1	52.5	61.1	41.8	33.1	45.2	44.3
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	19.9	37.7	54.1	53.2	32.1	28.4	16.1	30.6
	Construction	26.9	22.3	23.5	29.0	8.2	29.7	39.8	25.9
	Wholesale and retail trade	42.9	60.9	80.2	37.3	61.0	47.0	47.0	46.1
	Transportation and storage	43.4	33.3	79.2	61.6	14.5	52.6	52.1	43.1
	Accommodation and food service activities	90.6	76.4	100.0	96.3	79.7	93.1	56.4	88.9
	Information and communications	87.6	93.0	100.0	86.2	98.0	83.6	92.0	89.0
	Real estate activities; Professional, scientific and technical activities	35.4	73.8	62.1	47.5	36.4	33.9	59.9	44.8
	Administrative and support service activities; Repair of computers	56.4	44.7	67.1	70.6	30.1	32.6	37.3	55.0
	Total	44.9	54.2	61.4	53.7	43.8	40.4	46.6	47.3

Enterprise's blog (*Twitter*)

Activities	Manufacturing	7.4	25.6	16.5	15.2	14.7	6.3	14.4	12.1
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	5.2	9.9	19.8	12.0	3.7	17.4	1.3	8.6
	Construction	15.4	5.5	12.5	25.9	-	3.3	14.1	13.4
	Wholesale and retail trade	6.6	9.5	16.3	0.4	11.4	11.0	17.0	7.2
	Transportation and storage	-	6.3	35.3	2.8	0.3	2.3	5.7	2.3
	Accommodation and food service activities	13.4	29.3	-	22.3	11.0	3.8	-	15.3
	Information and communications	37.2	54.2	58.7	37.9	43.1	40.6	56.1	40.8
	Real estate activities; Professional, scientific and technical activities	6.6	56.8	19.6	20.7	3.2	24.8	32.9	18.5
	Administrative and support service activities; Repair of computers	14.6	8.1	29.1	19.6	1.7	6.4	25.4	14.5
	Total	9.4	22.2	20.7	14.3	10.5	8.5	15.7	12.2

C11: Does your enterprise use any of the following social media?

%

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

Multimedia content sharing websites (*YouTube, Flickr, Picasa*)

Activities	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i istočna Srbija	Total
Manufacturing	13.2	18.2	27.1	20.8	15.4	11.1	14.0	15.2
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	11.2	7.9	33.3	6.0	13.3	19.4	2.5	11.8
Construction	15.4	16.6	13.6	28.5	2.9	3.7	16.6	15.5
Wholesale and retail trade	11.0	16.9	44.6	9.1	15.2	13.2	19.0	12.6
Transportation and storage	3.1	10.1	21.2	2.2	-	14.3	3.1	4.9
Accommodation and food service activities	34.6	10.7	50.0	41.5	19.8	17.5	20.6	31.8
Information and communications	30.2	52.0	81.0	16.2	72.7	73.2	50.0	35.7
Real estate activities; Professional, scientific and technical activities	13.4	61.2	31.4	27.7	7.0	32.6	38.5	24.9
Administrative and support service activities; Repair of computers	32.3	13.2	31.9	36.1	13.2	30.1	11.8	28.6
Total	14.7	22.1	32.4	19.8	14.6	14.1	16.6	16.8

Wikipedia

Activities	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i istočna Srbija	Total
Manufacturing	10.0	11.5	7.7	11.7	4.0	9.8	19.9	10.2
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	-	-	9.2	-	-	1.9	1.3	0.9
Construction	4.1	7.2	3.1	-	-	3.7	28.2	4.6
Wholesale and retail trade	4.3	0.9	11.4	0.9	-	8.3	16.6	4.1
Transportation and storage	3.1	6.3	4.7	0.6	-	11.6	3.1	3.7
Accommodation and food service activities	12.2	10.5	-	15.3	-	16.9	7.7	11.9
Information and communications	8.3	21.0	14.3	5.6	20.1	32.6	4.2	10.7
Real estate activities; Professional, scientific and technical activities	10.5	54.7	31.4	19.6	14.5	33.9	37.0	21.2
Administrative and support service activities; Repair of computers	3.7	2.5	11.4	5.7	0.8	2.4	3.3	4.1
Total	6.8	12.4	9.4	6.9	3.1	10.1	16.9	7.9

C12: Does your enterprise use any of the above mentioned social media to?

%

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

Develop the enterprise's image or market product (by advertising or launching products, etc.)

Activities	Manufacturing	77.9	91.6	77.5	82.0	88.7	78.8	74.9	81.8
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	82.6	94.6	66.6	53.9	91.9	100.0	92.2	86.0
	Construction	100.0	89.3	81.2	98.5	77.2	100.0	100.0	97.3
	Wholesale and retail trade	82.6	92.2	92.5	95.6	70.6	87.5	85.3	84.7
	Transportation and storage	93.4	84.6	74.6	96.0	88.9	85.4	94.0	91.1
	Accommodation and food service activities	88.9	97.3	50.0	87.5	100.0	92.6	73.7	89.5
	Information and communications	88.6	76.3	77.8	85.4	85.1	81.6	95.9	86.0
	Real estate activities; Professional, scientific and technical activities	72.5	92.0	34.8	79.9	58.2	96.3	94.2	79.1
	Administrative and support service activities; Repair of computers	97.1	81.9	74.4	94.0	97.3	69.5	100.0	92.8
	Total	84.7	90.2	77.7	88.2	81.0	85.5	84.7	85.5

Obtain or respond to customer opinions, reviews, questions

Activities	Manufacturing	69.1	66.6	59.5	62.3	73.8	74.3	58.9	67.7
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	82.6	68.2	58.7	53.9	62.9	100.0	50.0	72.0
	Construction	78.6	45.9	89.0	89.8	72.8	56.2	55.0	72.7
	Wholesale and retail trade	69.0	75.9	88.8	90.2	68.9	65.0	33.2	71.0
	Transportation and storage	70.1	81.1	65.4	94.5	88.9	56.3	35.6	71.2
	Accommodation and food service activities	95.0	60.7	50.0	94.9	98.3	80.5	60.7	91.1
	Information and communications	56.9	66.4	75.4	45.4	74.5	95.0	85.1	59.3
	Real estate activities; Professional, scientific and technical activities	55.7	81.5	58.3	62.7	48.7	96.3	94.2	65.9
	Administrative and support service activities; Repair of computers	69.2	63.9	77.9	65.3	97.3	88.9	31.8	69.2
	Total	70.3	70.0	70.1	73.2	73.0	71.3	52.9	70.2

C12: Does your enterprise use any of the above mentioned social media to?

%

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

Involve customers in development or innovation of goods or services

Activities	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	Total
Manufacturing	35.7	32.3	39.2	27.9	41.3	27.0	50.7	34.9
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	82.6	41.9	52.8	31.3	62.9	75.3	50.0	58.5
Construction	46.2	32.0	39.5	45.3	68.5	43.8	27.5	43.3
Wholesale and retail trade	54.4	27.2	44.2	58.7	43.7	54.5	29.9	49.3
Transportation and storage	26.4	37.3	42.5	43.1	86.5	7.8	4.9	28.8
Accommodation and food service activities	74.5	34.6	50.0	82.6	45.9	53.0	56.2	70.2
Information and communications	28.7	49.7	48.4	25.4	49.0	48.6	32.8	33.2
Real estate activities; Professional, scientific and technical activities	26.9	76.0	-	43.8	2.8	92.7	90.9	45.4
Administrative and support service activities; Repair of computers	25.8	20.8	41.3	19.5	60.4	49.1	22.9	26.5
Total	43.3	39.1	40.7	43.1	44.3	39.5	40.0	42.3

Collaborate with business partners (suppliers) or other organisations (public authorities, non-governmental organisations)

Activities	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	Total
Manufacturing	45.9	42.1	42.6	48.8	48.7	42.7	31.6	44.5
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	82.6	52.7	27.9	53.9	59.3	70.1	42.2	59.9
Construction	71.1	38.5	30.1	86.0	68.5	45.2	33.3	63.3
Wholesale and retail trade	52.3	27.0	51.4	58.7	48.5	40.8	28.6	48.0
Transportation and storage	37.0	37.3	12.4	40.9	22.0	36.9	27.7	35.6
Accommodation and food service activities	36.4	35.4	50.0	34.8	15.6	70.5	21.9	36.4
Information and communications	51.2	37.9	44.4	48.2	33.4	68.2	73.8	48.6
Real estate activities; Professional, scientific and technical activities	56.7	80.9	32.2	74.6	8.9	92.7	70.7	65.5
Administrative and support service activities; Repair of computers	45.0	20.8	52.6	38.1	46.7	49.1	91.2	42.2
Total	49.0	43.3	41.4	52.8	43.0	47.0	36.5	47.3

C12: Does your enterprise use any of the above mentioned social media to?

%

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

Recruit employees

Activities	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	Total
Manufacturing	25.2	41.2	45.6	36.1	31.3	31.8	21.1	31.4
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	55.6	5.4	24.3	73.9	3.6	25.3	-	26.7
Construction	32.4	52.4	41.1	43.8	72.8	12.3	33.3	36.5
Wholesale and retail trade	32.6	15.0	52.4	23.3	42.3	34.6	15.0	30.6
Transportation and storage	26.4	35.7	20.8	42.2	95.2	4.2	-	27.3
Accommodation and food service activities	67.9	42.3	100.0	72.1	47.8	61.7	56.2	65.4
Information and communications	67.1	66.2	57.1	70.5	66.6	44.2	58.5	66.6
Real estate activities; Professional, scientific and technical activities	36.3	80.9	40.9	47.1	53.3	92.7	74.0	53.9
Administrative and support service activities; Repair of computers	41.5	22.0	71.2	43.2	17.0	70.3	22.9	41.5
Total	38.3	41.4	47.2	45.1	42.3	32.4	25.3	39.5

Exchange views, opinions or knowledge within the enterprise

Activities	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	Total
Manufacturing	41.0	33.8	29.1	40.9	39.7	39.9	26.9	38.0
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	41.7	52.7	41.3	33.0	29.0	75.3	42.2	46.9
Construction	78.6	44.9	31.7	86.0	72.8	43.8	66.7	70.4
Wholesale and retail trade	30.6	10.7	36.2	22.6	38.8	25.3	16.6	27.5
Transportation and storage	50.3	35.7	32.1	42.7	35.4	63.1	27.7	47.3
Accommodation and food service activities	52.8	27.3	50.0	54.0	45.9	38.3	52.1	50.1
Information and communications	43.4	61.9	63.5	46.6	40.0	63.2	58.5	47.4
Real estate activities; Professional, scientific and technical activities	20.8	78.0	8.7	31.7	38.4	92.7	93.4	42.9
Administrative and support service activities; Repair of computers	35.9	7.8	53.2	25.2	46.7	64.8	91.2	33.5
Total	40.8	37.8	35.8	39.1	40.1	43.7	36.0	39.8

MODULE D: Sharing information electronically within the enterprise

D1: Does your enterprise use an ERP software package?

%

Enterprises		Size class			Region				Total
		Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i istočna Srbija	
Activities	Manufacturing	19.3	51.3	72.7	24.5	33.7	25.8	38.9	29.7
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	27.4	23.3	74.4	41.7	40.8	21.3	17.4	30.0
	Construction	9.9	27.8	57.6	11.0	24.8	4.9	25.7	14.8
	Wholesale and retail trade	27.4	53.9	88.4	39.4	36.2	18.8	21.7	32.3
	Transportation and storage	29.8	41.9	80.8	44.1	26.1	32.0	31.4	33.5
	Accommodation and food service activities	21.2	43.9	50.0	27.4	18.8	25.6	12.7	24.1
	Information and communications	21.2	53.6	71.4	33.3	11.8	15.4	45.8	28.5
	Real estate activities; Professional, scientific and technical activities	16.7	81.3	42.5	35.4	10.4	36.2	59.9	32.2
	Administrative and support service activities; Repair of computers	13.5	23.5	50.6	21.1	8.4	37.0	-	18.4
Total	21.6	48.7	71.8	31.1	29.3	23.0	30.5	28.7	

D2: Does your enterprise use CRM software to manage:

%

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

Entry, storage and making available information about customers to other business functions

Activities	Manufacturing	11.2	26.4	28.8	17.5	13.1	12.9	23.4	15.7
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	25.2	13.6	30.5	18.5	19.4	11.2	38.2	20.8
	Construction	5.0	13.1	10.0	3.5	12.5	3.7	11.6	6.7
	Wholesale and retail trade	17.2	23.4	36.5	23.5	9.3	16.6	21.8	18.5
	Transportation and storage	3.1	22.5	40.8	10.1	-	17.0	0.8	7.5
	Accommodation and food service activities	21.0	25.1	50.0	23.8	16.1	17.5	26.0	21.6
	Information and communications	26.8	35.6	38.1	31.5	18.6	23.7	37.7	28.7
	Real estate activities; Professional, scientific and technical activities	14.1	68.6	31.4	29.4	9.9	35.2	43.8	27.1
	Administrative and support service activities; Repair of computers	25.5	12.0	51.8	32.7	4.1	37.0	8.6	25.0
	Total	14.2	27.5	32.5	21.7	10.8	14.9	21.9	17.5

The analysis of information on customers for marketing purposes
(setting prices, sales promotion, choosing distribution channels...)

Activities	Manufacturing	7.9	22.4	25.9	16.0	12.0	8.0	15.9	12.3
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	9.6	3.4	16.8	14.8	1.3	10.3	9.3	7.7
	Construction	2.0	6.5	3.4	3.3	-	-	11.6	2.9
	Wholesale and retail trade	15.6	14.7	35.1	25.3	4.1	9.1	17.4	16.0
	Transportation and storage	-	11.3	9.8	0.8	-	7.3	-	2.2
	Accommodation and food service activities	23.9	12.0	50.0	30.8	8.7	13.8	15.5	22.6
	Information and communications	18.4	31.1	41.3	21.7	15.8	23.7	29.7	21.4
	Real estate activities; Professional, scientific and technical activities	8.1	59.8	18.3	20.7	3.8	35.2	43.8	20.4
	Administrative and support service activities; Repair of computers	13.5	1.3	29.1	14.1	0.8	32.1	5.3	12.4
	Total	10.7	20.4	25.1	18.6	6.4	9.5	15.7	13.1

MODULE E: ICT security

E1: Does your enterprise use any of the following ICT security measures? %

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

Strong password authentication, minimum length of 8 mixed, periodical change

Activities	Manufacturing	60.8	77.0	90.7	85.7	64.3	52.5	67.4	66.2
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	83.0	83.3	88.3	88.0	89.3	90.9	61.1	83.6
	Construction	63.1	76.1	73.5	67.8	54.6	86.2	46.1	65.9
	Wholesale and retail trade	76.1	81.7	88.2	83.0	85.4	53.1	78.4	77.1
	Transportation and storage	78.5	81.1	89.1	99.4	66.1	78.6	68.0	79.3
	Accommodation and food service activities	71.6	83.5	100.0	71.4	70.8	83.8	71.9	73.2
	Information and communications	78.6	95.9	87.3	74.6	93.7	100.0	88.2	81.9
	Real estate activities; Professional, scientific and technical activities	80.3	93.9	100.0	89.4	68.4	84.5	74.5	83.8
	Administrative and support service activities; Repair of computers	73.7	67.1	91.1	75.0	68.4	78.3	74.6	73.8
	Total	71.1	80.8	89.1	81.9	72.1	63.2	69.3	73.6

Keeping the software (including operating systems) up-to-date

Activities	Manufacturing	83.9	90.3	94.8	90.4	90.5	82.5	77.7	86.0
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	88.9	87.4	100.0	100.0	100.0	91.9	61.1	89.3
	Construction	69.1	85.4	90.0	84.0	87.5	60.6	34.5	72.9
	Wholesale and retail trade	74.3	94.9	96.4	77.4	94.2	74.4	50.4	77.5
	Transportation and storage	74.6	96.2	87.1	74.8	91.0	80.5	52.1	78.5
	Accommodation and food service activities	75.1	95.6	100.0	76.9	74.5	81.9	82.0	77.7
	Information and communications	90.1	100.0	100.0	92.9	89.4	83.9	100.0	92.1
	Real estate activities; Professional, scientific and technical activities	91.1	100.0	100.0	92.3	99.3	98.7	78.1	93.4
	Administrative and support service activities; Repair of computers	79.2	87.3	89.1	83.3	80.8	78.3	74.6	81.6
	Total	79.2	92.3	94.5	84.2	91.3	79.3	64.0	82.3

E1: Does your enterprise use any of the following ICT security measures? %

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

User identification and authentication via biometric methods implemented by the enterprise (e.g. based on fingerprints, voice, faces)

Activities	Manufacturing	7.0	11.3	12.8	11.5	7.1	8.8	4.4	8.3	
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	5.9	-	4.8	-	9.7	-	-	-	3.3
	Construction	6.7	3.5	3.1	12.5	-	0.4	5.0	5.9	
	Wholesale and retail trade	10.8	16.1	10.8	20.0	0.9	3.1	15.6	11.5	
	Transportation and storage	3.1	6.9	6.7	0.8	1.6	11.6	-	3.8	
	Accommodation and food service activities	13.4	12.3	50.0	17.4	-	20.6	5.1	13.5	
	Information and communications	19.7	21.8	25.4	24.5	12.8	20.6	8.0	20.2	
	Real estate activities; Professional, scientific and technical activities	7.1	54.0	-	20.0	-	28.6	34.4	17.9	
	Administrative and support service activities; Repair of computers	8.0	2.7	20.1	6.0	1.7	37.3	-	8.0	
	Total	8.8	14.9	11.8	15.6	3.8	8.5	8.2	10.1	

Encryption techniques for data, documents or e-mails

Activities	Manufacturing	23.8	41.8	54.3	40.2	40.2	15.9	22.5	29.7
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	10.3	38.2	40.2	25.9	36.6	18.2	14.9	24.9
	Construction	12.5	54.7	50.3	26.9	28.7	13.8	7.4	21.8
	Wholesale and retail trade	21.7	50.2	42.7	30.1	25.3	22.7	16.9	25.8
	Transportation and storage	38.2	40.8	53.3	83.2	17.4	27.6	18.4	39.2
	Accommodation and food service activities	25.9	58.7	100.0	37.5	8.7	32.5	25.8	30.3
	Information and communications	47.0	74.0	71.4	50.1	61.2	37.0	62.3	52.4
	Real estate activities; Professional, scientific and technical activities	38.7	85.4	75.2	48.9	53.4	40.4	68.8	50.2
	Administrative and support service activities; Repair of computers	39.7	11.2	50.0	35.8	32.4	37.0	34.0	35.0
	Total	26.2	49.3	52.3	39.6	33.3	20.7	22.6	31.6

E1: Does your enterprise use any of the following ICT security measures? %

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)

Activities	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	Total
Manufacturing	69.0	75.7	83.8	92.5	77.8	56.6	56.8	71.4
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	88.9	80.6	88.3	100.0	100.0	90.0	45.0	85.3
Construction	67.0	77.2	74.1	80.3	67.5	73.6	30.7	69.1
Wholesale and retail trade	67.6	77.3	87.4	74.3	77.2	78.5	22.1	69.3
Transportation and storage	72.0	77.2	83.5	92.0	81.9	69.2	18.5	73.2
Accommodation and food service activities	47.2	83.8	100.0	46.5	64.2	53.8	56.5	51.9
Information and communications	91.3	97.3	81.0	93.3	100.0	71.6	82.1	92.0
Real estate activities; Professional, scientific and technical activities	80.0	86.6	100.0	79.1	85.8	88.6	87.5	81.9
Administrative and support service activities; Repair of computers	64.0	70.4	86.6	69.5	60.3	62.7	74.6	67.1
Total	69.7	78.6	84.9	79.6	78.4	67.4	43.9	72.0

Network access control (management of access by devices and users to the enterprise's network)

Activities	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	Total
Manufacturing	60.1	74.4	88.3	75.3	70.6	55.1	59.0	65.0
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	73.4	68.6	83.7	94.0	73.9	90.0	29.7	72.3
Construction	44.0	64.2	83.8	52.5	45.0	57.3	32.0	49.1
Wholesale and retail trade	57.1	74.0	94.0	63.6	73.2	58.9	25.3	60.2
Transportation and storage	61.8	86.1	90.2	99.2	63.5	58.0	20.1	66.7
Accommodation and food service activities	52.0	97.9	100.0	65.4	36.4	63.1	46.1	57.8
Information and communications	79.9	96.0	100.0	82.4	83.2	83.9	90.1	83.4
Real estate activities; Professional, scientific and technical activities	56.0	93.5	100.0	68.7	53.4	68.8	65.6	65.5
Administrative and support service activities; Repair of computers	61.0	66.0	86.6	78.0	32.6	47.8	71.9	64.1
Total	58.4	76.9	89.6	70.3	65.4	59.0	43.9	63.2

E1: Does your enterprise use any of the following ICT security measures? %

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)

Activities	Manufacturing	27.3	40.8	75.9	51.1	30.0	24.2	29.6	33.2
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	15.6	27.1	71.3	35.6	23.9	29.3	16.1	25.6
	Construction	11.6	32.4	76.1	24.6	16.7	4.9	17.9	17.5
	Wholesale and retail trade	24.4	64.6	90.0	45.1	38.0	7.2	6.7	31.2
	Transportation and storage	41.8	63.4	77.2	98.4	23.3	31.8	18.5	46.5
	Accommodation and food service activities	30.8	80.1	100.0	46.5	10.1	44.4	22.9	37.2
	Information and communications	56.4	83.1	93.7	65.8	60.1	44.3	58.5	62.2
	Real estate activities; Professional, scientific and technical activities	38.1	39.3	54.2	42.7	41.1	20.8	18.7	38.6
	Administrative and support service activities; Repair of computers	41.8	19.0	58.6	38.1	45.6	30.5	35.3	38.8
	Total	29.0	46.7	76.7	48.0	32.0	20.2	21.1	34.3

Maintaining log files for analysis after security incidents

Activities	Manufacturing	32.8	55.6	74.0	47.9	48.4	34.2	26.9	40.4
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	24.3	38.7	60.2	61.6	21.6	46.5	16.1	33.7
	Construction	8.7	42.7	34.7	23.0	8.7	10.2	16.6	16.0
	Wholesale and retail trade	30.9	43.7	67.1	54.7	21.3	18.8	5.8	33.5
	Transportation and storage	21.6	33.3	56.5	35.6	14.2	35.8	3.3	24.7
	Accommodation and food service activities	33.6	69.7	100.0	44.0	17.5	35.6	49.0	38.3
	Information and communications	60.6	82.9	79.4	67.6	67.0	32.8	71.7	65.0
	Real estate activities; Professional, scientific and technical activities	44.0	32.1	56.9	48.9	32.4	21.8	25.0	41.4
	Administrative and support service activities; Repair of computers	40.6	10.0	57.5	42.3	7.6	47.8	56.1	36.1
	Total	31.6	46.7	66.3	48.1	30.6	28.8	20.8	35.9

E1: Does your enterprise use any of the following ICT security measures? %

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

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

Activities	Manufacturing	12.4	29.5	52.1	18.2	24.7	13.1	19.7	18.6
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	15.6	17.1	55.6	31.9	14.6	29.3	6.8	19.9
	Construction	13.3	41.0	37.5	35.8	8.7	10.2	2.5	19.4
	Wholesale and retail trade	24.0	37.9	45.3	34.1	34.8	12.1	5.3	26.4
	Transportation and storage	8.7	47.2	43.5	41.2	8.7	5.0	1.6	16.1
	Accommodation and food service activities	26.2	37.0	100.0	32.3	10.3	26.3	38.4	27.9
	Information and communications	52.9	75.8	69.8	65.7	61.9	16.7	25.9	57.4
	Real estate activities; Professional, scientific and technical activities	15.3	25.2	54.2	15.9	37.2	1.0	12.5	18.3
	Administrative and support service activities; Repair of computers	14.7	10.6	51.3	19.6	2.5	41.4	3.3	16.9
	Total	18.9	33.4	50.7	30.5	25.0	13.2	12.2	22.9

ICT security tests (e.g. performing penetration tests, testing security alert system, review of security measures, testing of back-up systems)

Activities	Manufacturing	11.0	22.4	44.2	17.8	20.8	9.0	15.8	15.5
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	11.2	11.3	32.9	13.4	13.5	16.5	8.1	13.2
	Construction	13.3	19.7	13.6	28.5	10.2	0.4	2.5	14.6
	Wholesale and retail trade	24.9	43.5	47.5	36.9	33.5	15.3	4.9	27.9
	Transportation and storage	8.7	28.9	43.5	34.8	7.1	2.7	1.6	13.2
	Accommodation and food service activities	27.3	36.4	50.0	31.7	10.3	33.1	38.4	28.6
	Information and communications	50.0	74.3	74.6	60.7	66.5	28.9	11.8	55.0
	Real estate activities; Professional, scientific and technical activities	16.5	20.8	62.1	15.4	33.4	7.8	18.1	18.3
	Administrative and support service activities; Repair of computers	22.8	8.9	41.0	29.0	2.5	30.5	6.6	21.6
	Total	19.0	27.6	43.6	30.2	23.3	11.0	10.5	21.6

E2: 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)

Activities	Manufacturing	24.8	40.7	61.8	35.5	36.5	22.8	28.5	30.6
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	37.7	38.4	54.6	40.7	56.1	26.4	31.0	39.6
	Construction	23.3	31.6	64.4	33.4	32.6	3.7	29.5	26.1
	Wholesale and retail trade	33.1	42.3	79.0	39.5	45.3	21.4	24.3	35.4
	Transportation and storage	36.9	67.1	56.0	41.0	48.4	43.4	28.8	42.4
	Accommodation and food service activities	27.7	61.3	100.0	30.7	22.6	50.6	30.6	32.2
	Information and communications	72.5	83.8	85.7	81.2	74.1	64.6	41.5	74.9
	Real estate activities; Professional, scientific and technical activities	64.0	34.2	68.6	60.5	63.4	33.8	40.6	57.1
	Administrative and support service activities; Repair of computers	42.6	52.2	64.7	44.6	36.0	69.5	57.5	46.3
Total	34.9	44.1	65.8	44.1	43.3	25.7	29.4	37.9	

Compulsory training courses or viewing compulsory material

Activities	Manufacturing	9.3	21.3	29.7	14.5	13.4	16.4	4.2	13.2
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	4.4	5.4	31.1	24.5	2.6	4.8	6.8	7.3
	Construction	8.7	6.6	3.4	12.8	2.4	3.3	11.6	8.1
	Wholesale and retail trade	17.9	21.4	31.6	30.5	7.7	9.4	13.1	18.7
	Transportation and storage	3.1	11.4	27.5	2.2	3.6	12.5	1.6	5.3
	Accommodation and food service activities	12.8	19.3	100.0	17.9	-	19.4	10.1	14.1
	Information and communications	41.9	64.0	61.9	52.6	44.7	20.8	29.7	46.3
	Real estate activities; Professional, scientific and technical activities	11.3	11.9	24.2	10.7	16.2	7.8	13.0	11.6
	Administrative and support service activities; Repair of computers	11.5	9.9	39.7	15.8	6.8	4.8	28.7	13.5
Total	13.3	18.5	30.8	21.4	10.4	12.3	9.3	15.0	

E2: 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	

By contract (contract of employment)

Activities	By contract (contract of employment)								
	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	Total	
Manufacturing	12.3	25.2	28.5	9.9	18.1	10.2	35.5	16.2	
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	26.7	6.8	21.0	3.7	27.8	8.3	24.5	17.8	
Construction	2.0	31.2	17.4	10.0	2.9	3.3	19.0	8.1	
Wholesale and retail trade	21.4	37.6	37.6	28.5	6.7	12.2	59.1	23.8	
Transportation and storage	20.0	34.6	45.5	35.0	17.4	12.5	33.5	23.3	
Accommodation and food service activities	25.2	28.2	-	30.1	8.8	33.1	18.1	25.4	
Information and communications	55.5	68.3	62.7	58.3	67.2	36.2	52.4	57.9	
Real estate activities; Professional, scientific and technical activities	33.0	62.9	49.0	49.4	4.3	49.2	43.8	40.3	
Administrative and support service activities; Repair of computers	25.1	15.2	34.1	22.4	19.2	38.9	28.7	23.9	
Total	20.1	32.8	32.5	28.1	15.1	13.4	39.7	23.0	

E3: Who carries out the ICT security related activities (security testing, ICT training on security, resolving ICT security incidents) in your enterprise?

%

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 those employed in parent or affiliate enterprises)

Activities	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	Total
Manufacturing	27.0	47.4	77.2	41.6	35.1	26.9	38.7	34.6
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	46.2	50.7	77.9	39.8	40.5	81.8	31.4	51.0
Construction	35.7	32.5	82.9	46.6	29.7	21.5	41.1	36.4
Wholesale and retail trade	31.7	63.8	85.9	38.7	43.2	39.6	16.5	37.2
Transportation and storage	38.8	66.5	75.7	42.7	37.8	52.8	48.1	44.5
Accommodation and food service activities	23.3	44.9	50.0	26.3	15.3	28.8	41.0	26.0
Information and communications	84.1	87.5	100.0	88.7	76.8	83.9	82.1	85.2
Real estate activities; Professional, scientific and technical activities	44.0	95.3	75.2	47.1	69.3	64.9	98.5	56.5
Administrative and support service activities; Repair of computers	53.6	33.9	68.7	54.0	38.2	57.0	57.5	51.0
Total	35.8	56.5	79.0	45.5	40.7	37.2	38.0	41.5

External suppliers

Activities	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	Total
Manufacturing	60.2	52.7	38.2	58.5	56.4	53.4	64.7	57.2
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	60.8	43.8	38.4	39.4	82.4	33.9	35.3	51.5
Construction	32.5	64.0	24.4	15.8	71.3	65.4	7.4	38.4
Wholesale and retail trade	64.2	48.2	40.0	75.6	55.0	53.1	38.2	61.5
Transportation and storage	58.2	54.8	32.6	65.0	65.4	42.4	46.4	56.7
Accommodation and food service activities	54.7	64.8	50.0	54.2	65.6	72.5	20.6	55.9
Information and communications	32.5	32.9	34.1	25.6	62.9	32.6	9.9	32.6
Real estate activities; Professional, scientific and technical activities	57.6	16.0	73.9	56.1	32.8	58.3	-	48.1
Administrative and support service activities; Repair of computers	54.6	59.5	52.1	62.3	51.6	36.5	37.3	55.3
Total	56.5	48.4	39.7	56.7	58.1	52.6	42.0	54.3

E4: Does your enterprise have document(s) on measures, practices or procedures on ICT security?

%

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

YES

Activities	Manufacturing	11.9	24.4	53.5	23.3	19.6	12.4	12.9	17.2
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	33.3	29.1	80.8	38.0	49.2	32.2	18.6	35.9
	Construction	17.4	27.9	47.2	20.9	16.3	19.9	25.7	20.3
	Wholesale and retail trade	31.7	31.3	37.8	51.8	20.8	7.4	21.3	31.8
	Transportation and storage	26.0	25.7	66.3	60.8	5.5	22.7	16.0	27.3
	Accommodation and food service activities	17.2	43.7	100.0	23.1	5.1	25.6	30.7	20.9
	Information and communications	53.6	72.4	74.6	61.9	57.0	37.2	46.2	57.5
	Real estate activities; Professional, scientific and technical activities	22.5	72.3	73.9	32.6	36.2	33.6	56.9	35.0
	Administrative and support service activities; Repair of computers	16.2	23.2	74.3	25.1	9.3	28.1	32.0	22.3
	Total	23.4	34.0	57.0	38.3	21.3	15.6	21.1	26.7

E6: When were your enterprise's document(s) on measures, practices or procedures on ICT security defined or most recently reviewed?

%

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

Within the last 12 months

Activities	Manufacturing	79.4	78.8	77.4	95.0	82.7	54.3	70.8	78.8
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	82.2	73.0	78.0	84.1	78.2	68.8	93.3	78.2
	Construction	16.9	43.8	77.7	23.3	97.2	2.0	-	28.1
	Wholesale and retail trade	30.1	66.0	91.6	19.7	65.1	86.6	98.1	36.5
	Transportation and storage	33.6	100.0	74.1	59.0	93.7	11.9	9.8	47.1
	Accommodation and food service activities	77.2	70.5	100.0	88.2	100.0	68.3	25.0	76.1
	Information and communications	75.9	84.8	93.6	82.8	75.8	77.6	48.0	78.6
	Real estate activities; Professional, scientific and technical activities	58.0	97.3	75.2	78.2	55.1	100.0	96.4	77.6
	Administrative and support service activities; Repair of computers	82.4	58.1	96.9	89.0	35.7	77.1	79.5	81.4
	Total	48.9	78.3	82.3	53.1	74.5	53.8	66.4	58.8

More than 12 months ago and up to 24 months ago

Activities	Manufacturing	4.2	15.4	13.6	5.0	3.3	17.5	24.1	9.6
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	17.8	20.0	18.5	-	21.8	31.2	-	18.7
	Construction	83.1	33.0	22.3	62.2	2.8	98.0	100.0	65.7
	Wholesale and retail trade	32.7	7.0	5.3	31.5	34.3	13.4	1.9	28.6
	Transportation and storage	66.4	-	25.9	41.0	6.3	88.1	90.2	52.9
	Accommodation and food service activities	19.5	19.2	-	7.7	-	31.7	58.5	18.9
	Information and communications	4.5	15.2	6.4	3.9	3.2	22.4	34.7	6.9
	Real estate activities; Professional, scientific and technical activities	42.0	2.1	8.8	21.8	40.6	-	3.6	21.6
	Administrative and support service activities; Repair of computers	7.0	41.9	3.1	5.5	64.3	8.6	20.5	12.9
	Total	30.8	12.9	12.5	23.9	18.3	35.9	30.0	25.0

E6: When were your enterprise's document(s) on measures, practices or procedures on ICT security defined or most recently reviewed?

%

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

More than 24 months ago

Activities	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i istočna Srbija	Total
	Manufacturing	16.4	5.8	9.0	-	14.0	28.2	5.1
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	-	7.0	3.5	15.9	-	-	6.7	3.1
Construction	-	23.2	-	14.5	-	-	-	6.2
Wholesale and retail trade	37.2	27.0	3.2	48.8	0.6	-	-	34.9
Transportation and storage	-	-	-	-	-	-	-	-
Accommodation and food service activities	3.2	10.3	-	4.1	-	-	16.5	4.9
Information and communications	19.6	-	-	13.3	21.0	-	17.3	14.5
Real estate activities; Professional, scientific and technical activities	-	0.6	15.9	-	4.3	-	-	0.9
Administrative and support service activities; Repair of computers	10.7	-	-	5.5	-	14.3	-	5.6
Total	20.3	8.8	5.2	23.0	7.3	10.2	3.6	16.2

E7: During 2018, did your enterprise experience at least once any of the following problems due to ICT related security incidents?

%

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

Unavailability of ICT services (denial of service attacks, ransomware attacks, hardware and software failures - excluding mechanical failure, theft)

Activities	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	Total
Manufacturing	13.1	10.3	17.8	23.9	6.5	13.9	3.8	12.8
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	-	23.7	13.7	9.7	9.4	17.2	6.8	11.3
Construction	-	6.5	29.9	4.4	0.5	0.8	-	2.1
Wholesale and retail trade	2.7	8.0	22.5	2.6	1.0	12.6	0.5	3.9
Transportation and storage	6.2	30.1	16.1	14.6	-	23.3	-	10.4
Accommodation and food service activities	14.0	20.6	50.0	20.1	-	17.5	10.3	15.0
Information and communications	26.6	32.6	46.8	21.6	48.9	35.7	20.3	28.3
Real estate activities; Professional, scientific and technical activities	28.2	61.6	42.5	37.3	34.1	33.9	34.9	36.2
Administrative and support service activities; Repair of computers	24.3	20.8	19.1	33.8	5.1	17.3	-	23.2
Total	10.4	18.8	21.5	17.0	7.3	14.7	4.4	12.4

Destruction or corruption of data (due to infection or malicious software or unauthorised intrusion, hardware or software failures)

Activities	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	Total
Manufacturing	12.1	9.4	7.6	23.8	2.4	11.9	5.7	11.2
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	-	-	14.9	-	2.3	1.9	-	1.4
Construction	6.7	8.2	22.5	3.9	10.0	14.2	2.5	7.4
Wholesale and retail trade	2.8	6.1	12.4	1.0	5.8	7.9	0.5	3.5
Transportation and storage	6.2	14.9	3.1	6.2	-	21.4	-	7.5
Accommodation and food service activities	15.6	14.1	-	16.8	-	31.9	10.1	15.3
Information and communications	9.2	13.2	9.5	8.9	8.3	27.3	4.2	9.9
Real estate activities; Professional, scientific and technical activities	11.6	10.1	55.6	18.0	1.0	1.0	2.1	12.0
Administrative and support service activities; Repair of computers	8.5	6.7	10.2	13.2	-	4.0	-	8.3
Total	7.9	8.6	11.6	10.6	3.7	11.9	3.0	8.2

E7: During 2018, did your enterprise experience at least once any of the following problems due to ICT related security incidents?

%

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

Disclosure of confidential data (due to intrusion, phishing, phishing attack, actions by own employees (intentionally or unintentionally))

Activities	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	Total
Manufacturing	6.2	4.0	6.4	9.8	4.5	4.0	4.6	5.7
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	-	-	7.9	-	1.3	1.0	-	0.7
Construction	-	-	13.1	0.9	-	-	-	0.4
Wholesale and retail trade	0.7	10.1	6.0	2.7	1.0	3.1	-	2.0
Transportation and storage	3.1	3.8	6.7	0.8	-	11.6	-	3.3
Accommodation and food service activities	-	-	-	-	-	-	-	-
Information and communications	0.8	6.4	13.5	1.6	2.8	8.1	-	2.2
Real estate activities; Professional, scientific and technical activities	7.5	3.4	6.5	8.9	-	-	13.0	6.6
Administrative and support service activities; Repair of computers	2.4	-	-	2.2	-	4.0	-	1.7
Total	2.9	4.2	6.6	4.3	1.9	3.8	2.2	3.3

E8: Does your enterprise have insurance against ICT security incidents?

%

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

YES

Activities	Manufacturing	11.9	11.0	26.6	14.2	11.8	11.4	13.7	12.6
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	16.2	10.0	22.7	18.5	28.7	1.0	6.8	14.2
	Construction	15.4	10.2	20.0	29.0	-	4.1	11.6	14.5
	Wholesale and retail trade	11.5	16.6	27.6	14.9	13.4	8.7	8.8	12.6
	Transportation and storage	11.8	35.5	22.8	38.5	5.1	12.5	-	16.0
	Accommodation and food service activities	5.1	15.6	100.0	7.1	3.7	8.1	10.1	6.9
	Information and communications	32.1	38.5	59.5	47.6	10.3	16.4	12.7	34.2
	Real estate activities; Professional, scientific and technical activities	11.2	63.4	-	22.5	16.7	27.1	43.8	23.2
	Administrative and support service activities; Repair of computers	8.6	11.9	34.0	8.9	3.3	32.1	25.4	11.3
Total	12.7	20.3	27.4	20.2	11.0	10.8	12.2	14.7	

MODULE F: E-commerce

F1: During 2019, did your enterprise receive orders for goods or services placed via a website or mobile application (excluding manually typed e-mails)?

%

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

YES

Activities	Size class			Region				Total
	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
Manufacturing	25.2	26.7	24.7	22.5	23.9	30.0	23.5	25.5
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	5.9	13.4	2.9	-	16.6	-	14.9	8.8
Construction	19.1	8.1	3.4	25.3	2.4	13.0	19.0	16.5
Wholesale and retail trade	35.2	55.4	56.1	31.9	47.2	41.5	38.6	38.3
Transportation and storage	19.0	17.6	37.9	2.0	12.6	53.0	6.4	19.5
Accommodation and food service activities	29.7	50.3	50.0	26.2	37.7	49.4	31.0	32.3
Information and communications	46.0	43.5	31.7	52.3	33.0	32.8	34.0	45.0
Real estate activities; Professional, scientific and technical activities	10.4	7.2	31.4	8.7	17.2	2.6	13.0	10.0
Administrative and support service activities; Repair of computers	32.0	39.4	21.6	45.8	7.6	12.9	30.7	32.6
Total	27.1	28.7	28.5	26.5	26.6	31.2	25.7	27.5

F2: Indicate an estimate of the percentage of the total turnover resulting from orders received via a website or mobile application in 2018¹⁾

%

	Size class			Region				Total
	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	
1-24%	65.1	60.3	56.9	62.4	63.3	75.2	45.0	63.8
25-49%	12.6	15.6	10.3	13.4	20.7	8.4	6.2	13.1
50-74%	7.4	15.9	14.1	8.7	9.8	9.3	10.6	9.4
75-100%	14.9	8.2	18.7	15.5	6.1	7.1	38.2	13.7

¹⁾The results refer only to enterprises that in question F1 said "Yes".

F3: Indicate the percentage of the turnover of orders received via a website or mobile application in 2018, by type of customer¹⁾ %

	Enterprises								Total
	Size class			Region					
	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i istočna Srbija		
Sales to private consumers (B2C)									
1-24%	25.6	30.1	25.7	31.7	23.1	26.8	16.6	26.5	
25-49%	0.6	4.0	1.5	1.3	1.9	0.1	2.7	1.3	
50-74%	25.7	27.3	17.0	32.3	16.3	17.2	42.0	25.7	
75-100%	48.0	38.6	55.7	34.7	58.7	56.0	38.7	46.5	
Sales to other enterprises (B2B, B2G)									
1-24%	46.3	37.0	55.7	34.7	57.4	53.3	33.8	44.9	
25-49%	8.0	12.4	6.5	14.9	3.1	6.1	6.5	8.8	
50-74%	20.1	20.5	12.1	18.8	16.4	13.9	43.1	19.8	
75-100%	25.6	30.1	25.7	31.7	23.1	26.8	16.6	26.5	

¹⁾ The results refer only to enterprises that in question F1 said "Yes".

F4: During 2018, did your enterprise receive orders for goods/services via websites or mobile applications?¹⁾

%

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 mobile application

Activities	Manufacturing	91.4	86.4	97.5	85.5	94.4	90.2	91.9	90.6
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	100.0	100.0	100.0	-	100.0	-	100.0	100.0
	Construction	100.0	78.5	100.0	100.0	100.0	100.0	87.0	98.0
	Wholesale and retail trade	99.2	97.4	97.2	100.0	98.8	99.5	94.2	98.8
	Transportation and storage	83.7	100.0	100.0	100.0	100.0	82.3	100.0	87.2
	Accommodation and food service activities	89.2	100.0	100.0	89.4	100.0	83.5	100.0	91.3
	Information and communications	100.0	97.7	100.0	100.0	100.0	100.0	94.4	99.6
	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	82.9	100.0	95.2	100.0	100.0	100.0	96.0
	Total	95.9	92.7	98.1	96.5	97.7	92.3	93.8	95.4

Via an e-commerce marketplace website or application used by several enterprises for trading products

Activities	Manufacturing	21.5	17.0	11.0	18.2	13.5	29.2	9.0	19.9
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	-	-	-	-	-	-	-	-
	Construction	10.6	64.5	-	-	-	-	100.0	15.7
	Wholesale and retail trade	20.3	12.4	31.6	20.8	15.1	7.6	44.8	19.3
	Transportation and storage	32.5	39.0	-	-	12.6	39.6	-	31.2
	Accommodation and food service activities	13.4	29.0	100.0	18.9	13.3	24.1	-	17.1
	Information and communications	4.4	18.4	20.0	9.3	-	-	5.6	7.1
	Real estate activities; Professional, scientific and technical activities	89.1	39.0	-	89.8	78.2	-	-	76.0
	Administrative and support service activities; Repair of computers	8.9	17.1	-	10.8	-	31.2	-	10.4
	Total	20.4	18.2	17.2	18.3	15.6	22.0	28.7	19.8

¹⁾ The results refer only to enterprises that in question F1 said "Yes".

F5: Indicate the percentage of the turnover resulting from orders received via a website or mobile application in 2018¹⁾

%

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

Via your enterprise's website or mobile application

1-24%	3.2	2.9	0.7	1.2	7.4	0.0	5.8	3.0
25-49%	1.0	0.0	4.9	0.9	0.0	2.2	0.9	1.0
50-74%	7.2	5.3	3.0	8.0	2.7	3.6	17.3	6.7
75-100%	88.6	91.8	91.4	89.9	89.9	94.1	76.0	89.3

Via an e-commerce marketplace website or apps used by several enterprises for trading products

1-24%	26.3	18.2	39.8	27.3	22.1	40.4	0.0	25.3
25-49%	0.0	3.2	0.0	0.0	0.0	0.0	3.3	0.6
50-74%	39.0	23.7	38.4	46.4	16.7	24.7	56.0	36.2
75-100%	34.7	54.9	21.8	26.3	61.2	35.0	40.7	37.9

¹⁾ The results refer only to enterprises that in question F4 said "Yes".

F6: During 2018, did your enterprise receive orders placed via a website or mobile application from clients 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

Activities	Manufacturing	98.5	94.0	100.0	97.2	99.4	95.5	100.0	97.5
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	-	100.0	100.0	-	49.2	-	100.0	67.3
	Construction	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Wholesale and retail trade	97.4	97.4	100.0	100.0	100.0	100.0	80.0	97.5
	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	83.1	76.8	100.0	81.2	84.0	74.6	100.0	82.5
	Real estate activities; Professional, scientific and technical activities	100.0	61.0	100.0	88.2	100.0	100.0	100.0	93.4
	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	96.7	94.5	100.0	96.1	97.6	97.6	91.9	96.4

EU countries

Activities	Manufacturing	28.6	21.4	31.5	22.3	40.4	19.9	28.6	27.1
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	100.0	-	-	-	50.8	-	-	32.7
	Construction	54.4	78.5	100.0	50.5	100.0	100.0	26.0	57.0
	Wholesale and retail trade	15.9	26.8	20.2	4.6	25.3	20.3	36.1	18.0
	Transportation and storage	32.5	57.0	32.9	-	25.4	41.2	26.4	36.1
	Accommodation and food service activities	50.5	61.1	-	47.7	56.0	74.7	8.4	52.1
	Information and communications	47.1	51.6	30.0	39.2	100.0	50.0	12.5	47.4
	Real estate activities; Professional, scientific and technical activities	-	45.9	-	13.9	-	-	-	7.7
	Administrative and support service activities; Repair of computers	27.3	17.1	46.9	28.7	10.9	31.2	-	26.0
	Total	27.7	30.0	27.5	23.0	35.2	29.5	27.5	28.2

F6: During 2018, did your enterprise receive orders placed via a website or mobile application from clients 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	

Rest of the world

Activities	Manufacturing	15.4	12.2	30.5	19.1	11.1	15.4	18.7	15.5
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	100.0	-	-	-	50.8	-	-	32.7
	Construction	-	43.0	-	-	-	-	26.0	4.1
	Wholesale and retail trade	6.7	11.1	21.3	2.5	4.9	24.5	3.8	8.1
	Transportation and storage	-	39.4	16.5	-	12.8	4.3	26.4	6.9
	Accommodation and food service activities	47.9	48.7	-	44.5	46.3	70.9	8.4	47.6
	Information and communications	28.2	63.2	50.0	29.1	77.9	12.7	12.5	34.5
	Real estate activities; Professional, scientific and technical activities	1.7	6.8	-	2.1	-	49.1	-	2.4
	Administrative and support service activities; Repair of computers	27.3	-	-	20.9	10.9	31.2	-	19.4
	Total	13.6	17.7	22.9	13.8	13.9	18.8	11.1	14.8

F7: Indicate the percentage of the turnover from orders received via a website or mobile application in 2018 from customers located in the following geographic areas

%

	Enterprises								Total
	Size class			Region					
	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i istočna Srbija		
Republic of Serbia									
1-24%	2.2	4.7	2.9	3.0	2.4	3.7	0.3	2.7	
25-49%	1.7	3.4	0.7	0.8	6.0	0.5	0.3	2.0	
50-74%	9.0	9.7	8.8	6.0	8.7	11.5	15.2	9.1	
75-100%	87.1	82.2	87.6	90.1	82.9	84.4	84.2	86.2	
EU countries									
1-24%	44.5	39.1	68.5	41.5	58.8	43.5	13.9	44.4	
25-49%	33.9	25.1	21.8	41.7	16.8	36.4	31.7	31.5	
50-74%	13.2	20.2	2.4	8.1	18.2	11.3	27.6	14.2	
75-100%	8.4	15.7	7.3	8.6	6.2	8.8	26.7	9.9	
Rest of the world									
1-24%	61.0	44.1	84.0	57.7	47.0	64.5	71.7	58.5	
25-49%	24.7	33.3	16.0	14.9	35.5	34.3	11.3	26.1	
50-74%	5.6	16.7	0.0	7.9	16.1	0.0	17.1	7.9	
75-100%	8.8	5.9	0.0	19.5	1.4	1.3	0.0	7.5	

F8: During 2018, did your enterprise experience any of the following difficulties when selling to other EU countries via a website or mobile application?

%

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

High costs of delivering or returning products when selling

Activities	Manufacturing	20.3	18.5	18.8	15.7	9.5	22.5	38.0	19.8
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	-	-	-	-	-	-	-	-
	Construction	-	-	-	-	-	-	-	-
	Wholesale and retail trade	3.9	23.3	28.9	8.5	5.6	16.9	-	8.4
	Transportation and storage	32.5	-	34.1	41.7	-	36.9	-	27.9
	Accommodation and food service activities	29.9	-	100.0	46.0	-	16.5	-	24.9
	Information and communications	4.8	19.5	30.0	3.7	24.5	24.6	-	7.9
	Real estate activities; Professional, scientific and technical activities	57.3	70.4	-	89.8	15.8	49.1	-	56.4
	Administrative and support service activities; Repair of computers	3.2	-	76.5	4.9	21.7	-	17.1	6.4
	Total	12.6	17.7	28.1	13.8	7.7	21.7	13.2	14.3

Difficulties related to resolving complaints and disputes when selling

Activities	Manufacturing	4.1	15.0	8.9	19.0	4.5	2.0	6.5	7.0
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	-	-	-	-	-	-	-	-
	Construction	-	-	-	-	-	-	-	-
	Wholesale and retail trade	1.9	17.7	23.8	7.4	3.0	9.8	-	5.7
	Transportation and storage	-	21.4	30.0	70.8	-	4.3	-	5.2
	Accommodation and food service activities	-	12.4	-	3.2	-	3.8	-	2.3
	Information and communications	8.7	14.8	-	11.4	8.5	-	-	9.5
	Real estate activities; Professional, scientific and technical activities	55.6	31.4	-	78.0	15.8	-	-	48.5
	Administrative and support service activities; Repair of computers	3.5	-	41.1	5.7	-	-	-	4.7
	Total	4.5	14.7	17.1	12.1	3.8	4.8	2.2	7.0

F8: During 2018, did your enterprise experience any of the following difficulties when selling to other EU countries via a website or mobile application?

%

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

Adapting product labelling for sales

Activities	Manufacturing	5.8	1.3	20.8	15.2	5.8	1.2	2.1	5.6
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	-	-	-	-	-	-	-	-
	Construction	-	-	-	-	-	-	-	-
	Wholesale and retail trade	1.9	6.2	9.9	3.5	-	8.2	-	3.0
	Transportation and storage	-	-	-	-	-	-	-	-
	Accommodation and food service activities	-	4.7	-	-	-	3.8	-	0.9
	Information and communications	-	11.6	-	2.6	-	-	-	1.9
	Real estate activities; Professional, scientific and technical activities	-	-	-	-	-	-	-	-
	Administrative and support service activities; Repair of computers	-	-	64.6	4.2	-	-	-	3.5
	Total	2.3	3.6	15.9	4.6	1.7	3.3	0.7	3.1

Lack of knowledge of foreign languages for communicating with customers

Activities	Manufacturing	77.0	6.0	2.0	24.0	15.0	-	46.0	84.0
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	-	-	-	-	-	-	-	-
	Construction	-	-	-	-	-	-	-	-
	Wholesale and retail trade	-	-	-	-	-	-	-	-
	Transportation and storage	-	-	-	-	-	-	-	-
	Accommodation and food service activities	-	2.0	-	-	-	2.0	-	2.0
	Information and communications	-	-	-	-	-	-	-	-
	Real estate activities; Professional, scientific and technical activities	-	1.0	-	1.0	-	-	-	1.0
	Administrative and support service activities; Repair of computers	-	-	4.0	4.0	-	-	-	4.0
	Total	77.0	8.0	5.0	29.0	15.0	2.0	46.0	91.0

F8: During 2018, did your enterprise experience any of the following difficulties when selling to other EU countries via a website or mobile application?

%

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

Restrictions from your business partners to sell to certain countries

Activities	Restrictions from your business partners to sell to certain countries								
	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i Istočna Srbija	Total	
Manufacturing	22.0	10.0	6.0	26.0	-	2.0	10.0	38.0	
Electricity, gas, steam and air conditioning supply; Water supply and sewerage	-	-	-	-	-	-	-	-	
Construction	-	-	-	-	-	-	-	-	
Wholesale and retail trade	-	-	-	-	-	-	-	-	
Transportation and storage	23.0	-	2.0	-	-	25.0	-	25.0	
Accommodation and food service activities	-	-	-	-	-	-	-	-	
Information and communications	2.0	-	-	-	-	2.0	-	2.0	
Real estate activities; Professional, scientific and technical activities	-	1.0	-	1.0	-	-	-	1.0	
Administrative and support service activities; Repair of computers	-	-	6.0	6.0	-	-	-	6.0	
Total	47.0	11.0	14.0	34.0	-	29.0	10.0	72.0	

F9: During 2018, did your enterprise receive orders for goods or services placed via EDI-type messages?

%

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

YES

Activities	Manufacturing	3.0	4.8	10.7	7.0	4.6	1.6	2.3	3.9
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	-	3.4	-	-	-	-	6.8	1.4
	Construction	-	-	-	-	-	-	-	-
	Wholesale and retail trade	5.3	14.1	8.4	3.0	7.5	8.7	13.2	6.5
	Transportation and storage	3.1	4.4	32.6	3.6	1.6	9.4	2.4	4.3
	Accommodation and food service activities	-	8.4	-	1.8	-	-	-	1.0
	Information and communications	1.9	5.0	-	2.6	2.0	-	4.2	2.4
	Real estate activities; Professional, scientific and technical activities	1.0	0.5	-	0.2	-	7.8	-	0.9
	Administrative and support service activities; Repair of computers	2.9	-	5.1	3.4	-	4.0	-	2.5
	Total	3.0	5.4	8.8	3.0	3.7	4.0	5.1	3.7

F10: Please, indicate an estimate of the percentage of the total turnover resulting from orders received that were placed via *EDI-type messages* in 2018¹⁾

%

	Enterprises								Total
	Size class			Region					
	Small (10-49)	Medium (50-249)	Large (250+)	Beogradski	Vojvodina	Šumadija i Zapadna Srbija	Južna i istočna Srbija		
YES									
1-24%	47.6	43.1	55.7	27.9	83.3	57.5	15.0	47.2	
25-49%	19.0	25.0	19.8	36.8	11.3	20.6	4.9	20.7	
50-74%	13.8	10.9	12.1	17.4	2.2	2.8	34.2	12.9	
75-100%	19.6	21.0	12.4	17.9	3.1	19.1	45.9	19.3	

¹⁾ The results refer only to enterprises that in question F9 said "Yes".

F11: During 2018, did your enterprise receive orders placed via EDI-type messages by customers located in the following geographical 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

Activities	Manufacturing	100.0	96.8	54.9	96.8	89.9	94.6	69.5	91.7
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	-	100.0	-	-	-	-	100.0	100.0
	Construction	-	-	-	-	-	-	-	-
	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	29.0	85.6	84.1	-	100.0	100.0	84.7
	Accommodation and food service activities	-	100.0	-	100.0	-	-	-	100.0
	Information and communications	72.7	100.0	-	100.0	-	-	100.0	82.5
	Real estate activities; Professional, scientific and technical activities	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
	Total	99.1	95.2	72.2	97.5	89.6	99.1	95.0	95.4

EU countries

Activities	Manufacturing	-	25.9	49.5	4.9	10.1	43.8	43.7	15.3
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	-	-	-	-	-	-	-	-
	Construction	-	-	-	-	-	-	-	-
	Wholesale and retail trade	12.8	3.4	-	-	-	37.2	-	9.8
	Transportation and storage	100.0	71.0	65.1	61.4	100.0	100.0	35.0	86.0
	Accommodation and food service activities	-	46.5	-	46.5	-	-	-	46.5
	Information and communications	51.9	100.0	-	53.7	100.0	-	100.0	69.1
	Real estate activities; Professional, scientific and technical activities	-	100.0	-	100.0	-	-	-	12.8
	Administrative and support service activities; Repair of computers	60.5	-	-	39.9	-	100.0	-	50.4
	Total	19.2	21.0	42.6	15.5	10.4	50.2	11.4	22.0

F11: During 2018, did your enterprise receive orders placed via EDI-type messages by customers located in the following geographical areas?

%

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									
Activities	Manufacturing	22.8	25.9	29.8	30.3	10.1	38.4	31.8	24.8
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	-	-	-	-	-	-	-	-
	Construction	-	-	-	-	-	-	-	-
	Wholesale and retail trade	12.8	-	-	-	-	33.6	-	8.9
	Transportation and storage	-	71.0	30.1	22.7	100.0	-	35.0	19.5
	Accommodation and food service activities	-	46.5	-	46.5	-	-	-	46.5
	Information and communications	24.6	100.0	-	53.7	-	-	100.0	51.6
	Real estate activities; Professional, scientific and technical activities	-	100.0	-	100.0	-	-	-	12.8
	Administrative and support service activities; Repair of computers	60.5	-	-	39.9	-	100.0	-	50.4
	Total	16.5	19.4	23.4	24.0	8.2	26.4	9.5	18.0

F12: During 2018, did your enterprise place orders for goods or services via a website, mobile application or EDI-type messages?

%

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

YES

Activities	Manufacturing	45.2	41.4	45.2	48.6	58.9	30.4	40.0	44.3
	Electricity, gas, steam and air conditioning supply; Water supply and sewerage	28.7	18.8	17.6	56.0	27.4	-	28.9	23.5
	Construction	47.3	27.6	27.3	44.6	45.9	30.1	53.9	42.9
	Wholesale and retail trade	34.1	33.1	43.2	34.6	44.6	20.3	34.9	34.2
	Transportation and storage	52.2	35.8	42.0	34.2	26.1	80.7	74.5	49.2
	Accommodation and food service activities	56.9	44.3	100.0	54.5	54.0	63.1	54.1	55.6
	Information and communications	65.3	71.4	47.6	64.0	72.9	48.2	75.9	65.7
	Real estate activities; Professional, scientific and technical activities	46.6	38.4	49.0	53.2	22.6	44.3	28.1	44.7
	Administrative and support service activities; Repair of computers	35.3	34.7	27.0	39.9	27.6	17.3	36.6	34.5
	Total	43.6	37.4	40.3	44.9	46.4	32.7	43.3	42.3

QUESTIONNAIRE





Data in this questionnaire are considered official secret and are to be 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: USE OF COMPUTERS

A1	Does your enterprise use computers for business purposes? (Computers include the following devices: personal computer (PC), laptop, tablet and other portable devices such as smartphones)	Yes	No
			→ End of survey
A2	Please, indicate an estimate of the percentage of employees who use computers for business:		%

MODULE B: ICT SKILLS AND SPECIALISTS

B1	Does your enterprise employ ICT specialists? (ICT specialists are employees for whom ICT is the main job ; for example maintenance and development of systems and operating applications)	Yes	No
B2	Did your enterprise provide any type of training to develop ICT related skills for employees for ICT skills improvement in 2018? a) Training for ICT specialists (answer with „No“ if you did not employ ICT specialists) b) Training for other persons employed	Yes	No
B3	Did your enterprise recruit or try to recruit ICT specialists during 2018?	Yes	No
			→ Go to B5
B4	Did your enterprise have vacancies for ICT specialists that were difficult to fill, during 2018?	Yes	No
B5	Who performed ICT functions in your enterprise during 2018? (e.g. maintenance of ICT infrastructure; support for office software; development or support of business management software/systems, web solutions; security and data protection) a) Own employees (including those employed in parent and affiliate enterprises) b) External suppliers	Yes	No

MODULE C: ACCESS TO AND USE OF THE INTERNET

C1	Does your enterprise have access to the Internet?	Yes	No
			→ Go to D1

C2	Please, indicate an estimate of the persons employed who use the Internet for business purposes:		%
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C3	Does your enterprise use applications for voice or video calls? (Skype, WhatsApp, Viber, FaceTime)	Yes	No

Use of broadband Internet for business purposes

C4	Does your enterprise use any type of fixed broadband connection to the Internet? (e.g. ADSL, SDSL, FTTP, cable Internet, public Wi-Fi)	Yes	No
			→ Go to C6

C5	What is the maximum contracted speed of the Internet connection in your enterprise? (tick only one)	Yes	No
	a) Less than 2 Mbit/s		
	b) At least 2, but less than 10 Mbit/s		
	c) At least 10, but less than 30 Mbit/s		
	d) At least 30, but less than 100 Mbit/s		
	e) At least 100 Mbit/s		

Use of a mobile connection to the Internet for business purposes

The use of a mobile connection to the Internet for business purposes means the use of portable devices paid and provided by the enterprise that are connected to the Internet through a mobile telephone network.

C6	Does your enterprise provide portable devices that allow a mobile connection to the Internet using mobile telephone networks for business purposes? (via portable computers or other portable devices such as smartphones)	Yes	No
			→ Go to C8

C7	Please, indicate an estimate of the persons employed who use portable devices (provided by the enterprise) for business purposes that allow Internet connection via mobile telephone network (portable computer, tablet, smartphone):		%
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Use of a website

C8	Does your enterprise have a website?	Yes	No
			→ Go to C11

C9	Does the website provide any of the following services?	Yes	No
	a) Description of goods or services, price lists		
	b) Online ordering or reservation or booking of goods/services		
	c) Possibility for visitors to customise or design online goods or services		
	d) Tracking or status of orders placed		
	e) Personalised content on the website for regular visitors		
	f) Links or references to the enterprise's social media profiles (Facebook, Twitter)		
C10	Does your enterprise use information about visitors' behavior on its website (e.g. clicks, items viewed), for advertising or improving customer satisfaction?	Yes	No

Use of social media

C11	Does your enterprise use any of the following social media?	Yes	No
	a) Social networks (<i>Facebook, LinkedIn, Xing</i>)		
	b) Enterprise's blog (<i>Twitter</i>)		
	c) Multimedia content sharing websites (<i>YouTube, Flickr, Picasa</i>)		
	d) Wikipedia		

The following question should be answered by enterprises that said "Yes" in question C11 to any of the proposed answers.

C12	Does your enterprise use any of the above mentioned social media to:	Yes	No
	a) Develop the enterprise's image or market products (by advertising or launching products, etc.)		
	b) Obtain or respond to customer opinions, reviews, questions		
	c) Involve customers in development or innovation of goods or services		
	d) Collaborate with business partners (suppliers) or other organizations (public authorities, non-governmental organizations)		
	e) Recruit employees		
	f) Exchange views, opinions or knowledge within the enterprise		

MODULE D: SHARING OF INFORMATION ELECTRONICALLY WITHIN THE ENTERPRISE

D1	Does your enterprise use an ERP software package? (ERP is a software package used to manage resources by sharing information among different functional areas [accounting, planning, production, marketing, etc.]	Yes	No
D2	Does your enterprise use CRM software to manage: (CRM refers to any software application for managing information about customers)	Yes	No
	a) Entry, storage and making available information about customers to other business functions		
	b) The analysis of information on customers for marketing purposes, (setting prices, sales promotion, choosing distribution channels, etc.)		

MODULE E: ICT SECURITY

E1	Does your enterprise use any of the following ICT security measures:	Yes	No
	a) Strong password authentication, minimum length of 8 mixed characters, periodical change		
	b) Keeping the software (including operating systems) up-to-date		
	c) User identification and authentication via biometric methods implemented by the enterprise (e.g. based on fingerprints, voice, faces)		
	d) Encryption techniques for data, documents or e-mails		
	e) Data backup to a separate location (including backup to the cloud)		
	f) Network access control (management of access by devices and users to the enterprise's network)		
	g) VPN (Virtual Private Network extends a private network across a public network to enable secure exchange of data over public network)		
	h) Maintaining log files for analysis after security incidents		
	i) ICT risk assessment, i.e. periodically assessment of probability and consequences of ICT security incidents		
	j) ICT security tests (e.g. performing penetration tests, testing security alert system, review of security measures, testing of backup systems)		
E2	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)		
	b) Compulsory training courses or viewing compulsory material		
	c) By contract (contract of employment)		
E3	Who carries out the ICT security related activities (security testing, ICT training on security, resolving ICT security incidents) in your enterprise?	Yes	No
	a) Own employees (incl. those employed in parent or affiliate enterprises)		
	b) External suppliers		
E4	Does your enterprise have document(s) on measures, practices or procedures on ICT security?	Yes	No
			→ Go to E7
E6	When were your enterprise's document(s) on measures, practices or procedures on ICT security, defined or most recently reviewed? (tick only one)	Yes	No
	a) Within the last 12 months		
	b) More than 12 months and up to 24 months ago		
	c) More than 24 months ago		

E7	During 2018, did your enterprise experience at least once any of the following problems due to ICT related security incidents?	Yes	No
	a) Unavailability of ICT services (denial of service attacks, ransomware attacks, hardware or software failures - excluding mechanical failure, theft)		
	b) Destruction or corruption of data (due to infection of malicious software or unauthorized intrusion, hardware or software failures)		
	c) Disclosure of confidential data (due to intrusion, phishing, phishing attack, actions by own employees (intentionally or unintentionally))		
E8	Does your enterprise have insurance against ICT security incidents?	Yes	No

MODULE F: 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.**

F1	During 2018, did your enterprise receive orders for goods or services placed via a website or application (excluding manually-typed e-mails)?	Yes	No
			→ Go to F9
F2	Please indicate an estimate of the percentage of the total turnover resulting from orders received that were placed via a website or mobile application in 2018.		%
F3	What was the percentage of the turnover from orders received that were placed via a website or mobile application in 2018 by type of customer?	Total 100%	
	a) Sales to private consumers (B2C)		%
	b) Sales to other enterprises (B2B) and sales to public authorities (B2G)		%
F4	During 2018, did you enterprise receive orders for goods or services via websites or mobile applications?	Yes	No
	a) Via your enterprise's website or mobile application? (including those of parent or affiliate enterprises, extranets)		
	b) Via an e-commerce marketplace website or application used by several enterprises for trading products? (<i>Apr, Nbs, Amss, Limundo, Artberza, Sve za kuću, Tehnomanija, Infostud, Popusti.rs</i>)		

If the answer is "Yes" in a) and b)-> go to question F5; otherwise, go to F6

F5	Indicate the percentage of the turnover from orders received via a website or mobile application in 2018:	Total 100%	
	a) Via your enterprise's website or mobile application? (including those of parent or affiliate enterprises, extranets)		%
	c) Via an e-commerce marketplace website or apps used by several enterprises for trading products? (<i>Apr, Nbs, Amss, Limundo, Artberza, Sve za kuću, Tehnomanija, Infostud, Popusti.rs</i>)		%
F6	During 2018, did your enterprise receive orders placed via a website or mobile application?	Yes	No
	a) Republic of Serbia		
	b) EU countries		
	c) Rest of the world		

If the answer is "Yes" for at least two proposed answers in question F6 a), b or c)-> go to question F7; otherwise go to F8

F7	Indicate the percentage of the turnover from orders received that were placed via a website or mobile application in 2018 by customers located in the following geographic areas:	Total 100%	
	a) Republic of Serbia		%
	b) EU countries		%
	c) Rest of the world		%
→ Go to F8			

F8	During 2018, did your enterprise experience any of the following difficulties when selling to other EU countries via a website or mobile application?	Yes	No
	a) High costs of delivering or returning products when selling		
	b) Difficulties related to resolving complaints and disputes when selling		
	c) Adapting product labelling for sales		
	d) Lack of knowledge of foreign languages for communicating with customers		
	e) Restrictions from your business partners to sell to certain countries		

EDI-type sales

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-EDIFACT, XML-UBL.);

Without the individual messages being typed manually.

F9	During 2018, did your enterprise receive orders for goods or services placed via EDI-type messages?	Yes	No
			→ End of survey

F10	Please indicate an estimate of the percentage of the total turnover resulting from orders received that were placed via EDI-type messages, in 2018:		%
-----	---	--	---

F11	During 2018, did your enterprise receive orders placed via EDI-type messages by customers located in the following geographic areas?	Yes	No
	a) Republic of Serbia		
	b) EU countries		
	c) Rest of the world		

Orders placed via the Internet

Orders placed via the Internet are orders via online stores (web shops) or via web forms on a website or mobile application.

F12	During 2018, did your enterprise place orders for goods or services via a website, mobile application or EDI-type messages?	Yes	No
			→ End of survey

ICT DICTIONARY



ADSL (Asymmetric Digital Subscriber Line):

A broadband digital transmission technology that uses the existing telephone line and provides for possible simultaneous data sending and voice communication. The larger part of range serves for data sending to user and the speed extends up to 6 Mbps.

Bit (Binary Digit):

The smallest information unit that a computer handles. A bit is expressed as 1 or 0 in binary presentation, or as true, i.e. false in logic presentation. A group of 8 bits makes 1 byte.

Broadband:

A communication system the agent (carrier) of which (e.g. optical cable) forwards multiplied data simultaneously, and each individual data is made module at different frequency.

B2B (Business-to-Business):

Transactions between two enterprises that are carried out by the way of networks based on IP (*Internet Protocol Address*) and through other computer networks.

B2C (Business-to-Customer):

Transactions between a business and private customer that are carried out through other computer networks.

CRM (Customer Relationship Management):

It is a process or methodology that helps managing information about our clients' needs and habits and developing tighter relationships with them. CRM contains several technological components, but in organizational terms, CRM represents a set of processes for collecting necessary information on customers, sales, marketing efficiency, customers' reactions and market trends. CRM helps managing technologies and human resources in order to have a view of customers' behavior and value.

Download:

Electronic transmission of information from a remote computer to your computer. Downloading of data files from anonymous FTP (*File Transfer Protocol*) is a popular way of obtaining free of charge software of public property

Dial-up connection:

Use of a telephone network for the purpose of connecting to another network. Included are modem and regular telephone line, ISDN (*Integrated Services Digital Network*) card and ISDN line, etc. If you are a typical computer user, you have one or two dial-up connections: one for the link to the Internet and another for the link to the network at your enterprise.

DSL (Digital Subscriber Line):

A type of fast Internet connection that utilizes standard telephone lines. It could also be a type of *broadband* connection.

xDSL, ADSL itd.:

Transmissions via the Internet networks based on protocols and via other computer networks. Goods and services are ordered over those networks, but payments and final delivery of goods or services can be carried out on/outside the off-line network. Orders received by telephone, fax or e-mail do not fall into this category of e-commerce.

Digital goods or services:

Goods/services that can be ordered or delivered directly via a computer over the Internet, e.g. films, games, computer software, “on-line” newspapers, consulting services, etc.

E-mail:

Electronic transmission of messages, including text and attachments, between computers located inside or outside an organization. This comprises electronic mails over the Internet or other computer networks.

Extranet:

A secure extension of Intranet enabling external users to have access to certain parts of the organization Intranet.

Electronic commerce:

E-Commerce (Electronic Commerce) is the purchase or selling of goods or services over the Internet particularly via the World Wide Web service. Practically this term is often used instead of the recent one, e-business, which means business over the Internet.

Electronic (digital) signature:

Electronic signature is meant to be a technology used in systems of electronic business for checking the signatory’s authenticity, securing the integrity of transmitted information and the irrevocability of the electronic signature in the message or document. Therefore, alike the signature in standard business, the electronic signature is used in electronic business. Besides, the latter secures electronically signed messages, which is not the case with personal signatures.

ERP (Enterprise Resource Planning):

ERP is a software system that monitors all the aspects of business operations of a company. The implemented ERP system is able to integrate business operations of different company functions (e.g. accountancy, sales, production, etc.) in one entity. One obtains this way a system through which one can, on one hand, manage all human and material resources, and on the other one, develop and monitor business processes and procedures.

Firewall:

A combination of hardware and software keeping the system secure. It is usually used to prevent any unauthorized access to the internal local network from the outside. Firewall prevents direct communication between a network and external computers.

Hardware:

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

Internet:

World computer network.

Internet address:

Address of one of the Internet resources. It typically reads for example: <http://www.stat.gov.rs>

Intranet:

A network inside an organization based on Internet technologies and protocols, but being only available to a specific group of persons, e.g. the employees.

ISDN (Integrated Services Digital Network):

A fast digital telephone service which speed ranges up to 128 Kbps, which is several times faster than the analogous modem.

Local Area Network (LAN):

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

Network:

A group of computers or other devices, such as printers, scanners, etc., being connected to the communication link, which enables all the devices to interact. It can be of small or large range, linked with cables, wireless, permanently, temporary linked, ... The largest network is the Internet, the largest group of all interconnected world networks.

Server:

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

Virus:

A computer program, which, by being started-up and installed, damages or erases data in a computer.

Wide Area Network (WAN):

A communication network that links geographically remote computers, printers and other devices.

Window:

A part of a screen from which programs and processes can be started-up. Users can start-up several "windows" at the same time.

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