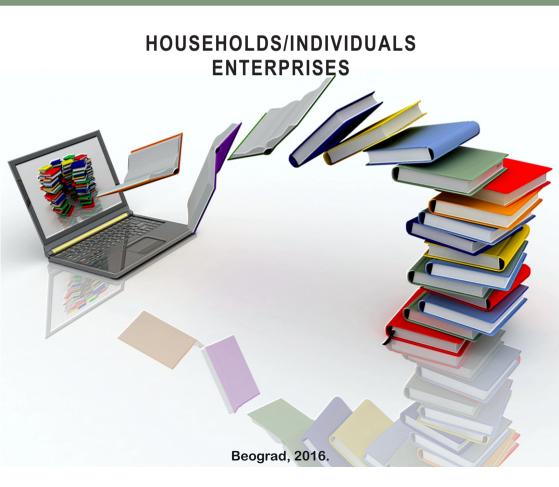


# USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE REPUBLIC OF SERBIA, 2016



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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 spheres in the life of individuals and the 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 ten 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 enteprises.

Both surveys were carried out on the territory of the Republic of Serbia also in 2016 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 2016, while selected ones referred to the entire 2015.

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 2400 households and 2400 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 1673 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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## **CHARTS**

#### Part I

# Usage of information and communication technologies in households/by individuals in the Republic of Serbia, 2016

- 1.1. Devices available in households
- 1.2. Computers in households
- 1.3. Number of computers in households
- 1.4. Percentage of households having a computer, by type of settlement
- 1.5. Percentage of households having a computer, by income level
- 1.6. Da Does the household have access to the Internet at home?
- 1.7. Households having an Internet connection, by type of settlements
- 1.8. Households having an Internet connection, by income level
- 1.9. Devices used to access the Internet
- 1.10. Type of Internet connection
- 1.11. Broadband Internet connection in households
- 1.12. Broadband Internet connection in households, by territory
- 1.13. When did you last use a computer?
- 1.14. Percentage of computer users (in the last three months), by educational level
- 1.15. Educational structure of computer users
- 1.16. Percentage of computer users (in the last 3 months), by employment situation
- 1.17. Use of computers (in the last 3 months), by sex and age
- 1.18. How often, on average, have you used a computer in the last 3 months?
- 1.19. Use of mobile phones
- 1.20. Use of mobiles phones, by sex and age
- 1.21. When did you last use the Internet?
- 1.22. Percentage of Internet users (in the last three months), by educational level
- 1.23. Educational structure of Internet users
- 1.24. Percentage of Internet users (in the last three months), by employment situation
- 1.25. How often, on average, have you used the Internet in the last three months?
- 1.26. Use of the Internet (in the last three months), by sex and age
- 1.27. Types of Internet use (for private purpose) in the last three months
- 1.28. Do you use any of the following mobile devices to access the Internet away from home of place of work?
- 1.29. For which of the following public authorities' services did you use the Internet?
- 1.30. Reasons for not having submitted completed forms to public authorities over the Internet
- 1.31. When did you last (for private purposes) buy/order goods or services over the Internet?
- 1.32. Which of the following goods or services (for private use) have you bought/ordered over the Internet in the last 12 months?

- 1.33. How often have you bought/ordered goods or services for private use in the last three months?
- 1.34. How much money have you spent for goods or services bought/ordered over the Internet in the last three months?
- 1.35. Have you used any cloud services to store information (documents, pictures, music or video files) such as Google drive, Dropbox, Windows Skydrive, iCloud?
- 1.36. What type of personal details have you provided over the Internet in the last 12 months?
- 1.37. Have you used any anti-tracking software that limits tracking your on-line activities?

#### Part II

# Usage of information and communication technologies in enterprises in the Republic of Serbia, 2016

- 2.1. Does your enterprise use a computer in for business purposes?
- 2.2. Enterprises by the percentage of employees using a computer at least once a week
- 2.3. Have your enterprise used open source operating system Linux?
- 2.4. Do the employees in your enterprises have remote access to the enterprise's e-mail system, documents or applications?
- 2.5. Does your enterprise have access to the Internet?
- 2.6. Enterprises by the percentage of employees who use the Internet at least once a week
- 2.7. Broadband Internet connection in enterprises
- 2.8. What is the maximum contracted download speed of the Internet connection in your enterprise?
- 2.9. Please, provide an estimate of the employees who use portable devices for business purposes that allow an Internet connectionvia a mobile network?
- 2.10. Does your enterprise use public authorities' services ia the Internet?
- 2.11. Does your enterprise use public authorities' services via the Internet for the following purposes?
- 2.12. Does your enterprise have a website?
- 2.13. Does the Website of your enterprise have the following services?
- 2.14. Did your enterprise order goods/services over the Internet?
- 2.15. Did your enterprise receive orders over the Internet?
- 2.16. Percentage of the total turnover in 2015 resulting from orders received over the Internet
- 2.17. Did your enterprise use any of the following social media for business purposes?
- 2.18. Does your enterprise pay cloud computing services over the Internet?



# USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE REPUBLIC OF SERBIA, 2016

# HOUSEHOLDS/INDIVIDUALS



# 1.1. METHODOLOGY

Survey period	The survey was carried out from 21 March to 1 April 2016
Type of survey	Telephone interview
Sample size	<ul><li>2400 households</li><li>2400 individuals</li></ul>
Target population	<ul> <li>For households: all households with at least one member aged between 16 and 74</li> <li>For individuals: all individuals aged between 16 and 74</li> </ul>
Type of sample	Two-stage, stratified sample
Geographic scope	Territory of the Republic of Serbia (without AP Kosovo and Metohija)

## 1.2. SAMPLE

The surve y on I CT usage in households w as conducted on a re presentative sample of 2400 households on the territor y of the Republic of Serbia. The res ponse rate was 85% (204 3 households).

#### Households

Sample (households)		Income		F	Region		Type house			
	Up to 300 euros	300 - 600 euros	More than 600 euros	Central Serbia	Vojvodina	Belgrade	Urban	Rural	Total	
Number	987	574	260	980	572	491	1248	795	2043	
%	54.2	31.5	14.3	48.0	28.0	24.0	61.1	38.9	100	

The same sample w as used for persons aged betw een 16 and 74 living on the ter ritory of the Republic of Serbia. The response rate was 85% (2043 persons).

#### Individuals

				Ą	ge			Sex Educational level			Employment situation						
	Sample (individuals)	16 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	Men	Women	Lower than secondary	Secondary	Tertiary	Employee	Unemployed	Student	Other	Total
Ν	lumber	141	193	287	332	473	617	840	1203	399	1035	609	643	525	38	837	2043
	%	6.9	9.4	14.0	16.3	23.2	30.2	41.1	58.9	19.5	50.7	29.8	31.5	25.7	1.9	41.0	100



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## 1.3. MAIN FINDINGS

#### 1.3.1. Devices in households

Households were offered to give more than one answer to the question relative to the devices available in households. The survey shows that 98.7% of households have a TV set and 57.3% cable TV

90.2% of households have a mobile phone

39.2% of households have a laptop, which is an increase of 0.2% and 0.5% in relation to 2015 and 2014, respectively

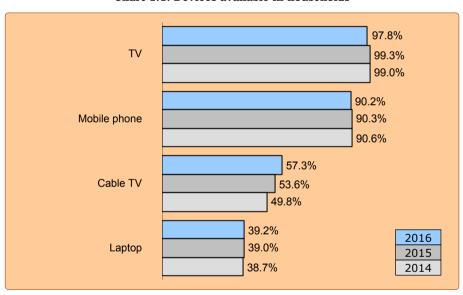


Chart 1.1. Devices available in households

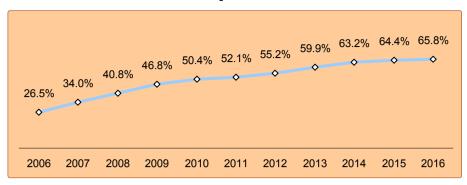
## 1.3.2. Computers in households

The main findings of the survey show that 65.8% of households in the Republic of Serbia have a computer, which is an increase of 1.4% and 2. 6% in relation to 2015 and 2014, respectively. The percentage of computers in households varies as to the ter ritory: in Belgrade it amounts to 75.9%, in Vojvodina 67.7%, and in Central Serbia 59.4%.

65.8% of households have a computer

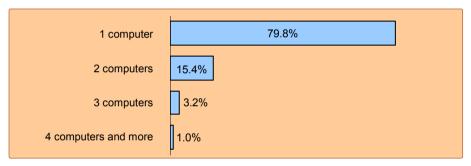
Methodology Sample Major findings Survey results Questionnaire

Chart 1.2. Computers in households



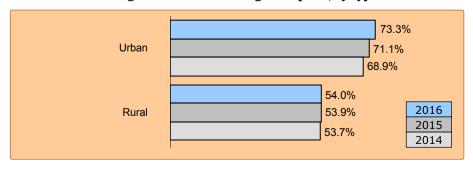
Most of the ho  $\,$  useholds have one computer  $\,$  (79.8%),  $\,$  while just a few  $\,$  (15.4%) have t  $\,$  wo computers.

Chart 1.3. Number of computers in households



The differences are also visible when comparing the availability of computers in urban and rural areas of Serbia: 73.3% versus 54.0%. In relation to 2015, this gap has significantly increased, which is backed by growth rates of computer availability in urban and rural parts of Serbia. The growth rate in the urban part of Serbia is 2.2%, and in the rural part it amounts to 0.1%, when compared to 2015.

Chart 1.4. Percentage of households having a computer, by type of settlement





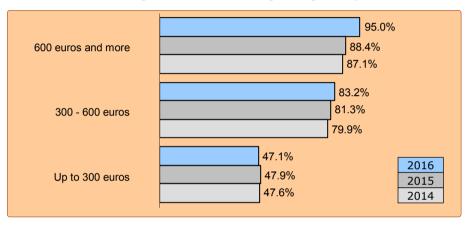
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However, the structure of households by monthly income is expressive of the greatest gap as to the availability of computers in households. Com puters are mostly available in households with a monthly income of more than 600 euros (95.0%) then in households with an income up to 300 euros (47.1%).

When comparing with data for 2015, growth rates in certain income classes for 2016 indicate that the above mentioned gap increased, when compared to the previous year. Growth rates for households with an income of more than 600 euros, in relation t o 2015, amount to 6.6%, for households with an income of 300-600 euros, to 1.9%, and to -0.8% for households with an income under 300 euros

47.1% of households with an income up to 300 euros have a computer

Chart 1.5. Percentage of households having a computer, by income level

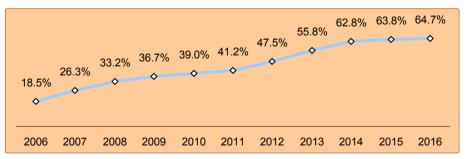


#### 1.3.3. Internet in households

In the Republic of Serbia 64.7% of househol ds have an Internet connection, w hich is an increase of 0.9% and 1.9%, when compared to 2015 and 2014, respectively

64.7% of households have an Internet connection

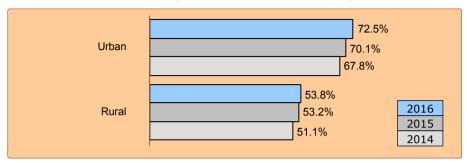
Chart 1.6. Does the household have access to the Internet at home?



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The highest percentage of Internet connection was observed in Belgrade (73.1%), in Vojvodina (68.7%), and in Central Serbia (57.9%).

Chart 1.7. Household having an Internet connection, by type of settlements

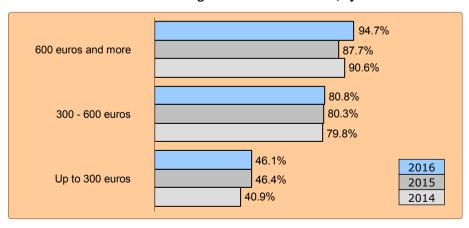


There are also c onsiderable differences as to the percentage of Internet connection in u rban and rural parts of Serbia: 72.5 % versus 53.8%. When compared to 2015, the results indicate that the gap widened. The growth rate in the urban part of Serbia is 2.4% and in the rural part 0.6%.

In the same way as in computer availability in households, a large gap as reg and the Intern et connection appears when obser ving the structure of households according to their month ly income level. The internet connection is mo stly used by households which monthly income exceeds 600 eur os (94.7%), while only 46.1% of households with an income under 300 euros are connected to the Internet.

46.1% of households with an income under 300 euros have an Internet connection

Chart 1.8. Households having an Internet connection, by income level

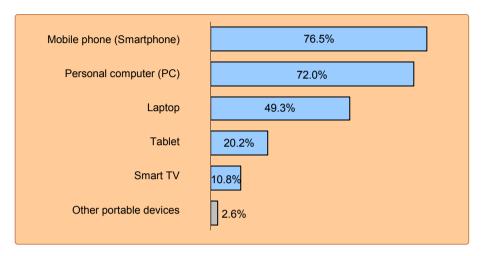


As regard the d  $\,$  evices u sed to  $\,$  access the In  $\,$  ternet, 72.0% of h  $\,$  ouseholds use  $\,$  a personal computer, 76.5% a mobile phone and 49.3% a laptop.



The results of the survey indicate that the num ber of households that access the Internet via a mobile phone in creased by 8.6% in relation to 2015.

Chart 1.9. Devices used to access the Internet



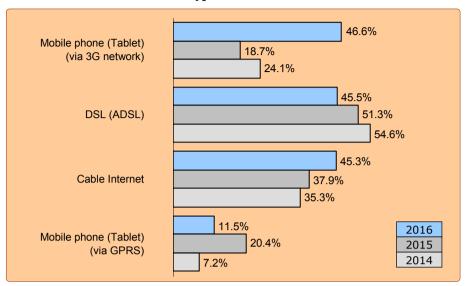
As for t ypes of connection, hou seholds were given the possibility to tick severa. I proposed answers. The results indicate that of the total number of house holds that have an Internet connection, 45.5% of them have DSL (ADSL), 45.3% cable Internet and 1.2% have a modem or ISDN connection.

45.5% of households having an Internet connection use DSL (ADSL)

Based on the results of the survey, only 1.2% of households have a dial-up connection. This is primarily due to the growing use of broadband connection

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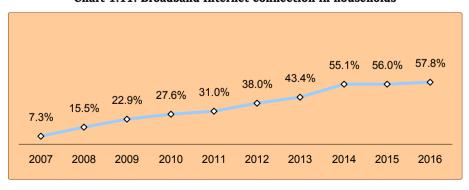
Chart 1.10. Type of Internet connection



57.8% of households in Serbia have a broadband 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 compared to the classic dialup modem connection. Accordingly, from 2005 the percentage of households having this type of Internet connect ion is taken to be one of the main indicators of ICT development in the European Union. In Serbia, 57.8% of hous eholds have a broadband connection, which is an increase of 1.8% and 2.7 % in relation to 2015 and 2014, respectively. This type of Internet connection is most used in Belg rade (68.5%), in Vojvodina (61.0%), and the leas tin Central Serbia (50.4%).

Chart 1.11. Broadband Internet connection in households



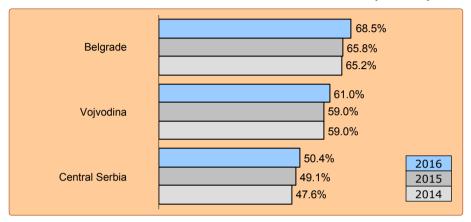


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The broadband Internet connection is mostly used in households with a monthly income of more than 600 euros (90.5%), while the share of households with an income less than 300 euros is only 38.7%.

Large differences are also observed when comparing the use of this type of Internet connection in rural and urban parts of Serbia: 66.8% versus 44.0%.

Chart 1.12. Broadband Internet connection in households, by territory



### 1.3.4. Individuals: use of computers

In the Republic of Serbia, 67.2% of individuals us ed a computer in the last three m onths, 0.9% more than th ree months ago, and 4.7% more than one year ago. There are even 27.2% of individuals who have never use diacomputer. The number of computer use rs increased by 1.5%, 2.5% and 9.4% in relation to 2015, 2014 and 2013, respectively.

The number of computers increased by 1.5% in relation to 2015

When compared with 2015, the  $\,$ number of individuals w ho have used a compute  $\,$ r in the last three months increased by rather 60 000.

More than 3 610 000 persons have used a computer in the last three months

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

- 87.1% of persons with tertiary educational level;
- 77.6% of persons with secondary educational level;
- 37.6% of persons with lower than secondary educational level.

Chart 1.13. When did you last use a computer?

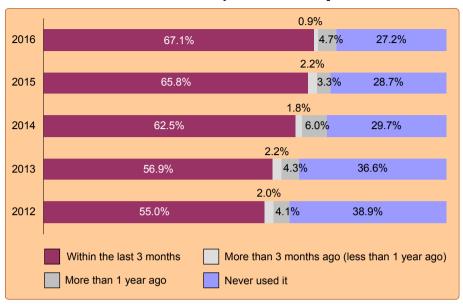
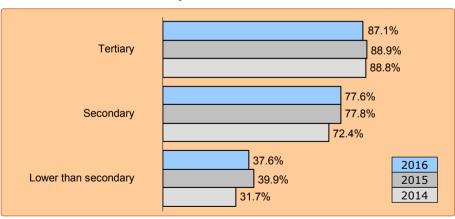
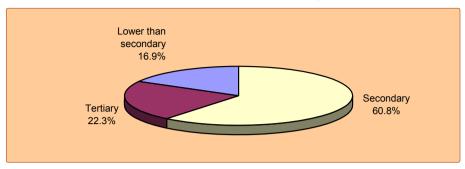


Chart 1.14. Percentage of computer users (in the last three months), by educational level



Among computer users, 60.8% have secondary educational level, 16.9% lower than secondary educational level, and 22.3% tertiary educational level.

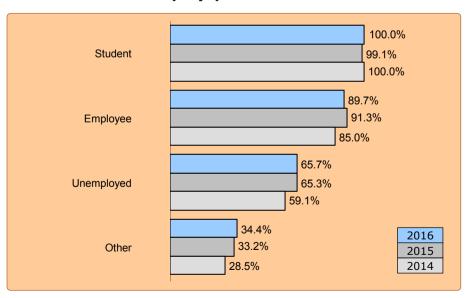
Chart 1.15. Educational structure of computer users



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

- 100% of students:
- 89.7% of employees;
- 65.7% of unemployed;
- 34.4% of others (retired, compulsory military service...).

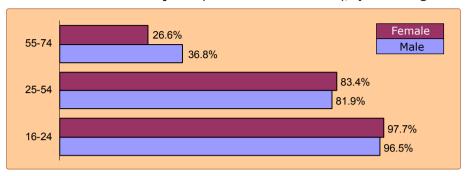
Chart 1.16. Percentage of computer users (in the last three months), by employment situation



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The analysis of the respondents by sex indicates that in the last three months 69.4% of men and 65.0% of women have used a computer.

Chart 1.17. Use of computers (in the last three months), by sex and age

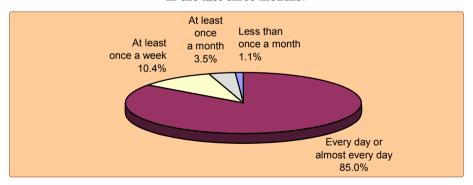


When asked how often, on ave rage, the respondents have used a computer in the last three months, 85.1% said having used a computer every dayor almost every day, 10.4% at least once a week, 3.5% at least once a month, and 1.1% less than once a month.

More 3 070 000 persons use a computer every day or almost every day

When compared with 2015, the number of individuals who used a computer every day or almost every day increased by some 180 000.

Chart 1.18. How often, on average, have you used a computer in the last three months?





### 1.3.5. Individuals: use of mobile phones

The surve y indi cates that 91.8 % of individuals use a mobile phone, while i n 2015 the percentage was 91.4%.

More than 4 940 000 persons use a mobile phone

Chart 1.19. Use of mobile phones

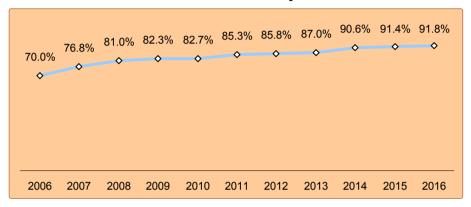
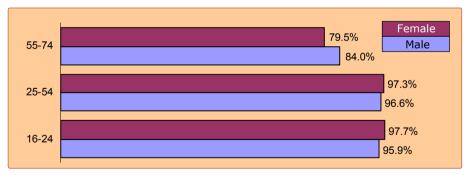


Chart 1.20. Use of mobiles phones, by sex and age



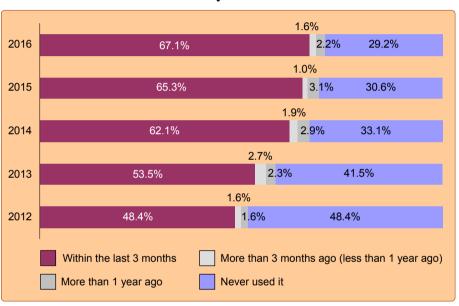
#### 1.3.6. Individuals: use of the Internet

In the R epublic of Serbia, 6 7.1% of pe rsons have used the Internet in the last th ree months, 1.6% of respondents used the Internet more than 3 months ago, and 2.2% more than one year ago. There were 29.2% of respondents that had never used the Internet.

The number of Internet users increased by 1.4%, 3.9% and 12.3% in relation with 2015, 2014, 2013, respectively.

The number of Internet users increased by 1.4% in relation to 2015

Chart 1.21. When did you last use the Internet?



More than 3 610 000 persons have used the Internet in the last three months

When compared with 2015, the number of persons who have used the Internet in the last three months increased by some 60 000.

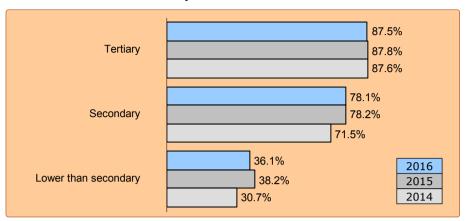
The percentage of Internet users (in the last three months), by educational level:

- 87.5% of persons with tertiary educational level;
- 78.1% of persons with secondary educational level;
- 36.1% of persons with lower than secondary educational level.



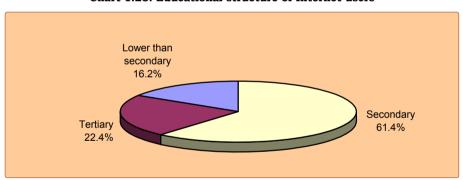
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Chart 1.22. Percentage of Internet users (in the last three months), by educational level



Among Inter net users, 61.3% attained secondary educational level, 16.2% of users attained lower than secondary educational level, and 22.4% tertiary educational level.

Chart 1.23. Educational structure of Internet users

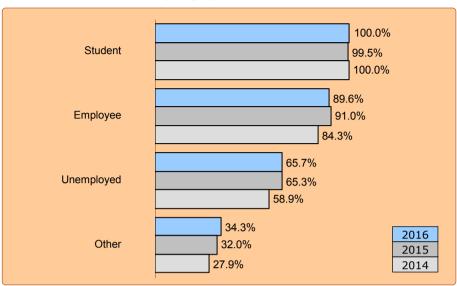


The percentage of Internet users (in the last three months), by employment situation:

- 100% of students;
- 89.6% of employees;
- 65.7% of unemployed;
- 34.3% of others (retired, compulsory military service...).

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Chart 1.24. Percentage of Internet users (in the last three months), by employment situation



When asked how often on average they have used the Internet in the last three months, 85.9% of respondents said having used it every day or almost every day.

More than 3 100 000 persons use the Internet every day or almost every day

Compared to 2015, the number of persons who used the Internet every day or almost every day increased by some 150 000.

Chart 1.25. How often, on average, have you used the Internet in the last three months?

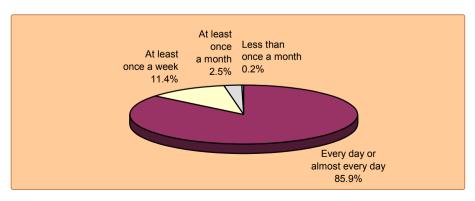
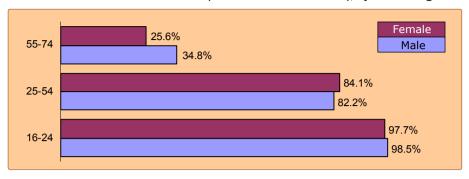




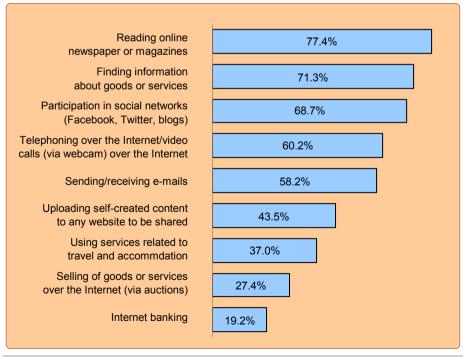
Chart 1.26. Use of the Internet (in the last three months), by sex and age



The analysis of respondents by sex indicates that 69.2% of m en and 65.0 % of women have used the Internet in the last three months.

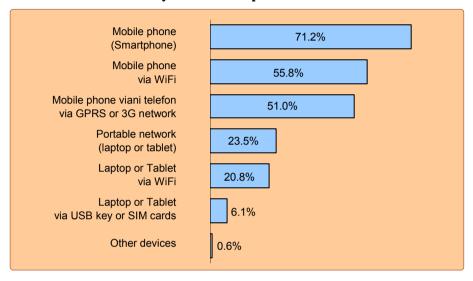
In the last three months the respondents have used the Interne t mostly for watching video content via YouTube or similar sharing services (84.2%), reading online newspapers/news/news magazines (77.4%), finding information about goods and services (71.3%), as well as for participating in social networks such as Facebook and Twitter (68.7%).

Chart 1.27. Types of Internt use (for private purposes) in the last three months



90.3% of Internet population aged 16 to 24 have an account on social networks (Facebook, Twitter)

Chart 1.28. Do you use any of the following mobile devices to access the Internet away from home or place of work?





#### 1.3.7. e-government

The survey indicates that 28.1% of respondents among Internet users use the Internet instead of personal contacts or visits to public authorities.

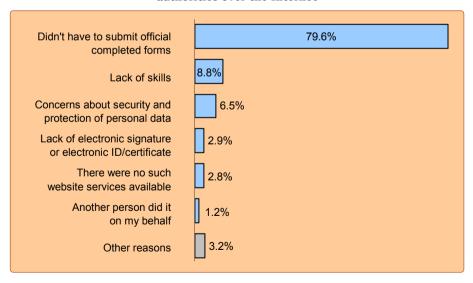
More than 1 510 000 persons use public authorities' electronic services

Chart 1.29. For which of the following public authorities' services did you use the Internet?



The survey indicates that 34.8% of respondents who used public authorities' services over the Internet did it for obtaining information from public authorities' websites.

Chart 1.30. Reason for not having submitted completed forms to public authorities over the Internet



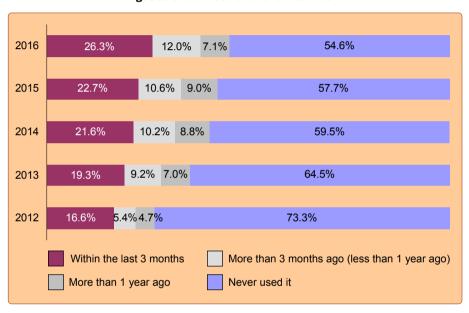
#### 1.3.8. e-commerce

As regard the p eriod when Internet users have bought/ordered goods or services via the Internet, 26.3% of users have bought/ordered goods/services in the last three months, 12.0% did it more than three months ago, and 7.1% more than a year ago.

54.6% of Internet users have never bought/ordered goods or services over the Internet.

More than 1 450 00 000 persons have bought or ordered goods/services over the Internet in the last 12 months

Chart 1.31. When did you last (for private use) goods or services over the Internet?

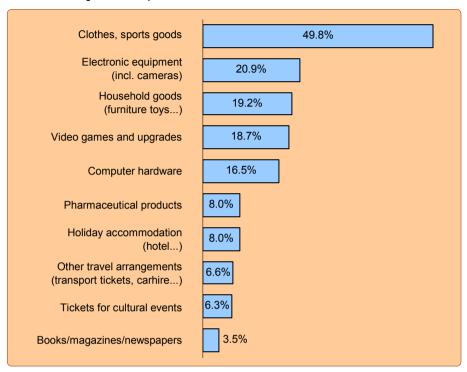


Compared to 2015, the number of persons who bought or ordered goods/services over the Internet increased by some 230 000.



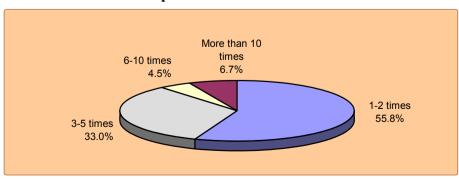
Introduction Households/individuals Enterprises Glossary

Chart 1.32. Which of the following goods or services have you ordered (for private use) over the Internet in the last 12 months?



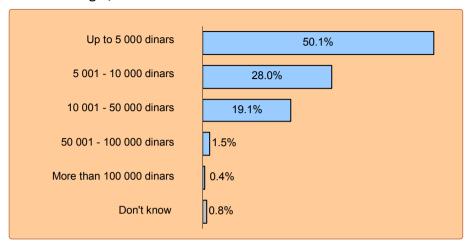
Most of the Int ernet users b ought/ordered clothes and sport g oods (49.8 %) a nd computer equipment (20.9%).

Chart 1.33. How often have you bought/ordered goods or services over the Internet for private use in the last three months?



Methodology Sample Major findings Survey results Questionnaire

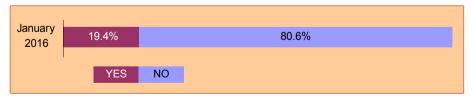
Chart 1.34. How much money have you spent for goods or services bought/ordered over the Internet in the last three months?



#### 1.3.9. Use of cloud services

The survey indicates that 19.4  $\,\%$  of Internet population used cloud services to store or share information.

Chart 1.35. Have you used any cloud services to store documents (documents, pictures, music and video files) such as Google drive, Dropbox, Windows Skydrive, iCloud?





#### 1.3.10. Privacy and protection of personal identity

When asked what kind of p ersonal details the y have provided on the I nternet in the last 12 months, 56.7% of Internet users have mentioned personal details (name, date of birth, number of identity card...), while 53.6% left the following details: personal address, telephone number, e-mail...)

Chart 1.36. What type of personal details have you provided over the Internet in the last 12 months?

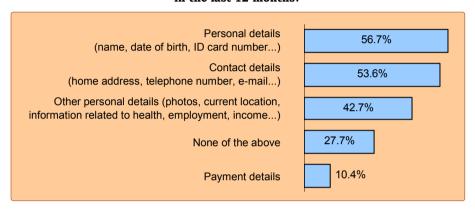
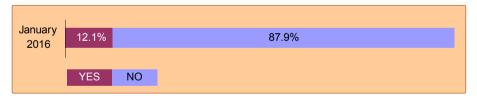


Chart 1.37. Have you used any anti-tracking software that limits tracking your on-line activities?



## 1.4. SURVEY RESULTS

MODULE 1.A: Access to information nad communication technologies

In percentages

In percentages											
	Income			Region			Type of household				
Answer (households)	Up to 300 euros	300 - 600 euros	More than 600 euros	Central Serbia	Vojvodina	Belgrade	Urban	Rural	Total		
A1: Devices available in households (tick all that apply)											
Personal computer (PC)	47.1	83.2	95.0	59.4	67.7	75.9	73.3	54.0	65.8		
Laptop	21.5	50.0	71.8	32.2	36.4	51.8	46.6	27.3	39.2		
TV	96.7	99.1	99.6	96.8	97.8	99.5	98.4	96.7	97.8		
Cable TV	49.7	65.1	70.5	47.2	59.3	74.2	69.3	37.3	57.3		
Mobile phone	80.0	95.8	98.6	85.6	89.3	95.1	91.5	87.0	90.2		
None of the above	0.6	0.3	0.0	0.6	0.6	0.0	0.3	8.0	0.4		
A2: Do you or anyone in your household have access to the Internet at home?											
Yes	46.1	80.8	94.7	57.9	68.7	73.1	72.5	53.8	64.7		
No	52.9	18.5	5.3	41.4	30.1	26.7	27.1	47.0	34.6		
Don't know	1.0	0.8	0.0	8.0	1.2	0.2	0.5	1.2	8.0		
АЗ: Туре	of Inte	rnet c	onnec	tions (	all tha	t apply	<b>7)</b> <sup>1)</sup>				
DSL (ADSL)	43.8	47.4	48.6	51.0	42.0	40.9	43.3	50.6	45.5		
Cable Internet	41.4	44.9	48.0	36.7	47.9	55.4	50.2	33.8	45.3		
Mobile phone (Tablet, USB) (via 3G mreže)	36.3	49.8	56.2	48.0	40.9	50.7	47.4	44.9	46.6		
Dial-up access over telephone line or ISDN	1.2	0.4	2.5	1.7	0.7	1.0	1.2	1.2	1.2		
Mobile phone (putem GPRS-a)	16.3	6.3	10.4	13.3	14.1	5.8	10.4	13.9	11.5		

<sup>1)</sup> The data refer to households that answered YES in question A2.

MODULE 1.A: Access to information nad communication technologies

In percentages

							ır	ı perce	ntages		
	Income				Region	ı	Type of household				
Answer (households)	Up to 300 euros	300 - 600 euros	More than 600 euros	Central Serbia	Vojvodina	Belgrade	Urban	Rural	Total		
A4: Reasons fo	or not	not having access to the Internet at home									
(all that apply) <sup>2)</sup>											
Have access to the Internet elsewhere	2.7	6.0	7.5	3.9	2.7	2.9	4.1	2.8	3.4		
Don't need the Internet	59.1	75.4	58.6	57.5	68.3	61.9	65.8	56.3	60.9		
Equipment costs too high	31.4	23.5	29.7	29.8	25.5	33.3	32.8	26.2	29.4		
Access costs too high	28.8	22.0	29.7	28.5	23.9	30.4	31.5	24.2	27.7		
Lack of skills	32.4	18.0	10.1	30.7	31.1	27.4	25.6	34.5	30.2		
Privacy or security concerns	1.9	2.2	0.0	1.4	2.8	1.5	2.4	1.1	1.7		
Broadband Internet is not available	5.6	4.7	0.0	8.0	1.9	3.6	2.2	9.0	5.7		
None of the above,	2.2	2.9	10.3	3.0	1.7	0.8	0.7	3.8	2.3		

<sup>&</sup>lt;sup>2)</sup> Data refer to households that answered NO in question A2.



MODULE 1.B: Use of

				Sex					
Answer (individuals)	16 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	Men	Women	
					B1:	When	did you last		
Within the last 3 months	97.1	90.1	85.1	72.8	42.5	15.4	69.4	65.0	
More than 3 months ago less than a year	0.0	1.5	1.2	1.0	1.0	0.3	0.6	1.2	
More than a year ago	1.0	2.5	6.1	4.0	7.3	6.5	5.2	4.3	
Never used it	1.9	5.9	7.7	22.2	49.2	77.8	24.8	29.6	
	B2: How often,								
Every day or almost every day	88.2	88.88	84.5	83.2	80.4	73.8	84.5	85.7	
At least once a week	8.7	7.5	11.4	12.4	11.2	17.5	11.6	9.1	
At least once a month	3.1	3.0	2.7	3.1	6.2	7.1	3.4	3.6	
Less than once a month	0.0	0.7	1.4	1.3	2.2	1.6	0.6	1.6	
					вз: ч	When (	did you	ı last	
Within the last 3 months	98.1	90.2	87.0	72.3	40.3	14.9	69.2	65.0	
More than 3 months ago less than a year	0.0	3.6	2.5	1.3	0.8	0.7	2.0	1.2	
More than a year ago	0.0	8.0	1.6	2.6	4.8	2.7	2.6	1.8	
Never used it	1.9	5.5	8.9	23.8	54.1	81.7	26.3	32.0	
			В4	: How	often,	on av	erage,	have	
Every day or almost every day	90.4	93.5	86.0	84.7	68.1	75.5	85.0	86.7	
At least once a week	8.5	5.7	10.4	11.8	27.0	17.8	12.6	10.2	
At least once a month	1.1	8.0	3.0	3.5	4.4	6.1	2.0	2.9	
Less than once a month	0.0	0.0	0.6	0.0	0.5	0.6	0.3	0.2	

<sup>1)</sup> The data refer to individuals who answered "Within the last 3 months" in question B1.

# computers and the Internet

com	puter	s and	l the	Inter		In percentages							
Educ	ational	level	Em	ployme	nt situa	tion							
Lower than secondary	Secondary	Tertiary visoko	Employee	Unemployed	Student	Other	Total	Answer (individuals)					
use a computer?													
37.6	77.6	87.1	89.7	65.7	100.0	34.4	67.2	Within the last 3 months					
0.9	1.1	0.4	0.7	1.6	0.0	0.3	0.9	More than 3 months ago less than a year					
3.9	5.2	4.8	3.3	4.7	0.0	7.4	4.7	More than a year ago					
57.7	16.2	7.7	6.3	28.0	0.0	57.9	27.2	Never used it					
have you used a computer in the last 3 months? 1)													
77.5	84.3	92.8	89.0	79.9	96.8	80.8	85.1	Every day or almost every day					
14.1	11.3	5.0	7.8	14.5	0.0	12.1	10.4	At least once a week					
7.2	3.2	1.5	2.2	4.3	3.2	6.0	3.5	At least once a month					
1.1	1.2	0.7	1.0	1.3	0.0	1.1	1.1	Less than once a month					
use th	e Inte	rnet?											
36.1	78.1	87.5	89.6	65.7	100.0	34.3	67.1	Within the last 3 months					
2.5	1.2	0.9	1.3	2.6	0.0	0.7	1.6	More than 3 months ago less than a year					
1.9	2.6	1.6	1.9	1.9	0.0	3.4	2.2	More than a year ago					
59.5	18.1	10.0	7.3	29.8	0.0	61.7	29.2	Never used it					
use th	e Inte	rnet i	n the l	ast 3 r	nonths	s? <sup>1)</sup>							
74.8	85.9	93.9	90.4	82.9	100.0	72.4	85.9	Every day or almost every day					
22.2	11.2	4.3	7.7	13.5	0.0	23.4	11.4	At least once a week					
3.0	2.7	1.4	1.5	3.6	0.0	3.7	2.5	At least once a month					
0.0	0.2	0.4	0.3	0.0	0.0	0.6	0.2	Less than once a month					



MODULE 1.B: Use of

			Ą	ge			S	ex	
Answer (individuals)	16 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	Men	Women	
	B5: Where have you used								
At home	98.0	98.6	97.0	97.0	97.0	94.1	98.1	96.8	
At place of work (away from home)	25.1	32.0	40.3	46.1	28.0	13.2	34.5	34.1	
At place of education	44.4	9.6	7.7	8.1	4.9	0.0	12.9	16.4	
At someone else's home	52.9	33.2	26.1	22.4	10.8	9.1	29.2	30.4	
At public library	16.4	6.7	7.0	5.2	2.4	0.0	6.6	8.7	
At post office	18.8	9.9	7.7	6.2	3.0	1.3	8.2	10.4	
In public institution, assembly, government organisation	17.2	9.4	8.7	6.7	3.3	1.8	8.7	9.8	
In Internet café	48.4	25.5	17.6	13.6	18.8	1.4	25.6	22.7	
Hotspot (at hotel, airport, public place)	46.1	31.3	25.2	19.2	9.1	2.2	27.7	25.9	
		E	36: On	which	of the	follov	ving de	evices	
Personal computer (PC)	79.5	65.6	76.3	75.6	60.2	65.6	74.9	69.0	
Laptop, netbook	49.0	47.2	50.0	51.5	50.4	43.2	46.6	52.1	
Tablet	19.3	21.2	22.6	23.1	12.3	12.4	18.5	21.9	
Mobile phone or smartphone	92.2	82.4	69.5	71.6	68.1	49.6	75.6	77.3	
Other mobile devices (media or video games, e-book reader, smartwatch)	0.9	1.7	4.0	3.8	2.3	2.7	1.7	3.6	
Smart TV (directly connected to the Internet, via WiFi network, not via a separate device using it as a larger screen)	9.6	8.7	14.5	12.7	7.1	9.6	10.7	10.9	

<sup>1)</sup> The data refer to individuals who answered "Within the last 3 months" in question B3.

## computers and the Internet

### In percentages

in percentages											
		tion	nt situa	ployme	Em	level	ational	Educ			
Answer (individuals)	Total	Other	Student	Unemployed	Employee	Tertiary visoko	Secondary	Lower than secondary			
		1)	apply)	ll that	hs? (a	mont	last 3	in the			
At home	97.5	98.3	96.9	98.3	96.7	97.5	97.3	98.3			
At place of work (away from home)	34.3	10.4	31.3	16.4	55.6	55.0	32.2	13.5			
At place of education	14.6	21.7	65.6	9.7	10.7	15.4	11.7	24.4			
At someone else's home	29.8	25.6	55.4	29.9	28.0	28.5	30.3	29.8			
At public library	7.6	6.2	30.3	5.4	7.3	7.9	7.3	8.4			
At post office	9.3	4.4	34.6	7.7	9.0	10.9	8.9	8.6			
In public institution, assembly, government organisation	9.3	4.8	24.2	7.8	10.0	11.1	8.9	8.1			
In Internet café	24.1	33.1	42.5	22.1	21.2	19.8	22.5	36.4			
Hotspot (at hotel, airport, public place)	26.8	22.7	32.9	25.9	28.0	29.4	26.0	26.2			
		1)	home?	net at	Inter	ed the	70u us	have y			
Personal computer (PC)	72.0	67.7	66.6	72.6	73.3	70.9	72.1	72.9			
Laptop, netbook	49.3	43.8	67.3	38.7	57.3	67.9	46.4	34.2			
Tablet	20.2	14.0	21.6	15.0	25.9	26.4	19.9	12.8			
Mobile phone or smartphone	76.5	73.4	90.2	73.3	78.3	78.4	78.5	65.8			
Other mobile devices (media or video games, e-book reader, smartwatch)	2.6	1.8	1.7	2.3	3.2	4.5	2.3	1.2			
Smart TV (directly connected to the Internet, via WiFi network, not via a separate device using it as a larger screen)	10.8	10.0	0.0	9.6	13.3	14.3	9.2	12.0			



### MODULE 1.B: Use of

			Ą	ge			S	ex	
Answer (individuals)	16 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	Men	Women	
		В7:	For wh	ich of	the fo	llowin	g activ	vities	
Watching Internt streamed TV live or catch-up	63.0	81.2	55.6	84.1	63.9	51.0	72.3	64.1	
Watching video content (on demand or from sharing services)	54.2	49.0	52.8	49.6	21.9	22.3	46.8	50.4	
Internet browsing through a browse application	42.9	37.4	46.6	59.3	48.6	33.3	36.0	58.5	
Using other Internet applications (Skype, Facebook, games, on-line shopping)	48.2	47.7	45.8	43.9	37.2	70.3	33.2	59.8	
	B8: Have you used any of the fo								
Mobile phone or smartphone	92.4	75.9	62.5	66.3	61.4	36.7	70.7	71.7	
Mobile phone or smartphone via GPRS or 3G network	65.3	61.6	45.9	46.1	30.3	29.1	53.0	48.9	
Mobile phone or smartphone via WiFi	74.8	58.8	49.0	50.5	49.0	24.6	57.0	54.6	
Portable computer (laptop or tablet)	26.3	24.4	23.5	23.6	18.9	16.6	21.4	25.7	
Via mobile phone network, USB key or SIM card	2.5	7.2	6.2	6.7	8.4	5.0	4.5	7.6	
Via WiFi network (wireless)	25.2	21.8	21.0	19.7	15.1	13.8	19.9	21.8	
Other devices (media or video games, e-book reader, smartwatch)	0.0	0.0	1.9	0.6	0.0	0.0	0.6	0.6	
Don't have access to the Internet via mobile devices away from home or work	7.6	21.1	35.5	30.8	35.6	58.0	26.8	26.3	

<sup>1)</sup> The data refer to individuals who answered "Within the last 3 months" in question B3.

<sup>&</sup>lt;sup>2)</sup> The data refer to individuals who answered "Smart TV" in question B6.

### computers and the Internet

In percentages			computers and the internet									
		tion	nt situa	ployme	Em	level	ational	Educ				
Answer (individuals)	Total	Other	Student	Unemployed	Employee	Tertiary visoko	Secondary	Lower than secondary				
	t <b>hs?</b> 2)	3 mont	e last 3	in the	art TV	sed sm	you u	have y				
Watching Internt streamed TV live or catch-up	68.3	74.3	0.0	54.7	75.0	73.5	66.6	64.4				
Watching video content (on demand or from sharing services)	48.6	22.9	0.0	62.5	46.3	52.5	41.3	63.9				
Internet browsing through a browse application	47.0	44.5	0.0	45.6	48.3	56.1	35.8	64.7				
Using other Internet applications (Skype, Facebook, games, on-line shopping)	46.1	81.9	0.0	45.4	38.4	38.8	40.6	76.4				
1)	work?	ne or v	m hor	way fro	rnet av	e Inte	ess th	to acc				
Mobile phone or smartphone	71.2	68.6	86.2	67.8	72.9	73.3	72.3	63.9				
Mobile phone or smartphone via GPRS or 3G network	51.0	46.5	64.3	45.6	55.0	53.9	52.0	43.0				
Mobile phone or smartphone via WiFi	55.8	53.2	60.6	52.1	58.9	57.8	57.2	47.8				
Portable computer (laptop or tablet)	23.5	22.1	43.8	16.6	27.2	34.1	22.4	13.2				
Via mobile phone network, USB key or SIM card	6.1	7.7	6.0	4.1	7.2	7.1	6.0	5.0				
Via WiFi network (wireless)	20.8	18.3	40.6	14.5	24.4	31.1	19.9	10.2				
Other devices (media or video games, e-book reader, smartwatch)	0.6	0.0	0.0	0.8	0.6	0.7	0.2	1.7				
Don't have access to the Internet via mobile devices away from home or work	26.6	27.9	9.8	31.1	24.5	22.3	25.6	36.1				



### MODULE 1.B: Use of computers

		M	ODU	LE 1.	B: Us	e of c	omp	uters			
		Age Sex									
Answer											
(individuals)	24	34	4	54	64	74	_	ale			
	16 -	25 -	35 -	45 -	55 -	65 -	Men	Female			
B9: Whi	ch of t	he fol	lowing	activi	ties ha	ave yo	u perfo	ormed			
Sending/receiving e-mails	62.1	62.2	60.3	55.6	48.0	43.9	57.1	59.4			
Telephoning over the Internet/video calls (via webcam) over the Internet	68.8	65.7	58.4	57.1	44.0	60.2	59.0	61.4			
Participating in social networks (Facebook, Twitter)	90.3	79.1	67.1	51.5	53.1	33.1	70.1	67.2			
Reading on-line news/newspapers/news magazines	71.9	76.8	80.1	82.7	76.7	67.4	74.9	80.0			
Finding information about goods or services	66.4	74.9	78.6	74.5	58.7	49.6	69.1	73.6			
Playing or downloading games	63.1	47.3	39.5	36.0	38.8	22.6	45.3	43.8			
Listening to music (web radio, music streaming)	93.1	76.6	65.8	59.4	63.0	36.0	70.4	71.8			
Watching Internet streamed TV (live or catch-up)	38.8	31.7	26.4	27.0	22.2	21.6	34.3	24.5			
Watching video on demand from commercial services (Netflix, HBO)	18.1	13.6	14.0	9.8	5.9	3.3	13.8	11.4			
Watching video content from sharing services over Youtube and similar sharing services	97.1	88.9	84.4	83.3	66.1	44.1	83.5	84.9			
Uploading self-created content (text, photos, music, videos, software)	71.6	48.8	33.4	30.8	36.9	9.2	43.2	43.8			
Creating websites or blogs	14.1	5.6	5.4	7.1	6.7	2.2	8.5	6.5			
Seeking health-related information (injuries, disease, nutrition, improving health)	69.4	69.8	75.1	76.9	70.8	47.0	62.6	81.1			
Making an appointment with a practitioner via the website of hospitals or health care centres	6.0	9.7	9.2	9.0	4.3	4.0	6.3	9.6			
Using services related to travel and travel related accommodation	30.3	46.8	42.7	35.4	23.5	22.7	35.5	38.5			
Selling of goods or services (via auctions)	26.2	33.0	30.7	29.4	12.5	12.1	32.7	21.9			
Internet banking	8.6	22.1	24.9	23.0	14.6	15.2	21.2	17.2			
Using payment accounts (PayPal) to pay goods or services purchased over the Internet	9.4	16.8	13.4	11.5	8.6	6.5	12.1	12.6			

<sup>1)</sup> The data refer to individuals who answered "Within the last 3 months" in question B3.

## and the Internet

### In percentages

Name	in percentages		51 ° 11 1 5 1 1 1 1 1											
Over the Internet for private purposes in the last 3 monthsp <sup>1</sup> (all that apply)           27.1         57.1         83.3         69.1         47.7         65.4         46.8         58.2         Sending/receiving e-mails           55.8         60.0         63.7         62.5         55.9         79.6         56.5         60.2         Telephoning over the Internet/video calls (via webcam) over the Internet video calls (via webcam) over the Internet brow for calls (via webcam) over the Internet video calls (via webcam) over the Internet video calls (via webcam) over the Internet video calls (via webcam) over the Internet bare of All via via via via via website of the via website of via website via			tion	nt situa		Em	level	ational	Educ					
27.1         57.1         83.3         69.1         47.7         65.4         46.8         58.2         Sending/receiving e-mails           55.8         60.0         63.7         62.5         55.9         79.6         56.5         60.2         Telephoning over the Internet/video calls (via webcam) over the Internet video calls (via webcam) over the Internet video calls (via webcam) over the Internet video calls (via webcam) over the seding on the Internet video calls (via webcam) over the Internet video calls (via webcam) over the Internet video calls (via		Total	Other	Student	Unemployec	Employee	Tertiary	Secondary	Lower than secondary					
27.1         57.1         83.3         69.1         47.7         65.4         46.8         58.2         Sending/receiving e-mails           55.8         60.0         63.7         62.5         55.9         79.6         56.5         60.2         Telephoning over the Internet/video calls (via webcam) over the Internet video calls (via webcam) over the Internet video calls (via webcam) over the Internet video calls (via webcam) over the seding on the Internet video calls (via webcam) over the Internet video calls (via webcam) over the Internet video calls (via	3 months? 1) (all that apply)	e last	s in th	urpose	vate p	for pri	ernet	he Int	over t					
Section   Sect														
68.3 76.0 87.8 80.0 74.9 80.1 74.6 77.4 Reading on-line news/newspapers/news magazines news/news/newspapers/news magazines news/news/news/news/news/news/news/news/	calls (via webcam) over the Internet	60.2	56.5	79.6	55.9	62.5	63.7	60.0	55.8					
56.0         72.0         80.2         76.6         69.0         72.8         58.8         71.3         Finding information about goods or services           54.4         47.3         30.1         40.4         45.5         62.1         49.7         44.6         Playing or downloading games           67.8         71.3         72.8         70.6         68.9         94.1         69.4         71.1         Listening to music (web radio, music streaming)           23.9         29.4         33.7         30.2         26.0         50.0         28.4         29.5         Watching Internet streamed TV (live or catch-up)           8.5         14.0         11.7         14.6         10.4         24.1         7.0         12.6         Watching video on demand from commercial services (Netflix, HBO)           86.9         83.6         84.0         85.5         85.0         95.3         73.1         84.2         Watching video on demand from commercial services (Netflix, HBO)           86.9         83.6         84.0         85.5         85.0         95.3         73.1         84.2         Uploading self-created content (text, photos, music, videos, software)           9.5         5.7         10.8         6.6         6.8         16.8         8.8         7.5         <	(Facebook, Twitter)	68.7	65.6	87.8	70.5	65.9	64.5	69.9	69.9					
56.0         72.0         80.2         76.6         69.0         72.8         58.8         71.3         services           54.4         47.3         30.1         40.4         45.5         62.1         49.7         44.6         Playing or downloading games           67.8         71.3         72.8         70.6         68.9         94.1         69.4         71.1         Listening to music (web radio, music streaming)           23.9         29.4         33.7         30.2         26.0         50.0         28.4         29.5         Watching Internet streamed TV (live or catch-up) or catch-up)           8.5         14.0         11.7         14.6         10.4         24.1         7.0         12.6         Watching video on demand from commercial services (Netflix, HBO) Watching video content from sharing services over Youtube and similar sharing services           51.4         43.1         38.8         38.6         43.6         75.3         47.7         43.5         Uploading self-created content (text, photos, music, videos, software)           9.5         5.7         10.8         6.6         6.8         16.8         8.8         7.5         Creating websites or blogs Seeking health-related information (injuries, disease, nutrition, improving health)           3.9         7.9         10.8	news/newspapers/news magazines	77.4	74.6	80.1	74.9	80.0	87.8	76.0	68.3					
67.8         71.3         72.8         70.6         68.9         94.1         69.4         71.1         Listening to music (web radio, music streaming)           23.9         29.4         33.7         30.2         26.0         50.0         28.4         29.5         Watching Internet streamed TV (live or catch-up)           8.5         14.0         11.7         14.6         10.4         24.1         7.0         12.6         Watching video on demand from commercial services (Netflix, HBO)           86.9         83.6         84.0         85.5         85.0         95.3         73.1         84.2         Watching video on demand from commercial services (Netflix, HBO)           86.9         83.6         84.0         85.5         85.0         95.3         73.1         84.2         Watching video on demand from commercial services (Netflix, HBO)         Watching video content from sharing services over Youtube and similar sharing services over Youtube and similar sharing services           51.4         43.1         38.8         38.6         43.6         75.3         47.7         43.5         Uploading self-created content (text, photos, music, videos, software)           9.5         5.7         10.8         6.6         8.8         7.5         Creating websites or blogs           Seeking health-related information (injuries, disea	services													
67.8         71.3         72.8         70.6         68.9         94.1         69.4         71.1         music streaming)           23.9         29.4         33.7         30.2         26.0         50.0         28.4         29.5         Watching Internet streamed TV (live or catch-up)           8.5         14.0         11.7         14.6         10.4         24.1         7.0         12.6         Watching video on demand from commercial services (Netflix, HBO)           86.9         83.6         84.0         85.5         85.0         95.3         73.1         84.2         Watching video on demand from commercial services (Netflix, HBO)           86.9         83.6         84.0         85.5         85.0         95.3         73.1         84.2         Watching video on demand from commercial services (Netflix, HBO)           86.9         83.6         84.0         85.5         85.0         95.3         73.1         84.2         Uploading self-created content (text, photos, music, videos, software)           9.5         5.7         10.8         6.6         6.8         16.8         8.8         7.5         Creating websites or blogs           66.4         70.9         77.7         75.1         69.4         80.0         63.1         71.7         Making an		44.6	49.7	62.1	45.5	40.4	30.1	47.3	54.4					
23.9   29.4   33.7   30.2   26.0   50.0   28.4   29.5	music streaming)	71.1	69.4	94.1	68.9	70.6	72.8	71.3	67.8					
8.5	or catch-up)	29.5	28.4	50.0	26.0	30.2	33.7	29.4	23.9					
86.9         83.6         84.0         85.5         85.0         95.3         73.1         84.2         sharing services over Youtube and similar sharing services           51.4         43.1         38.8         38.6         43.6         75.3         47.7         43.5         Uploading self-created content (text, photos, music, videos, software)           9.5         5.7         10.8         6.6         6.8         16.8         8.8         7.5         Creating websites or blogs Seeking health-related information (injuries, disease, nutrition, improving health)           3.9         7.9         10.8         10.2         7.5         4.7         2.3         7.9         Making an appointment with a practitioner via the website of hospitals or health care centres           16.4         36.3         53.3         47.3         28.5         38.0         23.9         37.0         Using services related to travel and travel related accommodation           19.4         28.4         30.3         30.1         27.1         42.1         12.5         27.4         Selling of goods or services (via auctions)           4.2         17.0         35.9         30.3         9.1         13.3         11.1         19.2         Internet banking           6.6         11.0         19.8         17.4 <t< td=""><td>commercial services (Netflix, HBO)</td><td>12.6</td><td>7.0</td><td>24.1</td><td>10.4</td><td>14.6</td><td>11.7</td><td>14.0</td><td>8.5</td></t<>	commercial services (Netflix, HBO)	12.6	7.0	24.1	10.4	14.6	11.7	14.0	8.5					
51.4         43.1         38.8         38.6         43.6         75.3         47.7         43.5         photos, music, videos, software)           9.5         5.7         10.8         6.6         6.8         16.8         8.8         7.5         Creating websites or blogs           66.4         70.9         77.7         75.1         69.4         80.0         63.1         71.7         Seeking health-related information (injuries, disease, nutrition, improving health)           3.9         7.9         10.8         10.2         7.5         4.7         2.3         7.9         Making an appointment with a practitioner via the website of hospitals or health care centres           16.4         36.3         53.3         47.3         28.5         38.0         23.9         37.0         Using services related to travel and travel related accommodation           19.4         28.4         30.3         30.1         27.1         42.1         12.5         27.4         Selling of goods or services (via auctions)           4.2         17.0         35.9         30.3         9.1         13.3         11.1         19.2         Internet banking           6.6         11.0         19.8         17.4         7.0         16.8         7.5         12.3         to pay go	sharing services over Youtube and	84.2	73.1	95.3	85.0	85.5	84.0	83.6	86.9					
66.4         70.9         77.7         75.1         69.4         80.0         63.1         71.7         Seeking health-related information (injuries, disease, nutrition, improving health)           3.9         7.9         10.8         10.2         7.5         4.7         2.3         7.9         Making an appointment with a practitioner via the website of hospitals or health care centres           16.4         36.3         53.3         47.3         28.5         38.0         23.9         37.0         Using services related to travel and travel related accommodation           19.4         28.4         30.3         30.1         27.1         42.1         12.5         27.4         Selling of goods or services (via auctions)           4.2         17.0         35.9         30.3         9.1         13.3         11.1         19.2         Internet banking           Using payment accounts (PayPal)         to pay goods or services purchased	, ,	43.5	47.7	75.3	43.6	38.6	38.8	43.1	51.4					
66.4         70.9         77.7         75.1         69.4         80.0         63.1         71.7         (injuries, disease, nutrition, improving health)           3.9         7.9         10.8         10.2         7.5         4.7         2.3         7.9         Making an appointment with a practitioner via the website of hospitals or health care centres           16.4         36.3         53.3         47.3         28.5         38.0         23.9         37.0         Using services related to travel and travel related accommodation           19.4         28.4         30.3         30.1         27.1         42.1         12.5         27.4         Selling of goods or services (via auctions)           4.2         17.0         35.9         30.3         9.1         13.3         11.1         19.2         Internet banking           6.6         11.0         19.8         17.4         7.0         16.8         7.5         12.3         to pay goods or services purchased	Creating websites or blogs	7.5	8.8	16.8	6.8	6.6	10.8	5.7	9.5					
3.9       7.9       10.8       10.2       7.5       4.7       2.3       7.9       practitioner via the website of hospitals or health care centres         16.4       36.3       53.3       47.3       28.5       38.0       23.9       37.0       Using services related to travel and travel related accommodation         19.4       28.4       30.3       30.1       27.1       42.1       12.5       27.4       Selling of goods or services (via auctions)         4.2       17.0       35.9       30.3       9.1       13.3       11.1       19.2       Internet banking         0.6       11.0       19.8       17.4       7.0       16.8       7.5       12.3       to pay goods or services purchased	(injuries, disease, nutrition,	71.7	63.1	80.0	69.4	75.1	77.7	70.9	66.4					
19.4 28.4 30.3 30.1 27.1 42.1 12.5 27.4 Selling of goods or services (via auctions) 4.2 17.0 35.9 30.3 9.1 13.3 11.1 19.2 Internet banking  Using payment accounts (PayPal) 6.6 11.0 19.8 17.4 7.0 16.8 7.5 12.3 to pay goods or services purchased	practitioner via the website of	7.9	2.3	4.7	7.5	10.2	10.8	7.9	3.9					
19.4 28.4 30.3 30.1 27.1 42.1 12.5 27.4 auctions) 4.2 17.0 35.9 30.3 9.1 13.3 11.1 19.2 Internet banking  Using payment accounts (PayPal) 6.6 11.0 19.8 17.4 7.0 16.8 7.5 12.3 to pay goods or services purchased	<u> </u>	37.0	23.9	38.0	28.5	47.3	53.3	36.3	16.4					
Using payment accounts (PayPal) 6.6 11.0 19.8 17.4 7.0 16.8 7.5 12.3 to pay goods or services purchased	,	27.4	12.5	42.1	27.1	30.1	30.3	28.4	19.4					
6.6 11.0 19.8 17.4 7.0 16.8 7.5 12.3 to pay goods or services purchased		19.2	11.1	13.3	9.1	30.3	35.9	17.0	4.2					
	to pay goods or services purchased	12.3	7.5	16.8	7.0	17.4	19.8	11.0	6.6					



### **MODULE 1.B: Use of computers**

			020		<b>D.</b> 05	0 01 0	O.I.P	2010		
			A	ge			S	ex		
Answer (individuals)	16 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	Men	Female		
B10	): Hav	e you	used c	loud so	ervices	for th	e stor	age of		
				lik	e Goog	gle driv	ve, Dro	pbox,		
Yes	31.2	22.5	16.1	14.4	11.9	10.0	20.4	18.4		
No	68.8	77.5	83.9	85.6	88.1	90.0	79.6	81.6		
B11: Which of the following learning activities have you conducted										
Doing an online course (from any field)	12.4	11.3	9.4	9.2	6.2	7.1	10.7	9.4		
Looking for information on the Internet for learning purposes (audio-visual materials, e-textbooks)	77.1	71.9	66.4	66.3	45.8	42.7	64.5	69.6		
Chatting or discussing on on-line forum	35.8	36.2	20.1	15.7	35.1	6.9	32.2	23.3		
Other	16.0	18.0	28.3	30.0	28.4	52.0	25.7	22.7		

# and the Internet Educational level Employment situation Answer (individuals) Lover than Coondan Secondan Secondar Secondan Secondar Sec

Se	Ŏ.	Te	ū	5	Ŋ	Ò	F				
files (documents, pictures, music or video files)											
Windo	ws Sk	ydrive	, iClou	d, Am	azon c	loud d	rive?				
17.4	18.7	23.0	19.8	15.8	41.9	19.3	19.4	Da			
82.6	81.3	77.0	80.2	84.2	58.1	80.7	80.6	Ne			

for pri	for private or professional purposes in the last 3 months: (all thay apply)													
6.4	10.4	11.8	9.7	9.9	21.5	6.9	10.0	Doing an online course (from any field)						
58.2	64.9	79.0	71.0	64.1	91.8	49.8	67.0	Looking for information on the Internet for learning purposes (audio-visual materials, e-textbooks)						
37.3	23.9	31.1	25.0	29.6	30.6	31.3	27.7	Chatting or discussing on on-line forum						
23.3	27.4	16.4	22.9	25.3	8.2	32.8	24.2	Other						



### MODULE 1.C: Use of

				1/	иорс	IPE I	.C. U	se or
			Ą	ge			Se	ex
Answer (individuals)	16 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	Men	Women
C1: Have you used	l publi	c auth	orities	' servi	ces or	public	autho	rities
Obtaining information from websites of public authorities and public services	25.2	39.2	36.1	41.1	32.0	23.0	34.9	34.8
Dowloading official forms	18.8	25.2	26.2	27.1	23.2	19.3	21.5	27.0
Sending completed forms	11.4	18.8	18.2	24.6	16.3	16.8	17.0	19.0
C2: What w	ere th	e reas	ons fo	r not s	endinį	g comp	leted i	forms
No need to send completed forms	87.0	79.0	82.1	71.2	77.9	72.9	79.2	80.1
There were no such services on the website	2.3	2.3	2.3	4.2	4.1	0.4	3.3	2.3
Lack of skills	2.3	10.6	6.9	12.6	10.8	21.2	10.3	7.2
Concerns about security and protection of personal data	6.0	7.5	5.4	7.2	7.0	3.6	7.2	5.7
Lack of electronic signature or identification	3.5	2.4	2.5	1.9	5.5	2.4	2.9	2.9
Another person did it on my behalf	0.0	0.8	1.4	2.6	0.9	2.6	1.7	0.6
Other reasons	3.6	3.1	3.4	3.9	1.8	1.2	2.3	4.2

<sup>1)</sup> The data refer to individuals who answered

<sup>&</sup>quot;Within the last 3 months" or "More than 3 months ago (less than a year) in question C1".

<sup>&</sup>lt;sup>2)</sup> The data refer to individuals who did not answer

<sup>&</sup>quot;Sending completed forms" in question C1.

e-government <sup>1)</sup> In percentages													
		tion	nt situa	ployme	Em	level	ational	Educ					
Answer (individuals)	Total	Unemployed Student Other		Employee		Secondary	Lower than secondary						
at apply)	(all tha	ths? 1)	Secondary Secondary Secondary Secondary Secondary Secondary Student Tertiany Student Student Student Student Secondary Seconda		over t								
Obtaining information from websites of public authorities and public services	34.8	19.6	36.9	28.9	43.8	53.7	34.2	12.6					
Dowloading official forms	24.2	12.7	24.0	17.8	32.7	45.6	21.1	7.7					
Sending completed forms	18.0	9.0	15.6	13.0	24.9	36.5	14.7	5.9					
12 months? <sup>2)</sup>	he last	et in t	nterne	r the I	ies ove	thoriti	olic au	to pub					
No need to send completed forms	79.6	79.9	81.4	81.6	77.5	75.7	80.1	81.5					
There were no such services on the website	2.8	1.1	3.4	2.0	4.1	5.4	3.0	0.0					
Lack of skills	8.8	10.0	5.4	9.6	8.0	6.7	7.9	13.4					
Concerns about security and protection of personal data	6.5	8.2	7.1	4.2	8.0	8.4	6.1	6.1					
Lack of electronic signature or identification	2.9	3.4	6.0	1.6	3.6	4.0	3.3	0.7					
Another person did it on my behalf	1.2	1.3	0.0	0.0	2.3	0.6	1.7	0.0					



3.0 2.9 4.7 2.6

4.2

3.5

2.0

3.2

Other reasons

### MODULE 1.D:

						11101		1.2.				
			Ag	jes			S	ex				
Answer (individuals)	16 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	Men	Women				
	D1:	D1: When did you last buy or order goods over										
Within the last 3 months	31.5	31.8	28.7	24.9	11.6	8.6	26.1	26.5				
More than 3 months ago (less than a year)	17.2	11.0	15.5	7.4	8.8	5.4	11.3	12.8				
More than a year ago	8.3	9.1	7.6	5.6	4.2	3.7	7.8	6.4				
Never	43.0	48.1	48.2	62.1	75.4	82.3	54.8	54.4				
D2: What type:	s of go	ods or	servic	es hav	e you	bough	t or or	dered				
Food or groceries	2.1	3.2	2.5	6.2	0.9	0.0	3.9	2.2				
Household goods (furniture, toys)	11.0	17.4	22.0	25.5	29.1	13.1	22.1	16.3				
Pharmaceutical products	8.4	7.7	8.3	5.6	12.4	5.2	5.6	10.4				
Clothes, sports goods	57.2	52.1	51.4	44.0	29.1	20.9	41.1	58.5				
Computer hardware	18.6	18.5	11.5	24.5	5.4	5.5	24.0	9.0				
Electronic equipment (incl. cameras)	17.2	22.5	16.4	28.0	28.5	23.4	27.7	14.2				
Telecommunication services (broadband subscriptions, uploading money on prepaid phone cards)	4.2	7.2	6.8	7.3	1.4	5.4	9.8	2.2				
Hotel accommodation (hotel)	2.0	9.7	8.8	11.7	3.0	11.4	8.0	7.1				
Other travel arrangements (transport tickets, carhire)	2.0	14.7	5.1	10.3	6.1	20.1	8.9	7.1				
Tickets for cultural events	8.3	7.0	5.6	7.8	1.4	0.0	5.0	8.2				
Films, music	3.7	9.1	6.2	8.1	1.4	3.2	6.4	6.2				
Books/magazines/newspapers	8.5	14.5	10.6	17.6	10.4	12.8	12.4	12.1				
e-learning material	1.0	5.5	3.4	5.4	1.4	0.0	5.5	1.6				
Video games and upgrades	10.6	11.8	3.9	6.2	0.0	5.4	10.3	4.9				
Other	17.9	16.8	20.3	21.6	12.7	29.5	20.0	17.3				

The data refer to individuals who did not answer "Never used it" in question C1.

<sup>&</sup>lt;sup>2)</sup> The data refer to individuals who answered

<sup>&</sup>quot;Within the last 3 months" or "More than 3 months ago (less than a year)" in question D1.

Major findings Survey results Questionnaire Methodology Sample

e-co	mme	rce <sup>1)</sup>						In percentages
Educ	ational	level	Em	ployme	nt situa	tion		
Lower than secondary	Secondary	Tertiary	Employee	Unemployed	Student	Other	Total	Answer (individuals)
the In	ternet	for p	rivate ı	ıse?				
21.1	25.2	33.3	27.5	28.3	33.4	14.1	26.3	Within the last 3 months
6.3	13.0	13.9	14.0	9.0	20.9	10.5	12.0	More than 3 months ago (less than a year)
3.2	7.6	8.8	8.3	7.0	6.8	3.4	7.1	More than a year ago
69.4	54.2	44.0	50.1	55.7	38.9	72.0	54.6	Never
over t	he Int	ernet i	in the	last 12	2 mont	ths? (a	ll that	apply) <sup>2)</sup>
0.0	3.1	4.3	3.6	3.7	0.0	0.0	3.1	Food or groceries
8.3	20.1	22.3	25.4	13.8	8.4	16.1	19.2	Household goods (furniture, toys)
7.4	7.8	8.7	6.9	7.2	11.1	15.0	8.0	Pharmaceutical products
46.3	54.2	41.3	49.3	53.6	41.0	43.7	49.8	Clothes, sports goods
29.6	14.6	14.8	13.4	20.1	17.1	18.7	16.5	Computer hardware
22.9	19.1	24.3	19.0	23.0	10.5	31.1	20.9	Electronic equipment (incl. cameras)
0.0	7.6	5.3	7.5	3.7	10.7	3.4	6.0	Telecommunication services (broadband subscriptions, uploading money on prepaid phone cards)
0.0	8.5	9.0	10.5	5.8	0.0	4.3	7.6	Hotel accommodation (hotel)
0.0	8.7	10.0	9.3	7.6	0.0	8.7	8.0	Other travel arrangements (transport tickets, carhire)
7.4	6.2	7.0	6.3	7.3	5.9	5.8	6.6	Tickets for cultural events
0.0	8.0	5.4	5.4	7.0	13.1	3.1	6.3	Films, music
0.0	12.0	18.5	15.0	10.2	10.8	6.7	12.3	Books/magazines/newspapers
0.0	4.6	2.7	4.2	4.2	0.0	0.0	3.5	e-learning material
7.5	8.9	4.6	4.3	12.4	11.3	3.4	7.6	Video games and upgrades
13.2	18.9	20.7	20.4	16.3	32.3	7.9	18.7	Other



### MODULE 1.D:

			Ag	jes			Sex	
Answer (individuals)	16 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	Men	Women
D3: From v	whom	have y	ou boi	ıght/o	rdered	l good:	or se	rvices
From national sellers	79.8	89.3	83.4	89.6	90.8	78.6	86.2	84.9
From sellers from EU countries	16.7	9.9	16.4	7.7	5.1	20.2	13.8	11.5
From sellers from the rest of the world	8.0	11.7	12.3	16.4	12.9	6.8	14.1	9.5
Unknown country of sellers	2.4	8.0	1.3	1.8	0.7	0.0	1.2	1.6
D4: How	often	have y	ou boi	ught/o	rdered	l good:	s or se	rvices
1-2 times	50.7	51.4	66.4	53.6	53.7	70.2	51.9	60.0
3-5 times	43.8	34.2	24.3	29.9	38.7	11.2	38.2	27.6
6-10 times	4.0	3.4	1.9	10.9	4.8	0.0	3.6	5.5
More than 10 times	1.5	10.9	7.4	5.7	2.8	18.6	6.4	7.0
D5: How much	n have	you s	pent b	ying/o	rdered	l goods	s or se	rvices
Up to 5000 dinars	54.5	51.6	52.5	43.7	37.8	41.1	41.0	59.5
From 5001 to 10000 dinars	24.7	29.4	29.5	25.3	34.7	26.4	32.8	23.0
From 10001 to 50000 dinars	19.3	17.5	16.7	25.4	15.9	27.4	22.2	15.9
From 50001 to 100000 dinars	1.5	0.0	0.4	3.8	7.3	0.0	2.6	0.4
More than 100000 dinars	0.0	0.0	8.0	0.0	4.3	0.0	0.9	0.0
Don't know	0.0	1.6	0.0	1.9	0.0	5.2	0.6	1.1

<sup>1)</sup> The data refer to individuals who did not answer "Never used it" in question C1.

The data refer to individuals who answered "Within the last 3 months" or "More than 3 months ago (less than a year)" in question D1.

Major findings Survey results Questionnaire Methodology Sample

e-co	e-commerce <sup>1)</sup> In percentages													
Educ	ational	level	Em	ployme	nt situa	tion								
Lower than secondary	Secondary	Tertiary	Employee	Unemployed	Student	Other	Total	Answer (individuals)						
over t	ver the Internet in the last 12 i		mont	ths?(a	ll that	apply) <sup>2)</sup>								
86.4	85.6	85.0	88.2	87.0	57.5	87.1	85.5	From national sellers						
17.8	9.3	17.8	11.9	12.5	18.7	13.0	12.7	From sellers from EU countries						
0.0	11.8	17.2	14.5	7.8	19.8	6.7	11.8	From sellers from the rest of the world						
0.0	0.5	4.3	1.7	0.7	4.0	0.6	1.4	Unknown country of sellers						
over t	he Int	ernet	in the	last 12	mont	ths ?(a	ıll that	apply) <sup>2)</sup>						
69.5	52.1	57.0	54.4	58.5	48.8	57.2	55.8	1-2 times						
30.5	36.6	26.6	33.3	31.7	37.2	33.5	33.0	3-5 times						
0.0	5.1	5.7	3.7	4.2	14.0	3.7	4.5	6-10 times						
0.0	6.3	10.8	8.6	5.6	0.0	5.6	6.7	More than 10 times						
over t	he Int	ernet	in the	last 3	month	ıs?(all	that a	<b>pply)</b> <sup>2)</sup>						
65.3	47.2	48.6	46.5	50.7	62.9	59.3	50.1	Up to 5000 dinars						
15.3	30.8	28.3	27.2	31.4	14.9	25.6	28.0	From 5001 to 10000 dinars						
19.3	20.2	16.6	22.8	15.9	22.3	10.5	19.1	From 10001 to 50000 dinars						
0.0	1.4	2.6	1.2	1.8	0.0	3.7	1.5	From 50001 to 100000 dinars						
0.0	0.0	1.6	1.0	0.0	0.0	0.0	0.4	More than 100000 dinars						
0.0	0.4	2.2	1.5	0.2	0.0	8.0	8.0	Don't know						



### MODULE 1.D:

			Ag	es			S	ex
Answer (individuals)	16 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	Men	Women
D6: Which of the followi	ng hav	e you	encou	ntered	l when	buyin	g/orde	ereing
Technical failure of website during ordering or payment	0.0	1.5	2.2	1.0	0.0	0.0	1.6	0.6
Difficulties in finding information on guarantees	1.1	1.3	0.4	1.6	0.0	0.0	1.4	0.5
Speed of delivery slower than indicated	8.4	3.9	4.1	2.7	6.0	2.0	5.3	4.5
Final costs higher than indicated	0.0	1.6	2.7	3.6	2.9	0.0	1.8	2.1
Wrong or damaged goods delivered roba ili roba nije primljena uopšte	6.0	6.5	5.7	5.9	14.1	4.5	7.7	5.4
Payment not secured enough (misuse of credit card details, etc.)	0.0	0.0	0.0	1.0	0.0	0.0	0.3	0.0
No satisfactory response after complaint	0.0	1.3	0.7	2.0	6.7	0.0	2.1	0.6
Foreign seller does not sell to the Republic of Serbia	8.9	4.2	2.9	2.5	2.7	0.0	6.8	2.2
Other	1.7	2.2	4.0	3.1	1.6	0.0	2.4	2.9
I have never encountered any problem	76.0	82.0	83.5	80.5	81.5	95.5	78.2	83.6
D	7: Ho	w ofter	ı have	you u	sed th	e follo	wing o	n-line
					Obta	aining	inform	ation
Every time or almost every time	45.4	49.9	43.6	53.4	50.0	42.7	50.0	45.3
Sometimes	16.3	24.7	19.2	16.1	15.3	27.7	20.4	18.2
Rarely or never	38.4	25.4	37.2	30.5	34.7	29.6	29.6	36.5
				Con	mparir	ıg pric	es/pro	ducts
Every time or almost every time	70.8	71.0	64.6	73.0	66.6	61.2	71.9	66.3
Sometimes	13.3	12.9	13.7	7.6	15.3	16.7	11.2	13.9
Rarely or never	15.9	16.0	21.7	19.4	18.2	22.1	16.8	19.8
					C	uston	iers' re	views
Every time or almost every time	67.7	73.8	66.9	56.9	49.2	40.4	63.9	67.4
Sometimes	17.6	10.0	15.1	13.4	25.2	32.2	16.5	13.6
Rarely or never	14.7	16.1	18.1	29.7	25.6	27.5	19.7	19.0

<sup>1)</sup> The data refer to individuals who did not answer

<sup>&</sup>quot;Never used it" in question C1.

<sup>&</sup>lt;sup>2)</sup> The data refer to individuals who answered

<sup>&</sup>quot;Within the last 3 months" or "More than 3 months (less than a year)" in question D1 .

e-co	mme	rce <sup>1)</sup>						In percentages
Educ	ational	level	Em	ployme	nt situa	tion		· ·
Lower than secondary	Secondary	Tertiary	Employee	Unemployed	Student	Other	Total	Answer (individuals)
goods	or ser	vices	over th	e Inte	rnet i	n the l	ast 12	months? 2) (all that apply)
0.0	1.1	1.6	0.7	2.2	0.0	0.0	1.1	Technical failure of website during ordering or payment
0.0	0.4	2.6	0.7	0.9	3.8	0.0	1.0	Difficulties in finding information on guarantees
7.0	3.8	6.3	4.9	3.3	5.3	11.2	4.9	Speed of delivery slower than indicated
0.0	2.0	2.6	2.2	2.4	0.0	0.0	1.9	Final costs higher than indicated
4.1	5.9	9.1	7.8	4.3	3.8	10.9	6.6	Wrong or damaged goods delivered roba ili roba nije primljena uopšte
0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.2	Payment not secured enough (misuse of credit card details, etc.)
0.0	1.3	2.0	1.1	1.5	0.0	3.1	1.3	No satisfactory response after complaint
8.1	4.4	3.1	1.1	11.1	0.0	0.0	4.5	Foreign seller does not sell to the Republic of Serbia
0.0	2.8	3.6	2.6	3.5	0.0	1.2	2.6	Other
80.9	82.0	78.5	83.2	76.9	90.9	77.0	80.9	I have never encountered any problem
inforn	nation	before	e you b	ought	/order	ed goo	ds or	services?
on var	rious s	ellers						
30.4	48.0	54.9	49.7	43.5	57.0	45.9	47.6	Every time or almost every time
20.7	17.8	22.0	20.1	20.7	3.8	21.1	19.3	Sometimes
48.9	34.2	23.1	30.2	35.8	39.2	33.0	33.1	Rarely or never
from v	variou	s webs	ites					
66.1	71.0	66.2	66.8	72.3	68.4	69.8	69.1	Every time or almost every time
4.1	12.4	16.8	13.5	9.9	15.6	16.4	12.6	Sometimes
29.7	16.6	16.9	19.8	17.8	16.0	13.8	18.3	Rarely or never
on we	bsite (	of blog						
57.8	64.7	71.4	62.7	71.0	75.5	53.2	65.7	Every time or almost every time
16.0	15.4	13.7	15.3	13.1	8.4	25.8	15.0	Sometimes
26.1	19.9	14.8	22.0	15.9	16.1	21.0	19.3	Rarely or never



### MODULE 1.D:

			Ag	es			Sex	
Answer (individuals)	16 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	Men	Women
	<b>D8:</b> 1	Have y	ou boi	•		_		rvices ement
Yes	4.6	9.1	13.8	10.8	4.5	14.6	7.3	11.5
No	95.4	90.9	86.2	89.2	95.5	85.4	92.7	88.5
D9: Have you ca	rried	out an	y of th	e follo	wing f	inanci	al acti	vities
Buying/selling shares, bonds or other investment services	66.6	0.0	19.3	23.7	0.0	0.0	41.3	18.7
Bying/renewing insurance policies, including policies offered as a package together with another service (travel insurance together with a plane ticket)	33.4	77.8	52.4	8.7	66.9	56.8	24.1	47.5
Taking a loan from banks or other financial providers	0.0	44.3	33.0	67.6	33.1	43.2	34.6	39.4

<sup>1)</sup> The data refer to individuals who did not answer "Never used it" in question C1.

<sup>&</sup>lt;sup>2)</sup> The data refer to individuals who answered "More than a year ago" or "Never" in question D1.

	1)
e-commerce	e.''

e-co	e-commerce ' In percentages													
Educ	ational	level	Em	ployme	nt situa	tion								
Lower than secondary	Secondary	Tertiary	Employee	Unemployed	Student			Answer (individuals)						
for pri	ivate u	ise ove	er the	Intern	et									
on soc	r private use over the Internet social media or applications (Facebook													
0.0	10.4	11.4	12.1	9.0	0.0	3.1	9.4	Yes						
100.0	89.6	88.6	87.9	91.0	100.0	96.9	90.6	No						
over t	he Int	ernet	(exclud	ling e-	mail) f	or priv	ate u	se in the last 12 months?						
58.2	25.4	0.0	23.2	41.1	0.0	0.0	26.4	Buying/selling shares, bonds or other investment services						
41.8	36.3	50.6	33.4	53.8	0.0	77.0	39.6	Bying/renewing insurance policies, including policies offered as a package together with another service (travel insurance together with a plane ticket)						
0.0	38.3	72.2	48.4	5.2	0.0	23.0	37.8	Taking a loan from banks or other financial providers						



### MODULE 1.E:

			Ą	ge			S	ex
Answer (individuals)	16 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	Men	Women
E1: Whi	ich of	the fol	lowing	comp	uter o	r mobi	ile acti	vities
Transferring files between computers or other devices	94.1	84.0	80.6	88.1	84.5	85.3	86.5	85.8
Installing software or applications	74.6	78.1	68.2	54.3	56.7	41.3	72.4	63.5
Setting software, including operational system or security (antivirus) programme	83.6	66.5	68.9	56.0	61.8	40.2	70.3	65.7
		E2	: Whic	h of tl	ne foll	owing	IT acti	vities
Copying or moving files or folders	94.5	94.0	89.7	92.6	88.3	83.1	91.6	92.5
Using word processing software	81.1	66.9	68.0	58.8	78.1	61.9	67.8	72.1
Creating presentations or documents integrating text, pictures, tables or graphs	62.9	41.1	46.0	28.8	28.9	25.3	40.6	45.3
Using spreadsheet software	64.9	50.3	49.1	45.5	34.8	38.4	50.7	49.8
Using advanced functions to organise and analyse data, such as sorting, filtering, using formulas, creating charts	41.8	24.3	29.8	23.6	15.2	18.2	27.5	28.5
Using software to edit pictures, video or audio files	61.0	40.8	39.0	35.3	22.3	28.7	42.9	39.7
Writing code in a programming language	16.5	9.8	8.9	4.6	5.6	1.8	11.1	7.7

<sup>1)</sup> The data refer to individuals who did not answer "Never used it" in question B1.

e-skills <sup>1)</sup>	la
	In percentages

In percentages	In perce												
		tion	nt situa	ployme	Em	level	cational	Educ					
Answer (individuals)	Total	Other	Student	Unemployed	Employee	Tertiary	Secondary	Lower than secondary					
have you performed in the last 12 months: (all that apply)													
Transferring files between computers or other devices	86.2	89.6	91.1	81.6	88.2	90.8	84.5	86.0					
Installing software or applications	68.0	62.0	84.9	68.4	67.2	70.5	64.9	77.6					
Setting software, including operational system or security (antivirus) programme	68.0	73.1	89.2	67.8	64.4	71.2	63.6	82.5					
hat apply)	: (all t	onths	t 12 m	he las	ut in t	rried o	you ca	have :					
Copying or moving files or folders	92.0	91.3	90.0	90.7	93.5	91.9	90.7	97.3					
Using word processing software	69.9	76.0	91.2	60.4	73.2	89.0	66.3	55.5					
Creating presentations or documents integrating text, pictures, tables or graphs	42.9	32.6	87.1	34.2	47.1	61.0	39.3	29.9					
Using spreadsheet software	50.3	41.2	84.6	36.2	59.7	70.1	47.7	30.6					
Using advanced functions to organise and analyse data, such as sorting, filtering, using formulas, creating charts	28.0	22.0	59.0	20.8	31.4	44.0	24.2	18.5					
Using software to edit pictures, video or audio files	41.3	38.7	71.4	39.1	40.2	51.7	39.3	33.7					
Writing code in a programming language	9.4	9.9	30.9	5.2	10.1	14.2	7.6	9.2					



**MODULE 1.F: Privacy and protection** 

	141	ODUL	1.1		vacy	anu j	TOLE	CIOII
				S	ex			
Answer (individuals)	16 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	Men	Women
	I	71: Wh	at type	es of p	ersona	al deta	ils hav	e you
Personal details (name, date of birth, number of identity card)	73.6	61.5	52.3	45.2	54.4	32.7	55.3	58.2
Contact details (home address, telephone number, e-mail)	62.6	61.1	55.3	44.5	41.4	32.0	53.4	53.8
Payment details (credit or debit cards number, bank account number)	8.9	12.5	11.5	10.6	7.0	5.1	10.6	10.1
Other personal details (photos, current location, information related to health, employment, income)	62.5	53.6	37.0	25.5	37.0	12.3	42.7	42.7
None of the mentioned (did not provide any personal information)	10.9	19.9	29.2	41.9	35.7	59.1	29.0	26.3
F2: Have you carried out any	of the	followi	ng act	ivities	befor	e maki	ing per	sonal
Reading privacy policy statement before providing personal information	68.3	65.7	72.7	80.2	85.5	79.7	69.7	75.6
Restrict access to your current location	57.6	53.1	44.8	45.7	53.9	36.0	49.4	52.0
Restrict access to your profile or content on social media	74.3	69.8	63.8	60.4	57.2	28.9	64.1	67.3
Refuse to allow the use of personal details for advertising purposes	61.9	47.1	48.9	46.8	53.1	26.3	50.2	51.7
Check the website where you need to provide personal details is secure	59.5	52.9	52.9	44.6	48.4	38.6	54.5	49.9
Ask website or search engines to up-date or erase details they hold about you	19.2	16.0	11.0	4.7	4.2	6.5	13.2	11.3

<sup>1)</sup> The details refer to individuals who answered

<sup>&</sup>quot;Within the last 3 months" or "More than 3 months ago (less than a year)" .

# of personal identity<sup>1)</sup>

### In percentages

In percentages		or personal identity											
		tion	nt situa	ployme	Em	level	cational	Educ					
Answer (individuals)	Total	Other	Student	Unemployed	Employee	Tertiary	Secondary	Lower than secondary					
over the Internet in the last 12 months?													
Personal details (name, date of birth, number of identity card)	56.7	54.4	71.8	55.4	56.7	59.6	57.9	48.8					
Contact details (home address, telephone number, e-mail)	53.6	40.4	71.7	49.5	58.6	62.3	55.4	36.0					
Payment details (credit or debit cards number, bank account number)	10.4	5.1	10.5	8.2	13.5	18.3	9.3	3.6					
Other personal details (photos, current location, information related to health, employment, income)	42.7	37.6	61.9	45.1	40.1	38.6	45.5	38.2					
None of the mentioned (did not provide any personal information)	27.7	34.6	18.6	27.5	26.9	24.3	26.4	36.9					
nonths:? 1) (all that apply)	st 12 :	the la	net in	e Inter	ver the	lable o	s avai	detail					
Reading privacy policy statement before providing personal information	72.6	80.1	77.3	73.0	69.8	73.4	71.0	77.4					
Restrict access to your current location	50.7	43.2	73.6	49.1	51.2	52.4	51.4	45.8					
Restrict access to your profile or content on social media	65.7	58.2	75.1	70.7	62.3	60.3	65.4	73.9					
Refuse to allow the use of personal details for advertising purposes	50.9	45.1	57.8	52.2	50.5	54.0	50.0	50.2					
Check the website where you need to provide personal details is secure	52.2	53.6	55.9	52.1	51.6	54.4	51.8	50.9					
Ask website or search engines to up-date or erase details they hold about you	12.3	12.9	20.5	11.1	12.0	12.7	12.2	11.9					



**MODULE 1.F: Privacy and protection** 

	Age							Sex	
Answer (individuals)	16 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	Men	Women	
F3: Did you know that cookies can be used to trace movements of people									
Yes	46.5	44.1	42.5	39.5	31.1	24.1	46.7	35.4	
No	53.5	55.9	57.5	60.5	68.9	75.9	53.3	64.6	
	F4:	Are yo	ou con	cerned	l about	t the p	ossibi	ity of	
Very concerned	11.5	19.5	15.5	15.7	14.5	10.7	12.1	18.9	
Somewhat concerned	50.2	36.6	34.9	34.5	38.3	20.9	36.9	39.3	
Not concerned at all	38.3	43.9	49.6	49.9	47.2	68.4	51.0	41.8	
F5: Have you e	ver ch	anged	the se	etting	of you	r Inter	net br	owser	
Yes	32.0	24.1	32.4	21.7	26.0	9.4	29.9	23.8	
No	68.0	75.9	67.6	78.3	74.0	90.6	70.1	76.2	
	F6: I	o you	usean	ti-trac	king s	oftwar	ethat :	limits	
Yes	11.4	14.6	10.1	15.2	7.8	9.3	14.0	10.1	
No	88.6	85.4	89.9	84.8	92.2	90.7	86.0	89.9	

<sup>1)</sup> The data refer to individuals who answered

<sup>&</sup>quot;Within the last 3 months" or "More than 3 months ago (less than a year)" in guestion B1.

of pe	rson	al ide	ntity	.1)				In percentages
Educ	ational	level	Em	ployme	nt situa	tion		
Lower than secondary	Secondary	Tertiary	Employee	Unemployed	Student	Other	Total	Answer (individuals)
on the	e Inter	net, to	make	a pro	file of	each t	ıser to	tailor them to ads?
30.7	38.6	55.9	48.3	32.4	54.0	35.7	41.1	Yes
69.3	61.4	44.1	51.7	67.6	46.0	64.3	58.9	No
tracin	g you	r onlin	e activ	rities f	or the	purpo	se of t	ailoring ads?
16.8	14.1	18.2	15.3	17.2	13.8	11.7	15.5	Very concerned
38.9	38.1	37.2	35.9	36.8	51.1	44.2	38.0	Somewhat concerned
44.3	47.8	44.6	48.8	46.0	35.1	44.1	46.5	Not concerned at all
to pre	vent c	or limit	t the a	mount	of co	okies o	on you	r computer?
19.6	27.8	29.8	27.1	25.8	40.9	23.7	26.9	Yes
80.4	72.2	70.2	72.9	74.2	59.1	76.3	73.1	No
tracki	ng yo	ur onli	ne act	ivities	?			
9.3	12.0	14.4	13.5	10.3	9.1	13.3	12.1	Yes
90.7	88.0	85.6	86.5	89.7	90.9	86.7	87.9	No



# 1.5. QUESTIONNAIRE

# USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN HOUSEHOLDS AND BY INDIVIDUALS

	IVIO	DOLL I.A - ACCESS TO IN	FORMATION AND COMMUNICATION TECHNOLOG	ILO							
A1	Do	you or anyone in your household	have access to the Internet <u>at home</u> ?								
			(tick all that apply)								
	a)	Personal computer (PC)									
	a1) Total number of computers in your household										
	b) Laptop										
	b1) Total number of laptops in your households										
	c)										
		c1) Satellite TV									
		c2) Cable TV		$\square$							
		c3) Digital TV									
		c4) Total number of TV se									
	d)	Radio receiver (including mobile									
		<u> </u>	receivers in your household	$\square$							
	e)	•		$\square$							
	f)	None of the above									
			-> Go to A2								
A2		Do you or anyone in your hou	usehold have access to the Internet <u>at home,</u> whether used o	r not?							
			(tick only one)								
		Yes	-> Go to A3								
		No	-> Go to A4								
		Don't know	-> Go to B1								
			-> Go to A3								
A3	W	hat types of Internet connection do	you use <u>at home</u> ?								
			(tick all that apply)								
		Broadband connection, ADSL (DS									
	b)	Broadband connection, cable Inte	ernet								
	c)	Mobile broadband connection (3G key	G network) via mobile phone, smartphone, SIM cards, USB								
	d)	Dial-up access over telephone line	e or ISDN								
	e)	Mobile narrow band connection (2 smartphone, modem in laptop	2G or GPRS), via SIM card or USB key, mobile phone,								
			-> Go to B1								

A4	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 reasons; other reasons	
	-> Go to B1	

	MODULE 1.B – USE OF CO	)MF	PUTERS AND THE INTERNET							
B1	When did you last use a <u>computer</u> (at home, at p (desktop, laptop, netbook, tablet, excluding smartph									
	(tick only one)									
	Within the last 3 months -> Go to B2									
	More than 3 months ago (less than 1 year) -> Go to B3									
	More than 1 year ago		-> Go to B3							
	Never used it		-> Go to B3							
B2	How often, on average, have you used a comput	<u>er</u> ir	n the last 3 months?							
	(tick	only	one)							
	Every day or almost every day									
	At least once a week									
	At least once a month									
	Less than once a month									
		io to	) B3							
В3	When did you last use the Internet? (desktop, laptop, mobile phone, smartphone)									
		(tick	only one)							
	Within the last 3 months		-> Go to B4							
	More than 3 months ago (less than 1 year)		-> Go to C1							
	More than 1 year ago		-> Go to D1							
	Never used it		-> Go to G1							
B4	How often, on average, have you used the Intern	<u>et</u> ir	n the last 3 months?							
	(tick	only	one)							
	Every day or almost every day									
	At least once a week									
	At least once a month									
	-> (	Go t	o B5							



B5	Where have you used the <u>Internet</u> in the last 3 months?	
	(tick all that apply)	
	a) At home	7
	b) At place of work (away from home)	1
	c) At place of education	1
	d) At someone else's home	1
	e) Other	1
	e1) Public library	1
	e2) Post office	1
	e3) Public institution, assembly, government organisation	1
	e4) Internet café	1
	e5) Hotspot (at hotel, airport, public place)	1
	-> Go to B6	_
В6	On which of the following devices have you used the Internet at home?	
	(tick all that apply)	
	a) Personal computer (PC)	
	b) Laptop, netbook	
	c) Tablet	
	d) Mobile phone or smartphone	
	e) Other mobile devices (media or video games, e-book reader, smartwatch)	
	f) Smart TV (directly connected to the Internet, via WiFi, not via a separate device using it as a larger screen)	
	If the answer is "Yes" in f) -> go to B7; otherwise, go to B8	_
В7	For which of the following activities have you used the smart TV in the last 3 months?	
	(tick all that apply)	
Wa	atching Internet streamed TV (live or catch-up)	
Wa	atching other video content (on demand or from sharing services)	
Int	ternet browsing through a browse application	
Us	sing other Internet applications (Skype, Facebook, games, on-line shopping)	
	-> Go to B8	
В8	Have you used any of the following devices to access the Internet <u>away from home or work?</u>	
	(tick all that apply)	
	a) Mobile phone or smartphone	
	If the answer is "YES" in a) -> go to a1) or a2)	
	a1) Mobile phone or smartphone via GPRS or 3G	
	a2) Mobile phone or smartphone via WiFi	
	b) Portable computer (laptop or tablet)	
	If the answer is "YES" in b) -> go to b1) or b2)	
	b1) Via mobile phone network, USB key or SIM cards	
	b2) Via WiFi (wireless network)	
	c) Other mobile devices (media or video games, e-book readers, smartwatch)	
	d) Don't have access to the Internet via mobile devices away from home or work	
	-> Go to B9	

В9		hich of the following activities have you performed over the Internet <u>for private purposes</u> in tonths?	he las	it 3				
		(tick all that apply)						
Co	mm	nunication						
	a)	Sending/receiving e-mails	П					
	b)	Telephoning over the Internet/video calls (via web cam) over the Internet	П					
c) Participating in social networks (Facebook, Twitter)								
Ac	ces	s to information	П					
	d)	Reading online news / newspapers / news magazines	Н					
		Finding information about goods and services	П					
Us	e of	f entertainment	Ш					
	f)	Playing or downloading games	Н					
		Listening to music (web radio, music streaming)	Н					
		Watching Internet streamed TV (live or catch-up)	П					
		Watching video on demand, from commercial services, (Netflix, HBO)	Н					
	j)	Watching video content from sharing services over YouTube and similar sharing services	Н					
Cr		vity	Н					
		Uploading self-created content (text, photos, music, videos, software)	Н					
	1)	Creating websites or blogs	Н					
e-h	., ieal		Н					
		Seeking health-related information (injury, disease, nutrition, improving health, etc.)	П					
	n)	Making an appointment with a practitioner via the website of hospitals or health care	Ш					
Ot	her	online services	П					
	0)	Using services related to travel and travel related accommodation	П					
	p)	Selling goods or services over the Internet (via auctions)	П					
	q)	Internet banking	П					
	r)	Using payment accounts (PayPal) to pay goods or services purchased over the Internet	П					
		-> Go to B10	_					
B10		ave you used cloud services for the storage of files (documents, pictures, music or video files Google drive, Dropbox,Windows One Drive, iCloud, Amazon cloud drive?	s) suc	:h				
		(tick only one)						
		Yes		1				
		No		1				
		-> Go to B11						
B11		hich of the following learning activities have you conducted for private or professional purpo e last 3 months?	ses ii	n				
		(tick all that apply)						
	a)	Doing an online course (from any field)		]				
	b)	Looking for information on the Internet for learning purposes (audio-visual materials, online learning software, e-textbooks)	9					
	c)	Chatting or discussing on online forum		1				
	d)	Other		1				
		-> Go to C1		_				



	MODUL	E C – USE e-GOVERNMENT	
-	C1 for private purposes for the following	public authorities' services or public services over the Internet, activities? i.e. certificates can be downloading (hospitals, libraries)	
		(tick all that apply)	
	<ul> <li>a) Obtaining information from websit</li> </ul>	es of public authorities or public services	
	b) Downloading official forms		
	c) Sending completed forms		
	d) None of the above		
	If the answer is "	NO" in c) -> go to C2; otherwise, go to D1	
(	What were the reasons for <u>not sendin</u> <u>over the Internet</u> in the last 12 months	g completed forms to public authorities ??	
		(tick all that apply)	
	<ul> <li>a) No need to submit completed form</li> </ul>	ı (whether online or in hard copy)	
	If the answer is "Yes" in a) -> go to D	1; otherwise, go to b)	
	b) There were no such services on the	e website (didn't exist)	
	c) Lack of skills (didn't know how to	use website or use was too complicated)	
	d) Concerns about security and prote	ection of personal data	
	e) Lack of electronic signature or ide	ntification	
	f) Another person did it on my behal	f	
	g) Other reasons		
		-> Go to D1	

MODULE D — e-COMMERCE		
When did you last buy or order goods or services over the Internet for private use?		
(via website or applications from any device: desktop, I	aptop, mobile phone, smartphone)	
(for persons who DID NOT answ	(for persons who DID NOT answer "Never used it" in question B3)	
Within the last 3 months	-> Go to D2	
More than 3 months ago (less than 1 year	-> Go to D2	
More than 1 year ago	-> Go to D9 / If 'more than year ago' in B3 -> go to G1	
Never	-> Go to D9 / If 'more than year ago' in B3 -> go to G1	

D2	What types of goods or services have you bought or ordered <u>over the Internet</u> for private use, last 12 months,	in the
	(tick all that apply)	
	a) Food or groceries	
	b) Household goods (furniture, toys)	
	c) Pharmaceutical products	
	d) Clothes, sports goods	
	e) Computer hardware	
	f) Electronic equipment (incl. cameras)	
	g) Telecommunication services (broadband subscriptions, uploading money on prepaid	
	phone cards)	
	h) Holiday accommodation (hotel)	
	i) Other travel arrangements (transport tickets, car hire, etc.)	
	j) Tickets for cultural events	
	k) Films, music	
	I) Books/magazines/newspapers (including e-books)	
	m) e-learning material	
	n) Video games and upgrades, computer software and upgrades	
	o) Other	
	-> Go to D3	
	From whom have you bought/ordered goods or services <u>over the Internet</u> in the last 12 month  (tick all that apply)	
	a) From national sellers	
	b) From sellers from EU countries	
	c) From sellers from the rest of the world	
	d) Unknown country of origin of sellers	
	-> Go to D4	
D4	How often have you bought/ordered goods or services over the Internet for private use, in the months?	last 3
	Question D4 is for respondents who answered "Within the last 3 months" in question D1	
	1–2 times	
	3–5 times	
	6–10 times	$\neg \neg$
	More than 10 times	
	-> Go to D5	
D5	How much have you spent buying/ordering goods or services Over the Internet for private use last 3 months?	, in the
	Question D5 is for respondents who answered "Within the last 3 months " in question D	1
	Less than 50 euros	
	From 50 to 100 euros	$\dashv$
	From 100 to 500 euros	$\dashv$
	From 500 to 1000 euros	
	More than 1000 euros	+
	Don't know	+
	-> Go to D6	



D6	Which of the problems have you encountered when buying/ordering Internet in the last 12 months?	goods or s	ervices <u>over t</u>	<u>he</u>
	(tick all that apply)			
	a) Technical failure of website during ordering or payment			
	b) Difficulties in finding information on guarantees			
	c) Speed of delivery slower than indicated			
	d) Final costs higher than indicated			
	e) Wrong or damaged goods or services delivered			
	f) Payment not secured enough (misuse of credit card details, etc.)			
	g) No satisfactory response after complaint			
	h) Foreign seller does not sell to the Republic of Serbia			
	i) Other			
	j) I have never encountered any problem			
	-> Go to D7			***************************************
D7	How often have you used the following online information before you bought/ordered goods or services for private use over the	Every time or almost	Sometimes	Rarely or
	Internet in the last 12 months?	every	Comounico	never
		time		
	(tick all that apply)	wl	nen I bought o	nline
	a) Obtaining information on various sellers		d	
	b) Comparing prices/products from various websites		е	
	c) Customers' reviews on websites or blogs		f	
	-> Go to D8			
D8	Have you bought/ordered goods or services for private use <u>over the</u> advertisements on social media or applications (Facebook), in the la			
	(tick only one)			
	Yes			
	No			
	-> Go to D9			
D9	Have you carried out any of the following financial activities over the (excluding e-mail) for private use, in the last 12 months?	Internet		
	(for respondents who answered "Within the last 3 months or more than 3 mon	ths ago (les	s than 1 year ag	o)" in B3)
	(tick all that apply)			
	a) Buying/selling shares, bonds or other investment services			
	b) Buying/renewing insurance policies, including policies offered as another service (travel insurance offered together with a plane tid		together with	
	c) Taking a loan from banks or other financial providers			
	-> Go to E1			

		MODULE 1.E – e-SKILLS	
E1	w	hich of the following computer or mobile activities have you carried out in the last 12 months?	
		(for respondents who DID NOT answer "More than 1 year ago or Never used it" in B3)	
		(tick all that apply)	
	a)	Transferring files between computers or other devices	
	b)	Installing software or applications	
	c)	Setting software, including operational system or security (antivirus) programme	
		-> Go to E2	
	_	(tick all that apply)	
	a)	Copying or moving files or folders	
	b)	Using Word processing software	
	c)	Creating presentations or documents integrating text, picture, tables or graphs	
	d)	Using spreadsheet software	
		If the answer is "Yes" -> go to d	
		d1) Using advanced functions to organise and analyse 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 1.F – PRIVACY AND PROTECTION OF PERSONAL IDENTITY

		(for persons who DID NOT answer "More than 1 year ago or Never used it" in B3)	
		(tick all that apply)	
	a)	Personal details (name, date of birth, identity card number)	
	b)	Contact details (home address, telephone number, e-mail)	
	c)	Payment details (credit or debit cards number, bank account number)	
	d)	Other personal details (photos, current location, information related to health, employment, income)	
	e)	None of the above (did not provide any personal information)	
		-> Go to F2	
F2		you carried out any of the following activities before making personal details accessil net in the last 12 months?	ble <u>over th</u>
F2		you carried out any of the following activities before making personal details accessil	ble <u>over th</u>
F2		you carried out any of the following activities before making personal details accessil net in the last 12 months?	ble <u>over th</u>
F2	Inter	you carried out any of the following activities before making personal details accessil net in the last 12 months?  (tick all that apply)	ole over th
F2	Inter	you carried out any of the following activities before making personal details accessilnet in the last 12 months?  (tick all that apply)  Read privacy policy statements before providing personal information	ble over th
F2	a) b)	you carried out any of the following activities before making personal details accessinet in the last 12 months?  (tick all that apply)  Read privacy policy statements before providing personal information  Restrict access to your current location	ble over th
F2	a) b)	you carried out any of the following activities before making personal details accessinet in the last 12 months?  (tick all that apply)  Read privacy policy statements before providing personal information  Restrict access to your current location  Restrict access to your profile or content on social media	ble over th
F2	a) b) c) d)	e you carried out any of the following activities before making personal details accessing in the last 12 months?  (tick all that apply)  Read privacy policy statements before providing personal information  Restrict access to your current location  Restrict access to your profile or content on social media  Refuse to allow the use of personal details for advertising purposes  Check that website where you need to provide personal details is secure	ble over th



F3	Did you know that cookies can be used to trace movements of people on the Internet, to make a profile of each user to tailor them to ads?	
	(tick only one)	
	Yes	
	No	
	-> Go to F4	
F4	Are you concerned with the possibility of tracing your online activities for the purpose of tailoring ads?	
	(tick only one)	
Ī	Very concerned	
	Somewhat concerned	
	Not concerned at all	
•	-> Go to F5	
F5	Have you ever changed the settings in your Internet browser to prevent or limit the amount of cookies on your computer?	
	(tick only one)	
	Yes	
	No	
	-> Go to F6	
F6	Do you use anti-tracking software that limits tracking your online activities?	
	(tick only one)	
	Yes	
	No	
-> Go to G1		

	MODULI	E 1.G – RESI	PONDENT'S E	ACKGROUND	INFORMATIO	N
G1. Age						
G2. Sex:						
Man Wom	nan 🗌					
G3. Educ	ational attainment					
Prima	ary education					
	Without education, 4–7 grades of prima Primary education	ary education	rimary educatio	n		
Seco	ndary education					
	Secondary vocatio Specialisation afte			ified workers sch		
Terti	ary education					
	Short-cycle Bachelor or equiva Master or equivale Doctor or equivale	nt		[ [ [		
G4. Emp	loyment situation					
Une Stud	loyee mployed lent er not in the labour	force (retired, in	compulsory mi	litary service) □		
G5. Num	ber of household m	embers				
G6. Of w	hich: number of chi	ldren aged und	er 18 years			
G7. Hous	sehold income (ave	rage net monthl	y income)			
Fron	o 300 euros o 300 to 600 euros o than 600 euros					



# USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE REPUBLIC OF SERBIA, 2016

### **ENTERPRISES**



### 2.1. METHODOLOGY

Survey period	The survey was carried out from 18 April to 4 May 2016
Type of survey	Telephone interview
Sample size	• 1673 enterprises
Target population <sup>1)</sup>	<ul> <li>Enterprises with 10 and more employees</li> <li>Section C: Manufacturing</li> <li>Sections D and E: Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities</li> <li>Section F: Construction</li> <li>Section G: Wholesale and retail trade; Repair of motor vehicles and motorcycles</li> <li>Section H: Transportation and storage</li> <li>Section I: Accommodation and food service activities</li> <li>Section J: Information and communications</li> <li>Sections L and M: Real estate activities; Professional, scientific and technical activities</li> <li>Section N and Division 95: Administrative and support service activities; Repair of computers</li> </ul>
Type of sample	Stratified sample
Geographic scope	<ul> <li>Territory of the Republic of Serbia (without AP Kosovo and Metohija)</li> </ul>

<sup>&</sup>lt;sup>1)</sup> Since 2011, the Classification of Activities has been in use according to the Regulation of the Classification of Activities ("O fficial Journal of the RS", No 54/10). This classificat ion is harmonised with NACE rev.2.

### 2.2. SAMPLE

The survey on LCT usage in ent erprises was carried out on a representative sample of 1673 enterprises on the terr litory of the Republic of S erbia. The response rate was 92.5% (1548 enterprises).

		S	Size clas	s		Region		
Sample (enterprises)		Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	Manufacturing	277	184	138	284	170	145	599
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	25	28	17	39	17	14	70
	Construction	36	29	23	41	21	26	88
l <b>i</b>	Wholesale and retail trade; repair of motor vehicles and motorcycles	120	71	43	108	56	70	234
Activity	Transportation and storage	32	21	22	33	20	22	75
	Accommodation and food service activities	70	40	3	44	29	40	113
	Information and communications	77	42	11	47	23	60	130
	Real estate activities; Professional, scientific and technical activities	76	35	12	42	29	52	123
	Administrative and support service activities; Repair of computers	64	27	25	36	23	57	116
Number		777	477	294	674	388	486	1548
Percentage		50.2	30.8	19.0	43.5	25.1	31.4	100



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### 2.3. MAIN FINDINGS

### 2.3.1. Computers and computer networks in enterprises

The results of the survey indicate that 99.8 % of enterprises on the territory of the Republic of Serbia use a computer for business use.

99.8% of enterprises use a computer for business use

Chart 2.1. Does your enterprise use a computer for business use?



In 29.9% of enterprises  $\frac{1}{2}$  of employees use a computer at least once a week, while in 38.4% of enterprises 75-100% employees use a computer at least once a week.

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

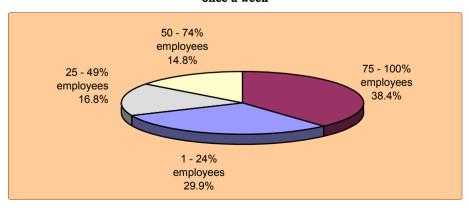


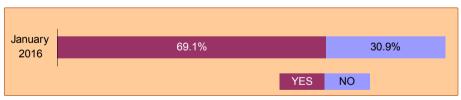
Chart 2.3. Does your enterprise use open Source operating system Linux?



14.5% of enterprises used Linux "Open Source"operating system

Linux was mostly used in large enterprises (43.0%), as well as those located on the territory of Belgrade (19.6%).

Chart 2.4. Do the employees in your enterprise have remote access to the enterprise's e-mail system, documents or applications?



The survey indicates that 69.1% of employees had remote access to doc uments or applications over the Internet (via fixed, mobile or wireless connection).

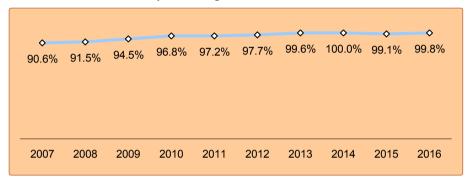


### 2.3.2. Internet in enterprises

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

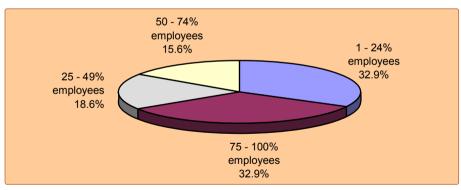
99.8% of enterprises have an Internet connection

Chart 2.5. Does your enterprise have access to the Internet?



In 32.9% of enterprises  $\frac{1}{2}$  of employees use the Internet at least once a week, while in 32.9% of enterprises 75-100% of employees use the Internet at least once a week.

Chart 2.6. Enterprises by the percentage of the employees using the Internet at least once a week



As regard t he type of connection, enter prises 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, 99.1% have broadband Internet connection.

99.1% of enterprises have a broadband Internet connection

Chart 2.7. Broadband Internet connection in enterprises

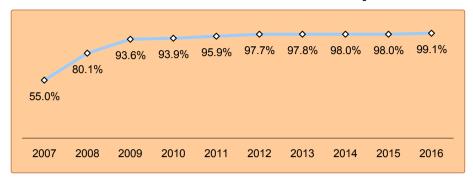


Chart 2.8. What is the maximum contracted download speed of the Internet connection in your enterprise?

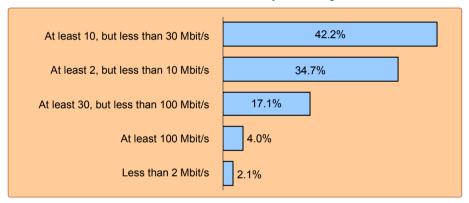
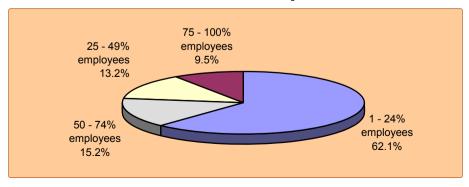


Chart 2.9. Please, provide an estimate of the percentage of employees who use portable devices for business purposes that allow an Internet connection via a mobile telephone line network?

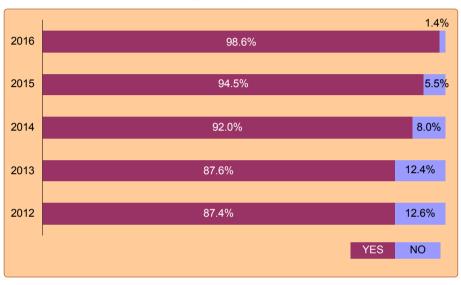




#### 2.3.3. e-government

On the territory of the Republic of Serbia, 98.6% of enterprises interact electronically with public authorities, being an increase of 4.1% and 6.6% in relation to 2015 and 201 4, respectively. There are 1.4% of enterprises that do not use this possibility.

Chart 2.10. Does your enterprise use public authorities' services via the Internet?



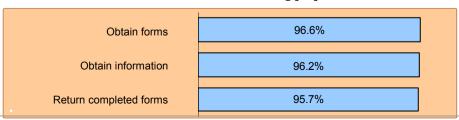
98.6% of enterprises use public authorities electronic services

The analysis of enterprises by a ctivities indicates that enterprise sengaged in "Construction" (100%) are those that interact the most with public authorities via the Internet.

Of the proposed answers as to the purposes for which the enterprises interact with public authorities via the Internet the most frequent ones are as follows:

- "To obtain information. " (96.2%)
- "To download forms. " (96.6%)
- "To return completed forms. " (95.7%)

Chart 2.11. Does your enterprise use public authorities' services via the Internet for the following purposes?



#### 2.3.4. Website

There are 80.8% of enterprises have a Website, being an increase of 5.6% in relation to 2015 and of 6.8% in relation to 2014

When observing the structure of enterprises by size classes, the following results are obtained:

- 93.9% of large enterprises have a website
- 89.8% of medium enterprises have a website
- 77.9% of small enterprises have a website

80.8% of enterprises have a website

There are differences depending on the territory. In Belgrade there are 84.0% of enterprises that have a Website, in Vojvodina 80.8%, and in Central Serbia 77.5%.



Chart 2.12. Does your enterprise a website?

Website available in enterprises, by activities:

- Information and communications (94.8%)
- Real estate activities; Professional, scientific and technical activities (92.8%)
- Manufacturing (86.9%)
- Administrative and support service activities; Repair of computers (84.6%)
- Accommodation and food service activities (80.7%)
- Construction (77.6%)
- Electricity, gas, steam and air conditioning supply; Water supply, sewerage
- Waste water management and remediation activities (74.1%)
- Wholesale and retail trade; repair of motor vehicles and motorcycles (61.2%)



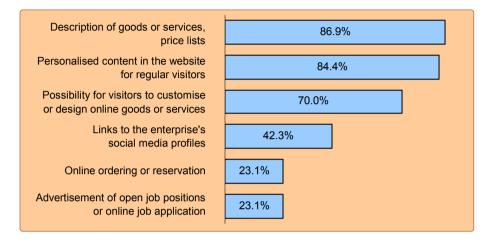
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Enterprises having a Website provide mostly the following services:

- Description of goods or services, pricelist (86.9%)
- Personalised content in the Website for regular/repeated visitors (83.6%)

• Possibility for visitors to customise or design the products (70.0%)

Chart 2.13. Does the website of your enterprise have the following services?



#### 2.3.5. e-commerce

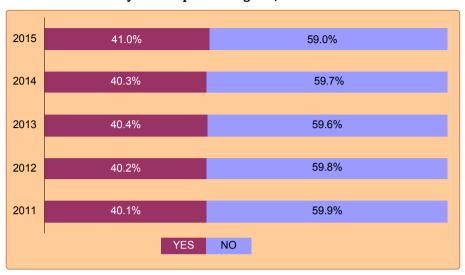
In 2015, 41.0 % of ent erprises in the Re public of Se rbia or dered go ods/services over the Internet, being a decrease of 0.7% in relation to 2014 and an increase of 0.6% c ompared to 2013

When observing the structure of enterprises by size classes, the following results are obtained:

- 51.9% of large enterprises ordered goods/services over the Internet
- 44.9% of medium enterprises ordered goods/services over the Internet
- 39.4% of small enterprises ordered goods/services over the Internet

41.0% of enterprises ordered goods/services over the Internet in 2015

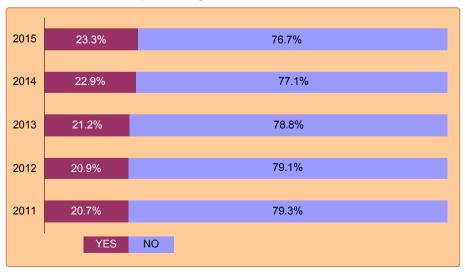
Chart 2.14. Did your enterprise order goods/services over the Internet?



The results of the survey indicate that only 23.3% of enterprises received, during 2015, orders (excluding manually-typed e-mails) over the Internet.

23.3% of enterprises received orders over the Internet in 2015

Chart 2.15. Did your enterprise receive orders over the Internet?





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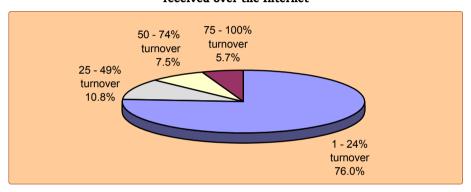
When observing the structure of enterprises by size classes, the following results are obtained:

- 34.5% of large enterprises received orders over the Internet
- 23.9% of medium enterprises received orders over the Internet
- 22.5% of small enterprises received orders over the Internet

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

- "Less than 24%. " (76.0% of enterprises)
- "More than 24% and less than 50%. " (10.8% of enterprises)
- "More than 50%, and less than 75%." (7.5% of enterprises)
- "75% and more." (5.7% of enterprises)

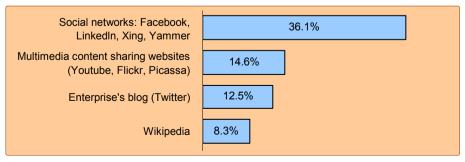
Chart 2.16. Percentage of the total turnover in 2015 resulting from orders received over the Internet



#### 2.3.6. Enterprises and social media

Social media are gro wing more available in ent erprises for business use. The r  $\,$  esults of the survey indicate that 36.1% of enterprises used any of the social media for business use.

Chart 2.17. Did your enterprise use any of the following social media for business purposes?



### 2.3.7. Use of cloud computing service

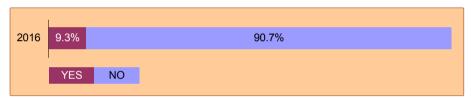
There are 9.3% of enterprises that pay cloud computing services over the Internet, which is an increase of 0.1% in relation to 2015.

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

- Delivered from servers of service providers
- Can be used on-demand by the user
- Are paid per user, capacity used.

9.3% of enterprises pay cloud computing services

Chart 2.18. Does your enterprise pay cloud computing services over the Internet?





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### 2.4. SURVEY RESULTS

### **MODULE 2.A:** Use of computers<sup>1)</sup>

#### A1: Does your enterprise computers for business purposes?

in percentages

		S	ize clas	SS		Region	i perce	
Enterprises		Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
		YES						
	Manufacturing	98.6	100.0	100.0	100.0	98.5	97.8	99.0
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	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
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Acti	Transportation and storage	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
	Information and communication	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
	Administrative and support service activities; Repair of computers	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Tota	l	99.6	100.0	100.0	100.0	99.5	99.6	99.8

### A2: Percentage of employees who use computers (at least once a week)

in percentages

		Enterprises						
	S	ize clas						
	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total	
1- 24%	27.0	41.4	31.7	36.0	31.9	22.7	29.9	
25- 49%	15.9	18.9	24.8	23.1	18.2	9.7	16.8	
50-74%	16.1	9.8	16.4	14.3	15.1	15.4	14.9	
75-100%	41.0	29.9	27.1	26.6	34.8	52.2	38.4	

<sup>1)</sup> The results in tables A2 and A3 refer only to enterprises that answered YES in question A1.

## A3: Does your enterprise use "Open source" operational system LINUX? in percentages

in percentage								
		S	Size cla	SS	ı	Region		
	Enterprises		Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
		YES						
	Manufacturing	6.8	14.8	40.0	9.8	12.7	10.1	10.7
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	5.7	28.4	42.5	26.2	4.1	30.2	19.6
	Construction	2.2	4.5	25.1	3.4	8.3	1.1	3.6
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	15.8	20.0	50.4	7.2	9.1	30.1	17.1
Act	Transportation and storage	12.1	2.9	68.3	19.7	2.2	16.1	13.1
	Accommodation and food service activities	8.0	10.9	100.0	4.4	3.4	13.7	9.2
	Information and communication	30.6	50.2	76.5	44.2	43.3	30.3	35.3
	Real estate activities; Professional, scientific and technical activities	21.9	30.7	68.6	25.1	31.1	21.5	23.9
	Administrative and support service activities; Repair of computers	9.0	10.7	14.1	11.1	1.1	13.0	9.8
Ukup	ono	12.3	17.4	43.0	11.4	11.5	19.6	14.5



### MODULE 2.B: ICT specialists and skills

### B1: Does your enterprise employ ICT specialists?

in percentages

							i perce	iitages
		S	ize clas	ss		Region		<del></del>
Enterprises		Small (10-49)	Secondary (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
		YES						
	Manufacturing	13.6	36.9	79.6	21.5	15.3	35.3	23.0
	Electricity, gas, steam and air concitioning supply; Water supply, sewerage, waste management and remediation activities	11.6	48.6	93.0	38.3	22.9	61.7	36.2
	Construction	2.2	19.5	75.2	6.3	13.3	7.5	8.5
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	8.8	34.5	80.1	18.2	12.7	10.2	13.6
Acti	Transportation and storage	15.4	37.5	92.7	24.0	12.7	32.9	22.5
	Accommodation and food service activities	11.0	29.8	33.3	27.3	4.8	11.8	14.4
	Information and communication	67.5	83.1	92.9	58.7	68.5	75.3	70.9
	Real estate activities; Professional, scientific and technical activities	26.4	58.0	82.9	26.1	28.1	34.3	31.7
	Administrative and support service activities; Repair of computers	26.1	43.6	48.1	16.5	31.6	35.2	31.2
Total		15.3	39.0	78.6	21.5	17.4	26.5	22.4

B2: Did your enterprise provide any type of training to develop ICT related skills of the persons employed, during 2015?

In percentages

		C	Size clas	:e	Region Region						
	Entermiser		- 0					ta			
	Enterprises	Small (10-49)	Medium (50-249	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total			
	Training f	Training for ICT specialists									
	Manufacturing	6.6	25.7	51.0	14.0	10.2	17.5	13.8			
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	7.5	44.1	8.6	4.1	11.6	7.5			
	Construction	-	3.5	43.7	0.6	3.9	3.2	2.5			
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	1.6	16.7	62.2	5.4	1.4	6.4	4.8			
Act	Transportation and storage	9.5	10.5	55.0	11.4	9.3	15.4	11.7			
	Accommodation and food service activities	2.0	8.5	-	9.6	-	1.1	3.1			
	Information and communication	32.4	68.1	80.0	33.9	29.0	44.5	39.7			
	Real estate activities; Professional, scientific and technical activities	7.1	41.6	58.6	7.2	14.3	13.7	12.7			
	Administrative and support service activities; Repair of computers	16.1	40.0	17.3	9.5	30.5	18.8	20.1			
Tota	l	5.9	22.1	49.8	10.1	8.2	13.2	10.8			
	Training for ot	her pe	rsons	employ	red						
	Manufacturing	13.5	36.0	52.8	21.7	21.0	20.4	21.2			
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	13.7	46.9	40.3	43.6	18.8	8.7	31.5			
	Construction	13.8	47.7	44.7	18.3	32.2	17.7	21.3			
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	22.8	41.7	58.9	39.6	22.3	16.6	26.0			
Act	Transportation and storage	36.8	39.6	60.5	46.2	19.9	49.3	38.3			
	Accommodation and food service activities	44.5	47.4	66.7	70.8	44.2	33.2	45.2			
	Information and communication	35.7	58.4	81.2	44.7	51.7	36.7	40.9			
	Real estate activities; Professional, scientific and technical activities	34.0	55.2	65.7	38.2	16.2	43.6	37.5			
	Administrative and support service activities; Repair of computers	22.4	51.5	36.5	26.6	44.7	22.5	28.6			
Tota	l	22.6	42.3	52.8	31.9	24.4	25.4	27.5			



B3: Did your enteprise employ or try to recruit ICT specialists, during 2015?

In percentages Size class Region Total Vojvodina **Enterprises** Belgrade Medium YES Manufacturing 4.3 13.7 19.0 6.4 5.2 12.3 7.5 Electricity, gas, steam and air conditioning supply; Water supply, 2.9 11.3 10.2 6.1 7.3 6.1 sewerage management and remediation activities Construction 3.3 10.8 32.1 0.6 5.0 4.6 Wholesale and retail trade; repair of 1.5 40.4 5.2 4.4 3.7 12.3 0.6 motor vehicles and motorcycles Transportation and storage 3.0 5.1 36.7 1.4 2.5 14.4 4.9 Accommodation and food service 5.7 4.5 10.5 10.2 4.9 33.3 2.1 activities Information and communication 48.6 8.86 65.9 42.7 33.9 60.7 52.5 Real estate activities: Professional. 1.8 29.7 38.6 7.2 2.2 7.3 6.3 scientific and technical activities Administrative and support service 14.2 13.1 19.2 6.0 9.2 19.1 14.5 activities; Repair of computers Total 5.2 15.6 26.9 6.2 4.6 12.1 8.0

B4: During 2015, did your enterprise have vacancies for ICT specialists that were difficult to fill?<sup>1)</sup>

In percentages

in percentage								illayes
		S	lize clas	ss	Region			
Enterprises		Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	Manufacturing	19.8	40.0	36.0	12.4	85.9	23.7	31.2
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation	-	27.3	-	41.4	-	-	23.1
	Construction	-	32.7	20.0	-	77.3	-	27.6
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	-	13.0	33.4	12.9	50.0	11.4	13.5
Acti	Transportatio and storage	100.0	-	24.5	-	-	81.3	57.6
	Accommodation and food service activities	-	-	100.0	-	-	10.0	4.7
	Information and communication	43.4	11.5	53.6	28.9	30.7	40.0	37.2
	Real estate activities; Professional, scientific and technical activities	-	41.3	37.0	-	100.0	32.6	30.9
	Administrative and support service activities; Repair of computers	31.2	66.7	-	100.0	100.0	12.5	32.1
Total		32.0	28.7	31.5	16.8	60.3	30.2	30.8

<sup>1)</sup> The results refer only to enterprises that answered YES in question B3.



B5A: Please, indicate who mainly performed the following ICT functions of your enterprise, during 2015

	enterprise, during 2015											
	(persons employed in the enterprise) In percentages											
			Size class				Region					
		Enterprises	Small (10-49)	Small (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total			
		Maintenand	e of IC	T stru	cture							
		Manufacturing	18.8	38.7	70.2	25.6	26.6	28.3	26.6			
		Electricity, gas, stea and air conditioning supply; Water supply, sewerage, waste management and remediation activities	17.2	49.3	70.4	39.9	20.6	66.7	36.9			
		Construction	7.0	37.2	70.4	16.1	23.2	10.0	15.2			
	Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	15.8	36.0	74.9	21.6	27.6	13.1	19.6			
	Acti	Transportation and storage	40.5	39.7	74.5	44.6	38.4	42.0	41.9			
		Accommodation and food service activities	15.9	37.6	66.7	31.3	2.7	21.0	20.1			
		Information and communication	66.7	80.7	100.0	76.6	56.9	71.9	70.1			
		Real estate activities; Professional, scientific and technical activities	19.4	61.0	78.6	37.9	21.4	24.6	26.2			
		Administrative and support service activities; Repair of computers	28.8	48.9	35.9	34.9	29.4	33.5	32.8			
	Total		20.9	42.3	69.6	28.0	27.5	25.5	26.9			
		Support f	or offic	ce soft	ware							
		Manufacturing	25.6	41.7	74.6	33.8	33.1	28.5	32.3			
		Electricity, gas, stea and air conditioning supply; Water supply, sewerage, waste management and remediation activities	32.0	58.2	84.9	57.2	28.0	66.7	48.9			
		Construction	13.5	34.5	83.7	34.7	16.1	11.0	20.3			
	vity	Wholesale and retail trade; repair of motor vehicles and motorcycles	28.3	51.8	83.1	29.6	32.6	34.7	32.4			
	Activity	Transportation and storage	49.8	52.6	96.8	63.7	39.3	49.8	52.4			
		Accommodation and food service activities	23.4	36.5	66.7	38.3	4.8	27.8	26.0			
		Information and communication	72.2	81.6	80.0	71.1	73.5	74.9	73.9			
		Real estate activities; Professional, scientific and technical activities	25.5	71.3	92.9	42.1	30.6	31.3	33.0			
		Administrative and support service activities; Repair of computers	37.6	51.3	51.3	37.0	48.8	39.3	41.2			
	Total		29.8	48.6	77.8	37.7	32.8	34.7	35.3			

B5A: Please, indicate who mainly performed the following ICT functions of your enterprise, during 2015

(persons employed in the enterprise) In percentages Size class Region Total /ojvodina Belgrade Enterprises 50-249) Small Development of business information system (ERP, CRM) Manufacturing 3.8 11.9 21.1 2.7 10.3 10.8 6.8 Electricity, gas, stea and air conditioning supply; Water supply, 6.0 2.9 3.7 3.1 24.7 sewerage, waste management and remediation activities Construction 4.2 27.8 2.3 2.2 2.0 1.1 Wholesale and retail trade: repair of 0.7 6.4 22.5 1.9 1.0 2.4 1.9 motor vehicles and motorcycles Transportation and storage 3.0 10.5 32.5 3.5 0.7 16.1 5.6 Accommodation and food service 4.4 7.5 33.3 11.7 3.9 5.2 activities Information and communication 28.9 55.1 43.5 26.4 24.7 38.3 33.5 Real estate activities: Professional. 4.2 15.9 7.3 26.1 7.1 8.8 4.7 scientific and technical activities Administrative and support service 10.5 9.2 8.1 6.0 14.8 12.8 7.0 activities; Repair of computers Total 3.7 11.9 22.8 4.1 5.7 8.2 6.0 Support for business information system Manufacturing 5.5 10.6 22.6 6.1 7.7 11.0 7.7 Electricity, gas, stea and air conditioning supply; Water supply, 9.9 32.8 13.0 2.9 7.6 sewerage, waste management and remediation activities Construction 2.5 5.7 34.1 9.2 1.1 2.5 4.5 Wholesale and retail trade; repair of 0.9 8.9 2.9 2.5 26.9 3.3 0.6 motor vehicles and motorcycles Transportation and storage 4.2 3.7 5.5 62.8 0.7 7.1 Accommodation and food service 12.5 7.5 21.0 11.2 11.6 activities Information and communication 34.9 55.7 47.5 24.7 41.0 39.3 67.1 Real estate activities; Professional, 7.1 30.4 7.1 34.2 8.8 4.7 10.4 scientific and technical activities Administrative and support service 7.0 18.7 16.0 22.8 9.2 6.4 9.8 activities; Repair of computers Total 5.2 12.7 28.5 8.5 4.7 8.6 7.6



B5A: Please, indicate who mainly performed the following ICT functions of your enterprise, during 2015

	enterprise, during 2015										
(	(pers	sons employed in the enterprise)					lr	perce	ntages		
			Size class				Region				
		Enterprises	Small (10-49)	Small (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total		
		Developme	nt of w	eb sol	utions						
		Manufacturing	14.9	29.5	30.1	18.4	9.8	32.1	19.3		
		Electricity, gas, stea and air conditioning supply; Water supply, sewerage, waste management and remediation activities	6.8	28.8	55.9	27.7	13.3	14.5	21.5		
		Construction	4.8	20.0	40.3	9.5	13.8	6.1	9.1		
	Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	14.5	18.4	23.1	15.0	19.1	13.1	15.2		
	Act	Transportation and storage	9.2	18.5	53.9	11.4	11.4	17.1	12.8		
		Accommodation and food service activities	13.9	10.6	33.3	16.6	1.4	16.3	13.5		
		Information and communication	68.3	75.1	56.5	64.1	54.3	74.6	68.9		
		Real estate activities; Professional, scientific and technical activities	27.2	60.9	58.6	31.0	24.1	35.2	32.4		
		Administrative and support service activities; Repair of computers	31.0	53.2	23.7	18.1	42.6	34.6	33.8		
٠	Total		17.6	29.7	35.0	18.2	16.3	25.7	20.6		
		Support :	for wel	soluti	ions						
		Manufacturing	16.1	28.4	30.9	18.9	9.6	34.3	20.0		
		Electricity, gas, stea and air conditioning supply; Water supply, sewerage, waste management and remediation activities	9.7	43.2	72.0	44.5	13.3	14.5	30.9		
		Construction	4.8	20.0	44.3	10.4	13.8	5.7	9.2		
	Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	12.5	20.0	26.5	13.4	14.6	13.6	13.8		
	Acti	Transportation and storage	15.4	23.5	61.2	17.4	11.4	31.3	18.8		
		Accommodation and food service activities	17.5	9.2	33.3	18.0	1.4	20.7	16.2		
		Information and communication	67.9	78.5	94.1	63.8	54.3	77.2	70.5		
		Real estate activities; Professional, scientific and technical activities	27.7	66.4	58.6	35.4	25.6	35.5	33.6		
		Administrative and support service activities; Repair of computers	30.0	53.6	26.9	20.0	42.6	33.6	33.5		
•	Total		17.9	31.5	39.7	19.6	15.1	27.3	21.4		

B5A: Please, indicate who mainly performed the following ICT functions of your enterprise, during 2015

(persons employed in the enterprise) In percentages Size class Region Total /ojvodina Belgrade 50-249) Enterprises Small Security and data protection Manufacturing 19.7 34.6 59.3 27.7 16.3 32.3 25.6 Electricity, gas, stea and air conditioning supply; Water supply, 13.7 76.9 43.5 30.3 23.8 36.9 51.3 sewerage, waste management and remediation activities Construction 7.3 35.7 48.0 20.7 13.8 9.2 14.3 Wholesale and retail trade; repair of 18.1 36.1 75.7 23.7 34.7 12.5 21.6 motor vehicles and motorcycles 40.6 Transportation and storage 37.0 44.7 89.9 50.8 30.4 36.3 Accommodation and food service 19.0 38.5 66.7 23.6 4.8 28.9 22.8 activities Information and communication 73.7 87.9 92.9 74.7 70.8 78.9 76.6 Real estate activities: Professional. 28.3 46.9 36.2 30.6 34.4 66.6 71.4 scientific and technical activities Administrative and support service 52.8 37.8 30.2 38.4 43.4 42.1 64.4 activities; Repair of computers

23.4

41.8

64.2

30.4

27.4

27.4



Total

28.5

B5B: Please, indicate who mainly performed the following ICT functions of your enterprise, during 2015

enterprise, during 2015									
(Ext	ernal persons)						u proc	entima	
		S	Size clas	SS		Region			
	Enterprises	Small (10-49)	Small (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total	
	Maintenand	e of IC	CT stru	cture					
	Manufacturing	80.7	61.3	29.8	73.8	73.4	71.3	73.1	
	Electricity, gas, stea and air conditioning supply; Water supply, sewerage, waste management and remediation activities	82.8	50.7	29.6	60.1	79.4	33.3	63.1	
	Construction	93.0	62.8	29.6	83.9	76.8	90.0	84.8	
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	84.0	63.7	25.1	78.4	71.2	86.9	80.2	
Acti	Transportation and storage	59.5	60.3	25.5	55.4	61.6	58.0	58.1	
	Accommodation and food service activities	84.1	62.4	33.3	68.7	97.3	79.0	79.9	
	Information and communication	33.3	19.3	-	23.4	43.1	28.1	29.9	
	Real estate activities; Professional, scientific and technical activities	80.6	39.0	21.4	62.1	78.6	75.4	73.8	
	Administrative and support service activities; Repair of computers	71.2	51.1	64.1	65.1	70.6	66.5	67.2	
Tota	I	78.9	57.6	30.4	71.8	72.2	74.4	72.9	
	Support f	or offic	ce soft	ware					
	Manufacturing	73.2	58.3	24.1	65.6	66.6	69.2	66.8	
	Electricity, gas, stea and air conditioning supply; Water supply, sewerage, waste management and remediation activities	68.0	38.7	15.1	40.2	72.0	33.3	49.7	
	Construction	86.5	62.8	16.3	63.8	83.9	89.0	79.2	
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	70.5	47.2	15.4	68.7	65.1	65.3	66.4	
Act	Transportation and storage	50.2	47.4	3.2	36.3	60.7	50.2	47.6	
	Accommodation and food service activities	76.0	55.1	33.3	58.7	95.2	70.0	72.0	
	Information and communication	21.6	18.4	14.1	26.8	26.5	17.4	20.8	
	Real estate activities; Professional, scientific and technical activities	72.7	28.7	-	48.5	69.4	68.5	65.4	
	Administrative and support service activities; Repair of computers	61.0	48.7	37.2	55.3	50.1	59.6	56.6	
Tota	I	68.9	50.4	19.9	60.7	66.4	64.0	63.4	

B5B: Please, indicate who mainly performed the following ICT functions of your enterprise, during 2015

<i>.</i>	enterprise, during 2015									
(Ext	ernal persons)		N1	_		D!	u proc	entima		
		5	Size clas	SS		Region				
	Enterprises	Small (10-49)	Small (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total		
	Development of business	inforr	nation	system	n (ERP	, CRM	)			
	Manufacturing	21.9	35.0	42.8	10.4	51.0	29.0	26.3		
	Electricity, gas, stea and air conditioning supply; Water supply, sewerage, waste management and remediation activities	12.7	12.3	52.2	14.0	12.8	35.2	16.2		
	Construction	4.6	28.3	20.3	2.9	3.9	18.3	9.6		
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	21.6	21.8	48.3	18.6	9.7	32.5	22.3		
Acti	Transportation and storage	3.0	21.1	36.2	7.1	1.5	16.1	7.5		
	Accommodation and food service activities	14.4	14.8	66.7	28.5	10.1	10.1	14.9		
	Information and communication	7.3	18.7	50.6	4.0	19.5	10.1	10.6		
	Real estate activities; Professional, scientific and technical activities	13.1	18.9	38.6	20.0	28.1	8.8	14.3		
	Administrative and support service activities; Repair of computers	10.3	12.7	34.0	16.7	1.1	17.1	13.2		
Tota	I	16.5	26.1	41.3	12.7	24.3	22.5	19.3		
	Support for busing	ness in	forma	tion sy	stem					
	Manufacturing	28.8	43.9	46.7	23.4	53.8	29.8	33.5		
	Electricity, gas, stea and air conditioning supply; Water supply, sewerage, waste management and remediation activities	12.7	8.6	47.8	9.6	12.8	38.1	14.0		
	Construction	11.7	26.8	17.8	7.5	3.9	26.7	14.7		
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	21.4	21.8	47.5	17.5	10.3	32.6	22.1		
Acti	Transportation and storage	6.1	37.1	23.9	10.6	1.5	28.6	11.9		
	Accommodation and food service activities	18.1	26.6	100.0	48.0	10.1	10.6	20.2		
	Information and communication	11.6	28.4	27.1	17.6	19.5	12.6	14.8		
	Real estate activities; Professional, scientific and technical activities	18.5	18.6	38.6	47.3	28.1	8.8	18.8		
	Administrative and support service activities; Repair of computers	22.7	14.6	34.0	55.7	10.2	18.3	22.6		
Tota	l	20.5	31.1	40.7	20.6	25.7	24.4	23.4		



B5B: Please, indicate who mainly performed the following ICT functions of your enterprise, during 2015

<i>.</i>	(Fotomal manage)									
(Ext	ernal persons)	-	\:			Danian	u proc	entima		
		5	Size clas	SS		Region				
	Enterprises	Small (10-49)	Small (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total		
	Developme	nt of w	eb sol	utions						
	Manufacturing	73.2	64.9	61.1	67.3	84.2	60.8	70.5		
	Electricity, gas, stea and air conditioning supply; Water supply, sewerage, waste management and remediation activities	60.2	48.3	44.1	39.9	72.9	61.9	53.2		
	Construction	71.9	74.5	50.9	69.7	64.6	76.8	71.5		
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	63.3	72.5	73.1	57.2	57.2	75.3	64.7		
Acti	Transportation and storage	56.5	73.5	46.1	42.4	70.0	72.8	58.8		
	Accommodation and food service activities	77.3	73.2	33.3	68.6	94.2	73.4	76.3		
	Information and communication	23.7	24.9	43.5	32.8	31.7	20.0	24.6		
	Real estate activities; Professional, scientific and technical activities	65.4	37.7	41.4	53.6	58.1	64.0	61.1		
	Administrative and support service activities; Repair of computers	51.1	34.9	62.2	40.0	34.1	58.8	49.6		
Tota	l	64.7	62.4	58.3	59.6	68.5	65.3	64.0		
	Support	for wel	soluti	ions						
	Manufacturing	72.9	66.3	61.1	67.9	84.4	60.0	70.6		
	Electricity, gas, stea and air conditioning supply; Water supply, sewerage, waste management and remediation activities	56.3	33.9	28.0	25.4	72.9	47.6	43.4		
	Construction	71.9	74.5	46.1	69.1	64.6	76.8	71.3		
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	66.2	70.9	67.9	61.1	61.7	74.6	66.8		
Acti	Transportation and storage	53.5	62.9	38.8	40.0	70.0	58.7	54.3		
	Accommodation and food service activities	73.7	71.1	33.3	67.2	94.2	67.9	72.9		
	Information and communication	24.0	21.5	5.9	33.2	31.7	17.4	23.0		
	Real estate activities; Professional, scientific and technical activities	64.9	32.2	41.4	49.3	56.6	63.7	59.9		
	Administrative and support service activities; Repair of computers	52.0	40.4	64.7	38.1	39.1	60.4	51.5		
Tota	I	65.1	60.5	54.0	59.7	69.9	63.7	63.8		

B5B: Please, indicate who mainly performed the following ICT functions of your enterprise, during 2015

(Ext	(External persons) u procentima								
		S	ize clas	ss		Region			
	Enterprises	Small (10-49)	Small (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total	
	Security a	nd data	prote	ction					
	Manufacturing	78.6	64.8	36.9	69.0	83.7	67.7	72.8	
	Electricity, gas, stea and air conditioning supply; Water supply, sewerage, waste management and remediation activities	75.8	41.1	23.1	45.0	69.7	61.9	55.0	
	Construction	78.7	58.8	42.4	64.9	86.2	73.3	73.5	
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	80.6	61.6	24.3	72.9	64.6	87.5	77.0	
Acti	Transportation and storage	63.0	49.8	10.1	47.2	69.6	63.7	58.5	
	Accommodation and food service activities	81.0	56.2	33.3	75.0	95.2	70.0	76.3	
	Information and communication	26.0	12.1	7.1	24.2	29.2	21.1	23.1	
	Real estate activities; Professional, scientific and technical activities	71.4	33.4	21.4	53.1	62.8	69.2	65.3	
	Administrative and support service activities; Repair of computers	56.9	47.2	59.0	65.4	35.6	61.1	55.6	
Tota	I	74.2	55.9	32.8	65.2	72.3	70.6	69.0	



### MODULE 2.C: Access to and use of the Internet<sup>1)</sup>

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

In percentages

прегсенка								
		S	ize clas	ss		Region		
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
		YES						
	Manufacturing	99.4	100.0	100.0	99.1	100.0	100.0	99.6
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation	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
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Acti	Transportation and storage	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
	Information and communication	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
	Administrative and support service activities; Repair of computers	100.0	95.6	100.0	100.0	100.0	98.8	99.3
Tota	I	99.8	99.9	100.0	99.6	100.0	99.9	99.8
4\								

<sup>&</sup>lt;sup>1)</sup> The results in tables C2 and C12 refer only to enterprises that answered YES in question C1.

### C2: Percentage of employees who use the Internet for business purposes In percentages

	in percentag						
		Enterprises					
	Size class						
	Small (10-49) Medium (50-249) Large (250+) Central Serbia Vojvodina		Belgrade	Total			
1- 24%	29.7	44.6	40.8	38.1	36.9	25.2	32.9
25- 49%	18.6	17.4	23.5	25.2	18.6	12.1	18.6
50-74%	16.3	12.9	14.7	13.7	18.2	15.8	15.6
75-100%	35.4	25.2	21.0	22.9	26.4	46.9	32.9

### C3: Does your enterprise use DSL or any other type of fixed broadband connection to the Internet (ADSL, cable Internet, public WiFi)?

In percentages

iii percentages									
		S	ize clas	SS		Region			
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total	
		YES							
	Manufacturing	98.0	98.3	90.5	98.6	99.1	94.0	97.6	
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	96.2	100.0	96.2	100.0	100.0	82.8	98.0	
	Construction	100.0	100.0	93.8	99.7	100.0	99.6	99.7	
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	99.8	100.0	95.9	99.5	100.0	99.8	99.7	
Acti	Transportation and storage	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
	Accommodation and food service activities	100.0	96.8	100.0	100.0	100.0	99.0	99.4	
	Information and communication	100.0	97.4	100.0	97.8	100.0	100.0	99.6	
	Real estate activities; Professional, scientific and technical activities	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	
Tota		99.3	99.1	94.4	99.2	99.7	98.5	99.1	

### C4: What is the maximum contracted speed of the Internet connection in your enterprise?

In percentages

		Enterprises						
	S	Size class Region						
	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total	
Less than 2 Mbit/s	2.3	1.1	0.6	1.3	0.4	3.9	2.1	
At least 2, but less than 10 Mbit/s	37.8	25.7	15.5	44.0	32.0	27.3	34.7	
At least 10, but less than 30 Mbit/s	40.2	49.3	47.2	41.1	57.3	33.1	42.2	
At least 30, but less than 100 Mbit/s	16.2	19.0	25.1	12.0	8.8	27.7	17.1	
At least 100 Mbit/s	3.4	4.9	11.5	1.6	1.6	7.9	4.0	



# C5: Does your enterprise use a mobile broadband connection to the Internet (3G or 4G) using portable devices (smartphone, laptop, tablet...)

In percentages

						ır	ı perce	ntages
		S	ize clas	s		Region		
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
		YES						
	Manufacturing	68.4	82.9	85.9	76.1	64.8	76.3	73.0
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	49.9	56.9	64.0	48.2	53.7	85.3	54.4
	Construction	62.2	85.3	92.7	80.0	68.5	57.3	67.7
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	57.7	61.9	90.3	54.1	79.4	51.3	58.9
Acti	Transportation and storage	75.6	65.0	87.8	59.1	86.9	84.9	74.4
	Accommodation and food service activities	67.3	67.1	100.0	83.2	67.2	60.2	67.6
	Information and communication	82.2	94.5	100.0	81.5	78.2	87.6	84.7
	Real estate activities; Professional, scientific and technical activities	82.3	86.6	92.9	82.5	74.5	85.8	83.1
	Administrative and support service activities; Repair of computers	78.2	79.7	75.0	75.6	69.1	82.5	78.1
Total		66.8	75.9	85.6	68.2	71.9	68.6	69.3

# C6: Does your enteprise a mobile broadband Internet connection (3G or 4G) using the following portable devices: (smartphone, laptop, tablet...)

In percentages Size class Region /ojvodina Total Belgrade Medium **Enterprises** 50-249 Via portable computers (notebook, laptop, tablet, netbook) Manufacturing 64.6 80.0 82.0 71.8 61.7 73.5 69.3 Electricity, gas, steam and air conditioning supply: Water supply. 41.9 50.0 60.2 36.2 53.7 82.4 47.3 sewerage, waste management and remediation activities Construction 45.5 82.3 89.0 50.6 54.1 56.9 54.1 Wholesale and retail trade: repair of 42.8 50.5 48.8 57.1 78.7 64.9 48.9 motor vehicles and motorcycles Transportation and storage 50.7 54.8 79.3 42.4 65.2 52.7 54.1 Accommodation and food service 62.2 58.9 100.0 75.5 67.2 53.5 61.9 activities Information and communication 83.0 93.5 80.4 77.3 89.0 85.2 100.0 Real estate activities: Professional. 78.0 85.7 85.7 75.8 61.6 85.3 79.2 scientific and technical activities Administrative and support service 81.2 79.7 75.0 75.6 78.3 82.5 80.3 activities; Repair of computers Total 59.0 72.0 80.7 58.4 63.2 65.6 62.3 Via other portable devices using a mobile broadband connection (smartphone) Manufacturing 64.7 74.3 84.0 73.4 55.0 73.3 68.2 Electricity, gas, steam and air conditioning supply; Water supply, 47.0 43.5 60.2 43.4 39.0 82.4 46.6 sewerage, waste management and remediation activities 55.2 8.08 90.1 75.3 54.1 54.1 61.4 Construction Wholesale and retail trade: repair of 50.2 61.6 88.1 54.0 45.1 55.3 52.4 motor vehicles and motorcycles Transportation and storage 71.5 72.3 65.5 80.5 60.4 76.4 84.9 Accommodation and food service 61.3 62.3 79.0 46.2 59.2 61.8 100.0 activities Information and communication 79.9 82.8 93.5 100.0 79.0 69.7 87.6 Real estate activities: Professional. 85.8 86.6 92.9 81.0 74.5 90.7 86.0 scientific and technical activities Administrative and support service 55.8 75.6 74.8 75.8 77.8 79.7 78.3 activities; Repair of computers Total 62.3 70.6 81.6 66.3 55.8 69.1 64.7



### C7: Percentage of the total number of employees who use portable devices (provided by the enterprise) for business purposes

In percentages

		Enterprises							
	Size class			Region					
	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total		
1- 24%	57.7	75.4	74.9	66.0	67.1	55.5	62.1		
25- 49%	14.0	11.1	9.1	14.4	9.1	14.8	13.2		
50-74%	17.9	6.8	9.2	13.4	12.1	18.8	15.2		
75-100%	10.4	6.7	6.8	6.2	11.7	11.0	9.5		

### C8: Did your enterprise provide the employees with portable devices that allowing mobile connections to?

						Ir	perce	ntages
		S	ize clas	s		Region		
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	Access to the enterprise's e-mail							
	Manufacturing	89.4	92.6	96.3	91.8	97.2	82.5	90.8
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	100.0	62.8	88.2	82.8	72.6	82.3	79.7
	Construction	86.5	95.0	86.2	97.0	75.7	87.2	88.5
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	78.3	92.4	100.0	88.6	50.8	95.2	80.7
Acti	Transportation and storage	79.5	92.2	92.6	87.3	72.3	88.2	82.0
	Accommodation and food service activities	92.7	80.6	66.7	92.0	82.8	92.2	90.3
	Information and communication	92.9	97.3	100.0	97.2	82.4	96.0	93.9
	Real estate activities; Professional, scientific and technical activities	89.1	98.0	89.2	85.1	86.0	92.7	90.3
	Administrative and support service activities; Repair of computers	99.6	90.6	87.2	95.5	95.5	98.0	97.0
Total		86.0	90.9	94.2	90.9	76.6	91.1	87.4

C8: Did your enterprise provide the employees with portable devices that allowing mobile connections to?

In percentages Size class Region **Total** /ojvodina **3elgrade Enterprises** Medium 50-249) Access to and work with the enterprise's documents Manufacturing 66.5 68.5 67.6 70.1 64.7 63.5 67.1 Electricity, gas, steam and air conditioning supply; Water supply, 38.0 56.5 24.0 38.7 36.1 29.1 58.7 sewerage, waste management and remediation activities 39.1 Construction 36.9 41.5 58.2 36.5 12.2 57.7 Wholesale and retail trade: repair of 30.6 58.0 63.9 31.2 18.7 48.6 35.1 motor vehicles and motorcycles Transportation and storage 52.3 34.1 31.8 43.4 44.4 23.1 23.8 Accommodation and food service 38.1 45.4 66.7 42.7 9.4 50.1 39.7 activities Information and communication 61.9 79.3 87.1 59.6 20.3 79.0 66.0 Real estate activities; Professional, 73.6 82.0 30.8 50.4 69.9 80.5 74.0 scientific and technical activities Administrative and support service 58.6 78.6 40.8 95.5 66.7 70.5 72.0 activities; Repair of computers Total 52.8 50.2 60.1 63.3 53.1 39.9 60.8 Use of the enterprise's dedicated business software applications (e.g. for orders or sales management, ERP system) Manufacturing 15.7 23.4 39.9 14.3 23.9 19.4 25.2 Electricity, gas, steam and air conditioning supply; Water supply, 20.6 27.7 15.7 15.6 14.4 22.7 sewerage, waste management and remediation activities Construction 12.3 16.0 30.2 11.6 8.0 20.3 14.1 Wholesale and retail trade; repair of 32.0 28.4 46.5 68.8 33.8 5.0 48.6 motor vehicles and motorcycles Transportation and storage 15.6 44.2 39.4 28.7 2.9 35.6 21.0 Accommodation and food service 26.3 30.1 25.9 10.6 33.5 26.6 activities Information and communication 32.0 49.3 61.2 46.8 5.1 41.2 36.2 Real estate activities: Professional. 34.0 32.4 45.6 9.7 37.5 33.9 41.5 scientific and technical activities Administrative and support service 29.9 25.7 28.0 12.3 18.4 20.9 29.6 activities; Repair of computers

23.0

28.7

42.7

22.3

11.9

36.1



Total

25.1

C9: Does your enterprise have a website?

#### In percentages

						ır	ı perce	ntages
		S	ize clas	s		Region		
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
		YES						
	Manufacturing	85.3	90.3	91.9	84.4	84.4	94.6	86.9
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	69.7	73.3	100.0	63.6	86.2	90.7	74.1
	Construction	74.4	88.8	87.8	76.1	71.2	82.5	77.6
Delatnost	Wholesale and retail trade; repair of motor vehicles and motorcycles	68.4	93.1	97.0	74.2	76.3	68.0	72.1
)ela	Transportation and storage	65.8	86.5	100.0	57.4	81.4	79.9	70.7
	Accommodation and food service activities	80.2	83.9	66.7	85.2	95.5	73.2	80.7
	Information and communication	93.5	100.0	100.0	91.6	86.0	98.3	94.8
	Real estate activities; Professional, scientific and technical activities	91.8	98.6	100.0	84.7	80.1	98.7	92.8
	Administrative and support service activities; Repair computers	82.1	92.1	91.7	58.1	77.8	95.1	84.6
Total		77.9	89.8	93.9	77.5	80.8	84.0	80.8

(your enteprise as Internet service provider)<sup>1)</sup>

		In percent					ntages	
		S	ize clas	s		Region		
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	Descriptions of goo	ds and	servi	es, pri	ice list	s		
	Manufacturing	96.5	90.0	94.2	92.9	98.9	93.4	94.7
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	88.6	87.4	91.9	75.9	100.0	100.0	88.5
	Construction	77.6	70.4	56.2	59.5	75.0	86.7	75.1
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	88.1	80.7	93.1	91.3	83.1	85.6	87.0
Act	Transportation and storage	60.7	88.2	80.9	90.1	33.7	85.3	67.4
	Accommodation and food service activities	92.1	95.9	100.0	97.3	91.6	90.9	92.8
	Information and communication	89.7	83.5	88.2	89.7	80.8	90.3	88.6
	Real estate activities; Professional, scientific and technical activities	76.6	64.8	72.9	100.0	74.4	69.3	74.8
	Administrative and support service activities; Repair of computers	93.2	100.0	94.4	100.0	95.8	93.0	94.5
Tota	l	87.4	84.6	88.6	89.3	84.7	86.1	86.9
	Online ordering or reserva	tion o	r booki	ng of g	goods/	service	es	
	Manufacturing	11.8	18.8	14.8	12.7	10.1	19.5	13.7
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	11.2	4.2	6.5	7.6	10.1	-	7.4
	Construction	7.8	11.3	14.4	6.3	9.3	10.6	8.9
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	38.6	30.3	41.3	37.2	43.3	33.7	37.3
Acti	Transportation and storage	14.3	24.8	28.8	9.8	14.0	31.5	17.3
	Accommodation and food service activities	69.4	65.5	50.0	66.5	50.3	78.3	68.6
	Information and communication	28.9	35.9	70.6	16.4	13.8	40.4	31.6
	Real estate activities; Professional, scientific and technical activities	15.5	9.5	31.4	20.4	16.7	13.3	14.9
	Administrative and support service activities; Repair of computers	34.6	6.3	10.5	35.2	30.1	24.6	27.1
Tota	I	23.8	21.0	22.3	20.5	21.5	26.5	23.1

<sup>1)</sup> The results refer only to enterprises that answered YES in question C9.



(your enteprise as Internet service provider)<sup>1)</sup>

In percentage						ntages		
		S	Size clas	SS		Region		
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	Possibility for visitors to	custon	nise or	design	onlin	e good	s	
	Manufacturing	50.1	59.3	66.5	42.7	92.8	30.6	53.5
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	65.6	64.5	58.6	59.9	89.4	13.5	64.2
	Construction	54.9	58.9	69.2	75.8	98.4	21.4	56.5
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	91.9	72.1	70.2	86.5	90.6	88.0	88.1
Acti	Transportation and storage	80.9	93.3	60.1	75.4	79.2	94.5	82.0
	Accommodation and food service activities	91.3	90.2	100.0	96.1	95.3	86.4	91.1
	Information and communication	82.4	83.8	72.9	72.8	98.3	81.0	82.3
	Real estate activities; Professional, scientific and technical activities	63.9	80.1	78.6	87.8	15.4	74.2	66.6
	Administrative and support service activities; Repair of computers	81.2	86.5	53.8	97.3	46.6	87.0	79.0
Tota		70.7	68.5	66.0	64.6	85.2	65.1	70.0
	Tracking or st	tatus o	f orde	s plac	ed			
	Manufacturing	6.6	11.1	8.7	7.4	7.0	9.7	7.9
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	4.2	6.5	4.0	2.1	-	2.7
	Construction	7.8	11.3	4.2	5.9	7.7	10.6	8.4
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	27.5	14.1	34.0	38.4	14.6	20.7	25.5
Act	Transportation and storage	9.0	6.4	19.1	14.7	-	14.7	9.1
	Accommodation and food service activities	24.2	14.1	-	24.4	11.2	26.1	22.2
	Information and communication	11.0	21.7	63.5	9.7	5.0	18.6	14.7
	Real estate activities; Professional, scientific and technical activities	9.9	2.1	17.1	3.2	3.2	11.5	8.8
	Administrative and support service activities; Repair of computers	15.3	2.2	3.5	15.6	3.3	14.0	11.8
Tota		14.3	10.7	15.2	16.2	7.8	14.9	13.6

<sup>1)</sup> The results refer only to enterprises that answered YES in question C9.

(your enteprise as Internet service provider)<sup>1)</sup>

In percenta						ntages		
		S	ize clas	ss		Region		
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	Personalised content on	the we	bsited	for re	gular v	isitors		
	Manufacturing	74.7	78.7	77.0	91.3	99.1	22.5	75.8
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	72.2	79.0	88.7	83.9	91.5	19.2	77.3
	Construction	51.7	90.1	92.0	73.4	100.0	34.3	61.7
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	93.2	87.3	92.7	90.7	99.8	88.9	92.3
Act	Transportation and storage	94.9	90.2	86.7	92.1	90.2	100.0	93.5
	Accommodation and food service activities	96.9	95.9	100.0	94.7	95.3	98.5	96.7
	Information and communication	92.2	89.4	100.0	90.4	98.3	90.9	92.0
	Real estate activities; Professional, scientific and technical activities	98.4	100.0	85.7	91.3	100.0	99.6	98.4
	Administrative and support service activities; Repair of computers	90.4	93.3	100.0	100.0	70.0	98.1	92.0
Total		84.1	85.1	86.0	89.6	97.1	71.6	84.4
	Links to the enterprise's	social	media	(Faceb	ook, T	`witter	)	
	Manufacturing	32.7	33.3	43.9	35.9	33.8	29.0	33.6
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	25.5	14.0	49.5	9.9	45.7	9.1	23.2
	Construction	27.0	29.4	20.4	30.0	20.9	28.0	27.2
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	55.6	35.9	64.0	40.4	50.0	65.8	52.7
Act	Transportation and storage	14.0	48.7	35.2	28.6	18.7	18.9	22.3
	Accommodation and food service activities	81.1	71.1	100.0	67.2	75.7	88.1	79.4
	Information and communication	65.8	78.5	94.1	78.2	64.8	67.4	69.0
	Real estate activities; Professional, scientific and technical activities	40.8	56.9	65.7	42.3	38.9	45.1	43.7
	Administrative and support service activities; Repair of computers	55.0	37.8	40.6	63.4	49.7	48.4	50.4
Total		43.1	38.0	47.8	37.9	39.6	48.0	42.3

<sup>&</sup>lt;sup>1)</sup> The results refer only to enterprises that answered YES in question C9.



(your enteprise as Internet service provider)<sup>1)</sup>

in percentage							iiiayes	
		S	ize clas	S		Region		
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	Advertising of open job p	osition	s or or	ıline jo	b appl	icatio	n.	
	Manufacturing	7.8	24.2	37.8	12.3	14.5	15.8	13.8
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	19.2	8.1	7.0	17.0	÷	9.7
	Construction	15.7	31.3	40.1	15.9	13.1	26.8	20.1
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	18.3	36.2	69.2	25.9	13.3	25.6	22.7
Acti	Transportation and storage	18.3	26.6	56.9	29.4	5.8	36.6	22.4
	Accommodation and food service activities	39.1	24.6	50.0	37.6	27.5	40.2	36.6
	Information and communication	59.3	64.4	60.0	55.7	57.1	62.2	60.2
	Real estate activities; Professional, scientific and technical activities	32.0	54.4	48.6	11.7	18.6	44.9	35.6
	Administrative and support service activities; Repair of computers	23.1	24.3	55.2	29.8	13.2	31.2	27.0
Tota	l	19.4	30.9	45.2	19.2	15.6	31.4	23.1

<sup>1)</sup> The results refer only to enterprises that answered YES in question C9.

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

C11: Does your enterprise use any of the following social media:									
		S	ize clas	SS		Region			
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total	
	Social networks (Faceb	ook, L	inkedl	n, Xinş	g, Yam	mer)			
	Manufacturing	29.5	28.9	41.0	31.7	32.5	23.6	30.0	
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	5.0	8.9	45.7	7.1	18.3	5.4	10.5	
	Construction	18.8	29.6	14.7	20.3	15.4	23.8	20.6	
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	42.4	44.7	70.0	41.1	44.9	44.3	43.3	
Acti	Transportation and storage	15.7	28.2	50.7	17.9	25.8	12.7	19.3	
	Accommodation and food service activities	69.8	63.3	66.7	62.4	76.1	68.9	68.6	
	Information and communication	62.1	82.5	92.9	78.9	56.1	65.6	66.4	
	Real estate activities; Professional, scientific and technical activities	35.5	45.2	72.9	39.2	37.8	36.9	37.4	
	Administrative and support service activities; Repair of computers	51.6	48.1	37.2	40.6	47.8	52.8	49.5	
Tota	l	35.7	35.3	47.2	33.4	36.1	38.8	36.1	
	Entepris	e's blo	g (Twit	ter)					
	Manufacturing	4.8	9.7	12.8	5.1	6.0	9.7	6.4	
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	5.1	8.1	1.3	7.3	-	3.1	
	Construction	5.8	1.5	2.6	4.0	-	8.4	4.9	
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	14.2	19.0	23.2	16.7	11.8	15.3	15.0	
Act	Transportation and storage	3.0	10.1	20.6	2.6	3.8	10.7	5.0	
	Accommodation and food service activities	35.1	27.6	66.7	32.1	32.3	35.5	34.0	
	Information and communication	39.4	60.9	75.3	39.4	34.6	48.2	44.1	
	Real estate activities; Professional, scientific and technical activities	11.9	18.2	35.7	18.1	3.8	14.7	13.2	
	Administrative and support service activities; Repair of computers	22.9	13.7	16.0	10.0	9.2	28.7	20.7	
Tota		11.9	13.7	17.7	9.9	8.6	17.5	12.5	



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

In percentage:								
		S	Size clas	SS		Region		
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	Multimedia content sha	aring (	Youtub	e, Flic	kr, Pic	assa)		
	Manufacturing	7.7	11.6	22.8	9.9	9.1	9.2	9.5
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	5.1	22.6	2.6	9.2	-	4.4
	Construction	7.1	5.0	11.4	12.9	9.9	0.4	6.9
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	14.9	16.0	25.8	15.0	16.1	15.0	15.3
Acti	Transportation and storage	-	13.4	21.5	5.1	2.2	1.0	3.1
	Accommodation and food service activities	36.4	17.8	33.3	40.7	17.8	35.0	33.1
	Information and communication	42.4	61.4	82.4	64.7	42.4	42.6	46.8
	Real estate activities; Professional, scientific and technical activities	17.9	34.3	35.7	19.1	10.9	23.6	20.4
	Administrative and support service activities; Repair of computers	30.8	15.0	25.6	20.2	18.3	34.0	27.8
Tota	I	13.9	15.1	25.2	13.5	12.3	17.2	14.6
	v	Vikiped	lia					
	Manufacturing	4.7	6.4	5.6	3.8	1.3	12.3	5.2
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	20.5	-	-	29.4	-	9.5
	Construction	10.6	31.8	2.6	10.6	12.6	17.9	14.2
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	7.3	16.8	8.7	5.2	10.4	10.3	8.5
Act	Transportation and storage	2.9	5.0	13.3	7.2	1.3	0.7	3.7
	Accommodation and food service activities	25.3	12.7	-	23.7	27.0	21.1	22.9
	Information and communication	16.2	33.1	36.5	15.6	34.6	16.6	19.6
	Real estate activities; Professional, scientific and technical activities	5.6	7.3	21.4	9.2	1.3	6.7	6.1
	Administrative and support service activities; Repair of computers	0.4	2.1	-	3.8	-	-	0.6
Tota	I	7.2	13.0	7.2	5.8	7.8	10.9	8.3

C12: Do any of the employee of your enterprise have remote access to the enterprise's e-mail, documents or applications?

in percentage							ntages	
		S	ize clas	ss		Region		
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
		YES						
	Manufacturing	66.9	81.3	89.8	74.8	62.8	76.2	71.8
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	59.6	57.5	96.8	60.9	57.8	78.9	62.1
	Construction	62.3	89.2	89.9	82.1	53.0	66.1	68.4
Activities	Wholesale and retail trade; repair of motor vehicles and motorcycles	63.6	71.9	89.5	66.0	50.0	73.2	65.2
cti	Transportation and storage	69.3	64.9	86.7	64.1	76.4	69.2	69.4
٩	Accommodation and food service activities	66.4	62.6	66.7	82.9	59.2	59.9	65.8
	Information and communication	83.2	98.7	100.0	85.8	65.6	92.3	86.2
	Real estate activities; Professional, scientific and technical activities	71.8	79.0	50.0	76.2	75.5	70.6	72.5
	Administrative and support service activities; Repair of computers	61.6	49.4	59.0	80.3	91.1	40.2	59.4
Total		66.5	76.2	86.1	72.0	61.3	71.5	69.1



### C13: Does your enterprise pay to advertise on the Internet (via adverts, social media, other websites)?

in percentag								illayes
		S	ize clas	ss		Region		
	Enterprises	Small (10-49)	Secondary (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
		YES						
	Manufacturing	32.7	34.0	29.4	38.8	21.8	33.6	32.8
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	19.6	21.9	6.5	25.6	16.1	-	19.5
	Construction	14.4	25.1	9.0	26.9	23.7	3.2	16.2
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	23.6	25.4	35.6	31.4	40.3	8.8	24.1
Act	Transportatio and storage	12.8	31.4	8.1	10.2	24.2	13.4	15.6
	Accommodation and food service activities	54.2	40.6	66.7	61.3	32.4	54.5	51.9
	Information and communication	24.9	33.8	54.1	34.0	22.3	26.7	27.3
	Real estate activities; Professional, scientific and technical activities	42.3	36.9	38.6	23.8	59.6	40.7	41.5
	Administrative and support service activities; Repair of computers	44.7	32.3	59.6	18.5	34.5	55.8	44.3
Total		28.2	30.7	29.6	32.4	30.1	24.2	28.7

# C14: Does your enterprise advertise over the Internet using any of the following advertising methods?<sup>1)</sup>

In percentages								ntages
		S	ize clas	s		Region		
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	Based on webpages con	tent or	keywo	ords us	ed by ı	ısers		
	Manufacturing	54.1	59.2	49.9	28.0	83.6	96.2	55.2
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	100.0	68.7	100.0	77.9	100.0	-	83.7
	Construction	100.0	57.0	100.0	100.0	88.5	-	87.7
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	71.0	87.5	76.9	98.2	53.7	49.4	73.3
Act	Transportation and storage	48.0	49.8	60.0	76.3	13.1	100.0	48.9
	Accommodation and food service activities	84.9	73.3	100.0	96.1	51.0	83.6	83.5
	Information and communication	65.3	80.2	67.4	60.9	37.3	78.7	68.4
	Real estate activities; Professional, scientific and technical activities	66.2	77.7	74.1	66.1	33.5	82.8	67.7
	Administrative and support service activities; Repair of computers	70.4	47.7	53.8	100.0	53.1	65.4	65.5
Tota	I	66.6	66.1	61.2	61.0	58.7	79.4	66.3
	Based on tracking user's	profile	and tl	neir pa	st purc	hases		
	Manufacturing	14.9	23.3	32.1	6.5	29.8	35.2	17.9
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	28.1	-	19.9	-	-	14.6
	Construction	26.4	42.2	71.4	32.1	39.3	-	32.0
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	27.4	24.6	29.4	28.7	26.1	24.6	27.1
Act	Transportation and storage	-	33.9	-	20.4	10.4	-	11.1
	Accommodation and food service activities	24.2	38.1	50.0	26.7	49.0	21.2	26.3
	Information and communication	46.2	41.6	43.5	28.5	12.9	59.2	45.1
	Real estate activities; Professional, scientific and technical activities	26.5	27.6	18.5	28.0	9.4	33.8	26.5
	Administrative and support service activities; Repair of computers	26.3	-	5.4	38.7	26.6	17.0	20.4
Tota		22.4	26.9	27.1	17.6	24.5	30.4	23.5

<sup>1)</sup> The results refer only to enterprises that answered YES in question C13.



# C14: Does your enterprise advertise over the Internet using any of the following advertising methods?<sup>1)</sup>

In percentage							niages	
		5	Size clas	SS		Region		
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	Based on the	geoloc	cation	of user	s			
	Manufacturing	8.9	14.0	14.2	5.8	27.5	8.4	10.5
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	25.4	14.0	100.0	9.9	54.3		21.7
	Construction	26.4	14.1	71.4	32.1	16.3	-	24.0
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	32.6	25.2	31.7	29.8	36.8	23.4	31.6
Acti	Transportation and storage	-	33.6	-	20.4	-	25.2	11.0
	Accommodation and food service activities	36.3	35.8	-	40.5	11.0	38.7	35.9
	Information and communication	40.1	43.8	43.5	34.8	35.1	44.9	41.0
	Real estate activities; Professional, scientific and technical activities	34.6	13.8	18.5	39.3	-	44.4	31.8
	Administrative and support service activities; Repair of computers	26.4	-	5.4	40.1	26.6	17.0	20.5
Total		24.0	18.8	20.6	18.3	25.0	26.8	22.8
	Any othe meth	od not	specif	ied abo	ve			
	Manufacturing	23.0	16.0	36.8	13.5	62.6	10.7	21.9
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	25.4	31.3	100.0	22.1	54.3	-	30.7
	Construction	17.6	-	-	21.4	-	-	12.2
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	16.7	17.6	30.6	8.4	22.7	30.0	17.3
Act	Transportation and storage	26.0	-	-	-	33.1	-	16.9
	Accommodation and food service activities	45.6	25.7	-	14.0	24.7	61.5	42.4
	Information and communication	18.0	26.2	89.1	18.5	40.4	23.1	24.6
	Real estate activities; Professional, scientific and technical activities	17.6	48.3	25.9	26.4	11.1	25.3	21.5
	Administrative and support service activities; Repair of computers	37.7	14.1	37.6	10.0	-	46.4	35.0
Total		22.7	18.2	37.8	13.2	30.8	27.8	22.5

<sup>&</sup>lt;sup>1)</sup> The results refer only to enterprises that answered YES in question C13.

### C15: During 2015, did your enterprise use public authorities' services over the Internet to?

In percentage Size class Region **Total** Vojvodina Belgrade **Enterprises** Medium Serbia Obtain information Manufacturing 95.6 96.4 98.2 93.2 99.9 96.9 96.0 Electricity, gas, steam and air conditioning supply; Water supply, 96.0 100.0 96.2 96.8 100.0 97.1 97.9 sewerage, waste management and remediation activities Construction 100.0 96.5 100.0 100.0 97.3 100.0 99 4 Wholesale and retail trade; repair of 96.2 961 977 921 91 1 993 98 7 motor vehicles and motorcycles 89.0 90.0 Transportation and storage 87.4 100.0 100.0 84.0 100.0 Accommodation and food service 99 4 993 100.0 100.0 97.7 100.0 100.0 activities Information and communication 96.9 98.7 97.8 97.3 100.0 100.0 96.3 Real estate activities: Professional. 93.8 100.0 100.0 95.3 76.5 100.0 94.8 scientific and technical activities Administrative and support service 97.7 100.0 100.0 95.6 98.9 98.8 98.3 activities; Repair of computers Total 95.7 97.7 97.7 93.4 96.6 98.6 96.2 Obtain forms, e.g. tax declarations Manufacturing 97.4 98.2 98.3 96.3 99.9 97.8 97.7 Electricity, gas, steam and air conditioning supply; Water supply, 97.0 98.0 96.2 100.0 96.2 100.0 97.1 sewerage, waste management and remediation activities Construction 100.0 100.0 100.0 100.0 100.0 100.0 100.0 Wholesale and retail trade: repair of 93.7 92.1 91.1 90.8 94.2 97.7 98.7 motor vehicles and motorcycles Transportation and storage 90.7 100.0 96.4 88.6 92.0 100.0 92.5 Accommodation and food service 98.5 100.0 100.0 95.4 100.0 100.0 98.8 activities Information and communication 93.6 98.7 100.0 96.3 100.0 92.6 94.7 Real estate activities: Professional. 98.6 98.7 100.0 92.6 99.1 100.0 98.6 scientific and technical activities Administrative and support service 99.0 95.6 100.0 100.0 99.3 100.0 100.0 activities; Repair of computers Total 96.0 98.7 97.5 94.5 96.7 98.5 96.6



### C15: During 2015, did your enterprise use public authorities' services over the Internet to?

	public authorities' services over the Internet to?  In percentage								
		S	ize clas	S		Region	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total	
	Return filled in	forms	over tl	ıe Inte	rnet				
	Manufacturing	97.8	98.6	98.9	96.8	99.9	98.4	98.1	
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	100.0	100.0	96.2	100.0	100.0	97.1	99.7	
	Construction	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	91.9	94.0	94.3	91.3	90.8	93.8	92.2	
Acti	Transportation and storage	90.7	100.0	92.7	88.2	92.0	100.0	92.3	
	Accommodation and food service activities	94.8	96.8	100.0	95.4	100.0	93.4	95.2	
	Information and communication	93.6	98.7	100.0	96.3	100.0	92.6	94.7	
	Real estate activities; Professional, scientific and technical activities	94.5	98.7	92.9	92.6	80.6	100.0	95.1	
	Administrative and support service activities; Repair of computers	99.0	100.0	100.0	95.6	100.0	100.0	99.3	
Tota	I	95.1	98.0	97.6	94.8	95.5	96.8	95.7	
	VA	Т рауп	nent						
	Manufacturing	97.6	99.5	98.2	96.8	99.7	98.7	98.1	
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	100.0	100.0	96.2	100.0	100.0	97.1	99.7	
	Construction	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	94.8	98.7	100.0	91.2	95.3	99.0	95.4	
Act	Transportation and storage	93.8	100.0	100.0	94.7	92.0	100.0	95.1	
	Accommodation and food service activities	98.5	94.7	100.0	94.0	100.0	99.0	97.9	
	Information and communication	96.9	97.1	100.0	97.8	98.6	96.3	97.0	
	Real estate activities; Professional, scientific and technical activities	96.3	100.0	92.9	92.6	92.7	99.0	96.8	
	Administrative and support service activities; Repair of computers	99.0	100.0	100.0	95.6	100.0	100.0	99.3	
Tota		96.6	99.2	98.7	95.3	97.4	98.9	97.2	

### C15: During 2015, did your enterprise use public authorities' services over the Internet to?

In percenta								entage
		S	ize clas	s		Region		
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	Pay social contributions							
	Manufacturing	98.0	99.5	98.2	96.9	99.7	99.7	98.3
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	100.0	100.0	96.2	100.0	100.0	97.1	99.7
	Construction	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	94.8	98.7	100.0	91.2	95.3	99.0	95.4
Acti	Transportation and storage	93.8	100.0	96.4	94.3	92.0	100.0	94.9
	Accommodation and food service activities	98.5	94.7	100.0	94.0	100.0	99.0	97.9
	Information and communication	99.7	98.7	100.0	97.8	100.0	100.0	99.6
	Real estate activities; Professional, scientific and technical activities	94.2	100.0	92.9	92.6	81.5	99.5	94.9
	Administrative and support service activities; Repair of computers	99.0	97.9	100.0	93.7	100.0	100.0	98.9
Tota		96.7	99.2	98.5	95.3	96.8	99.5	97.2



C16: Does your enterprise use the software package ERP for exchanging information about sales and/or purchases with other functions?

in percentag								entage
		S	ize clas	ss		Region		
	Enterprises		Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
		YES						
	Manufacturing	16.3	26.9	50.8	12.3	19.7	39.4	20.9
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	8.8	12.3	57.5	13.0	12.8	29.4	14.9
	Construction	4.6	10.8	34.6	4.8	5.0	9.8	7.0
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	17.5	20.6	71.5	11.3	9.8	31.0	19.1
Acti	Transportation and storage	6.4	20.5	59.7	6.4	10.2	20.5	11.1
	Accommodation and food service activities	6.8	8.9	100.0	11.8	8.0	6.0	7.9
	Information and communication	18.7	27.7	44.7	12.1	16.8	25.0	21.0
	Real estate activities; Professional, scientific and technical activities	2.7	31.7	31.4	15.9	5.2	5.6	7.2
	Administrative and support service activities; Repair of computers	5.8	22.4	38.5	12.0	9.2	12.9	11.8
Total		12.9	22.2	52.1	11.1	12.9	23.7	16.3

C17: Does your enterprise use any software application for managing information about customers (CRM software) that allows to?

Capture, store and make available to other business functions information about customers		In percentages								
Manufacturing   17.3   26.5   29.8   12.9   31.6   22.0   20.3			S	Size clas	SS		Region			
Manufacturing   17.3   26.5   29.8   12.9   31.6   22.0   20.3		Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total	
Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities   Construction		- · · · · · · · · · · · · · · · · · · ·				iness	functio	ons		
Conditioning supply; Water supply, sewerage, waste management and remediation activities   Construction   4.6   5.0   9.6   1.1   2.7   9.1   4.9		Manufacturing	17.3	26.5	29.8	12.9	31.6	22.0	20.3	
Wholesale and retail trade; repair of motor vehicles and motorcycles   8.3   13.6   29.9   3.5   5.9   16.5   9.5		conditioning supply; Water supply, sewerage, waste management and	11.8	6.2	44.6	15.6	8.7	5.8	12.2	
Manufacturing   19.7   29.4   29.3   8.0   27.3   46.3   22.6		Construction	4.6	5.0	9.6	1.1	2.7	9.1	4.9	
Accommodation and food service activities  Information and communication Real estate activities; Professional, scientific and technical activities Administrative and support service activities; Repair of computers  Total  Analyse information about customers for marketing purposes (stting price lists, making sales promotions)  Manufacturing  Incommodation activities  Analyse information about customers for marketing purposes (stting price lists, making sales promotions)  Manufacturing  Incommodation activities  Construction  Wholesale and retail trade; repair of motor vehicles and motorcycles  Transportation and storage  Accommodation and food service activities; Professional, scientific and technical activities  Administrative and support service activities; Repair of computers  20.3  30.9  28.2  15.4  14.2  21.3  22.2  38.  49.1  36.0  36.0  49.1  41.2  41.9  30.6  41.8  24.7  17.0  22.2  3.8  49.1  36.0  36.0  36.0  36.0  48.1  40.0  49.1  36.0	ivity	· •	8.3	13.6	29.9	3.5	5.9	16.5	9.5	
Activities   15.4   23.0   66.7   36.3   2.1   13.3   17.1	Act	Transportation and storage	-	26.6	39.9	9.2	0.9	7.8	6.1	
Real estate activities; Professional, scientific and technical activities   31.1   60.6   75.7   22.2   3.8   49.1   36.0     Administrative and support service activities; Repair of computers   26.9   50.3   28.2   15.4   14.2   41.9   30.6     Total			15.4	23.0	66.7	36.3	2.1	13.3	17.1	
Scientific and technical activities   31.1   60.6   75.7   22.2   3.8   49.1   36.0		Information and communication	35.9	51.7	81.2	31.5	20.6	48.1	40.0	
Analyse information about customers for marketing purposes (stting price lists, making sales promotions)    Manufacturing   19.7   29.4   29.3   8.0   27.3   46.3   22.6			31.1	60.6	75.7	22.2	3.8	49.1	36.0	
### Analyse information about customers for marketing purposes (stting price lists, making sales promotions)    Manufacturing   19.7   29.4   29.3   8.0   27.3   46.3   22.6     Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities    Construction   13.7   3.5   9.6   0.3   2.7   25.9   11.6     Wholesale and retail trade; repair of motor vehicles and motorcycles   7.3   19.4   66.7   20.4   2.1   7.8   9.9     Accommodation and food service activities   11.6   11.6   11.6   11.6   11.6   11.6     Real estate activities; Professional, scientific and technical activities   25.8   63.2   48.6   22.0   2.2   42.4   31.4     Administrative and support service activities; Repair of computers   20.3   30.9   28.2   6.0   10.2   32.9   22.8		• • • • • • • • • • • • • • • • • • • •	26.9	50.3	28.2	15.4	14.2	41.9	30.6	
Manufacturing   19.7   29.4   29.3   8.0   27.3   46.3   22.6	Total		14.4	24.1	33.5	10.6	14.8	24.7	17.0	
Manufacturing 19.7 29.4 29.3 8.0 27.3 46.3 22.6 Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities  Construction 13.7 3.5 9.6 0.3 2.7 25.9 11.6 Wholesale and retail trade; repair of motor vehicles and motorcycles  Transportation and storage - 21.1 40.3 7.1 0.9 7.8 5.2 Accommodation and food service activities  Information and communication 38.1 44.7 48.2 25.3 22.1 48.9 39.5 Real estate activities; Professional, scientific and technical activities  Administrative and support service activities; Repair of computers  19.7 29.4 29.3 8.0 27.3 46.3 22.6 19.7 9.8 29.8 25.9 19.7 25.9 11.6 25.9 25.9 25.9 25.9 25.9 25.9 25.9 25.9		• • • • • • • • • • • • • • • • • • •				_		ses		
Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities  Construction  Wholesale and retail trade; repair of motor vehicles and motorcycles  Transportation and storage  Accommodation and food service activities  Information and communication  Real estate activities; Professional, scientific and technical activities  Administrative and support service activities; Repair of computers  12.7  6.2  13.4  9.3  6.9  19.7  9.8  11.6  9.8  12.9  29.9  4.5  5.9  16.5  9.8  5.2  Accommodation and food service activities  7.3  19.4  66.7  20.4  21.1  7.8  9.9  29.9  4.5  5.9  16.5  9.8  5.2  4.6  Accommodation and communication  38.1  44.7  48.2  25.3  22.1  48.9  39.5  Administrative and support service activities; Repair of computers		· · · · · · · · · · · · · · · · · · ·			•		•	14.2	22.4	
Wholesale and retail trade; repair of motor vehicles and motorcycles  Transportation and storage  Accommodation and food service activities  Information and communication  Real estate activities; Professional, scientific and technical activities  Administrative and support service activities; Repair of computers    8.9   12.9   29.9   4.5   5.9   16.5   9.8     10.9   7.8   5.2     10.9   7.8   5.2     10.9   7.8   5.2     10.9   7.8   7.8     10.9   7.8   7.8     10.9   7.8   7.8     10.9   7.8   7.8     10.9		Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and								
motor vehicles and motorcycles Transportation and storage		Construction	13.7	3.5	9.6	0.3	2.7	25.9	11.6	
Accommodation and food service activities  Information and communication  Real estate activities; Professional, scientific and technical activities  Administrative and support service activities; Repair of computers  7.3 19.4 66.7 20.4 2.1 7.8 9.9  48.2 25.3 22.1 48.9 39.5  63.2 48.6 22.0 2.2 42.4 31.4  25.8 63.2 48.6 22.0 2.2 42.4 31.4	vity	•	8.9	12.9	29.9	4.5	5.9	16.5	9.8	
activities 7.3 19.4 66.7 20.4 2.1 7.8 9.9 Information and communication 38.1 44.7 48.2 25.3 22.1 48.9 39.5 Real estate activities; Professional, scientific and technical activities Administrative and support service activities; Repair of computers 20.3 30.9 28.2 6.0 10.2 32.9 22.8	Acti	Transportation and storage	-	21.1	40.3	7.1	0.9	7.8	5.2	
Real estate activities; Professional, scientific and technical activities  Administrative and support service activities; Repair of computers  25.8 63.2 48.6 22.0 2.2 42.4 31.4  20.3 30.9 28.2 6.0 10.2 32.9 22.8			7.3	19.4	66.7	20.4	2.1	7.8	9.9	
scientific and technical activities  Administrative and support service activities; Repair of computers  25.8 63.2 48.6 22.0 2.2 42.4 31.4  20.3 30.9 28.2 6.0 10.2 32.9 22.8		Information and communication	38.1	44.7	48.2	25.3	22.1	48.9	39.5	
activities; Repair of computers		· · · · · · · · · · · · · · · · · · ·	25.8	63.2	48.6	22.0	2.2	42.4	31.4	
		• •	20.3	30.9	28.2	6.0	10.2	32.9	22.8	
<b>Total</b> 15.1 23.8 28.8 7.6 13.0 29.7 17.3	Tota		15.1	23.8	28.8	7.6	13.0	29.7	17.3	



### MODULE 2.D: Use of cloud computing services<sup>1)</sup>

D1: Does your enterprise use cloud services over the Internet?

in percenta								entage
		S	ize clas	ss		Region		
	Enterprises		Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
		YES						
	Manufacturing	4.2	6.4	9.9	2.6	3.1	12.1	5.0
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remedication activities	-	6.9	6.5	5.7	1.8	-	3.8
	Construction	4.6	12.3	3.7	0.8	2.7	11.9	5.9
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	10.5	10.6	13.8	18.9	0.4	9.7	10.6
Acti	Transportatio and storage	9.7	5.1	25.1	0.7	19.9	11.7	9.6
	Accommodation and food service activities	7.6	6.9	33.3	3.3	20.8	5.1	7.7
	Information and communication	22.8	20.4	57.6	11.4	10.7	31.0	23.6
	Real estate activities; Professional, scientific and technical activities	17.9	19.5	21.4	6.5	4.2	25.4	18.2
	Administrative and support service activities; Repair of computers	12.5	4.6	9.6	3.4	9.2	13.9	11.0
Total		9.2	9.0	13.2	7.3	4.8	14.3	9.3

<sup>1)</sup> The results refer only to enterprises that answered YES in question C1.

D2: Does your enterprise pay any of the following computing services over the Internet (excluding free of charge services)? 1)

In percentages									
	5	Size clas	SS		Region				
Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total		
	e-mai	1							
Manufacturing	79.7	74.8	86.8	77.8	58.0	85.8	79.0		
Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	44.9	100.0	44.9	100.0		53.6		
Construction	100.0	41.0	100.0	100.0	100.0	73.4	77.5		
Wholesale and retail trade; repair of motor vehicles and motorcycles  Transportation and storage	87.0	68.6	32.4	78.3	66.7	91.6	83.2		
Transportation and storage	31.3	100.0	74.3	-	19.3	100.0	42.3		
Accommodation and food service activities	68.7	77.8	100.0	68.4	82.9	54.9	71.3		
Information and communication	42.5	71.4	75.5	22.9	73.2	49.9	49.3		
Real estate activities; Professional, scientific and technical activities	98.7	83.8	66.7	86.0	24.2	100.0	95.9		
Administrative and support service activities; Repair of computers	65.4	100.0	100.0	53.8	-	91.7	70.8		
Total	77.5	69.5	75.0	74.4	45.2	83.6	75.9		
Office so	ftware (\	Word, I	Excel)						
Manufacturing	67.8	53.9	34.1	43.5	34.4	74.1	59.7		
Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	44.9	100.0	44.9	100.0	-	53.6		
Construction	100.0	12.2	-	100.0	-	70.3	64.0		
Wholesale and retail trade; repair of motor vehicles and motorcycles  Transportation and storage	52.0	6.2	37.8	72.9	33.3	2.1	46.0		
Transportation and storage	65.7	-	52.9	-	47.0	91.4	58.5		
Accommodation and food service activities	45.3	77.8	-	31.6	54.9	45.1	48.8		
Information and communication	53.7	87.3	53.1	22.9	86.6	59.5	58.3		
Real estate activities; Professional, scientific and technical activities	74.4	83.8	33.3	86.0	-	77.9	75.0		
Administrative and support service activities; Repair of computers	51.7	100.0	100.0	-	100.0	52.2	59.3		
Total	61.1	44.0	45.9	64.8	47.5	55.5	57.1		

<sup>1)</sup> The results refer only to enterprises that answered YES in question D1.



D2: Does your enterprise pay any of the following computing services over the Internet (excluding free of charge services)?  $^{1)}$ 

In percentages								ntages
		S	ize clas	SS		Region		
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	Hosting the e	nterpr	ise's da	atabas	es			
	Manufacturing	37.5	53.9	41.5	28.6	44.3	48.7	43.0
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	44.9	-	44.9	-	-	37.8
	Construction	100.0	12.2	-	100.0	-	70.3	64.0
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	79.2	55.9	21.6	62.6	33.3	95.6	74.7
Act	Transportation and storage	34.3	100.0	19.3	-	56.3	-	38.2
	Accommodation and food service activities	56.6	44.4	100.0	-	68.8	54.9	56.2
	Information and communication	86.7	48.2	34.7	36.4	86.6	80.6	77.0
	Real estate activities; Professional, scientific and technical activities	71.8	78.2	33.3	-	48.5	77.9	72.0
	Administrative and support service activities; Repair of computers	62.0	-	100.0	-	-	82.9	61.5
Tota		69.6	51.8	35.9	52.7	49.0	73.7	64.4
	Sto	rage of	files					
	Manufacturing	53.8	47.7	54.7	34.4	79.5	51.1	52.0
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	100.0	-	100.0	-	-	84.2
	Construction	-	12.2	-	100.0	-	-	4.7
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	78.2	14.4	40.5	62.3	33.3	81.6	69.3
Act	Transportation and storage	65.7	100.0	59.9	-	59.7	94.2	67.9
	Accommodation and food service activities	45.3	22.2	-	-	45.1	45.1	40.1
	Information and communication	41.5	46.6	24.5	90.6	73.2	31.9	40.7
	Real estate activities; Professional, scientific and technical activities	47.4	78.2	33.3	-	24.2	56.5	51.7
	Administrative and support service activities; Repair of computers	44.9	100.0	100.0	46.2	-	68.9	53.5
Tota		58.0	44.9	45.4	57.9	52.9	53.8	54.9

<sup>1)</sup> The results refer only to enterprises that answered YES in question D1.

D2: Does your enterprise pay any of the following computing services over the Internet (excluding free of charge services)? 1)

In percentages Size class Region Vojvodina **Fotal 3elgrade Enterprises** 50-249) Medium Financial or accounting software applications Manufacturing 25.9 5.5 19.3 24.9 19.2 20.2 20.1 Electricity, gas, steam and air conditioning supply; Water supply, 44.9 44.9 37.8 sewerage, waste management and remediation activities Construction 12.2 100.0 4.7 Wholesale and retail trade; repair of 36.0 49.4 16.2 52.5 12.7 37.1 motor vehicles and motorcycles Transportation and storage 34.3 2 25.7 100.0 40.3 \_ 30.4 Accommodation and food service 90.2 63.2 65.3 66.7 31.6 51.6 activities Information and communication 44.2 41.3 51.0 18.9 86.6 43.1 44.4 Real estate activities; Professional, 72.0 69.2 69.0 75.6 36.7 33.3 60.6 scientific and technical activities Administrative and support service 100.0 52.8 51.7 100.0 43.4 activities; Repair of computers Total 41.8 33.4 25.4 46.9 43.3 34.7 39.3 CRM software Manufacturing 6.2 14.2 20.6 22.3 11.0 10.3 Electricity, gas, steam and air conditioning supply; Water supply, 44.9 100.0 44.9 100.0 53.6 sewerage, waste management and remediation activities Construction Wholesale and retail trade; repair of 6.2 1.2 8.0 motor vehicles and motorcycles Transportation and storage Accommodation and food service 9.9 20.0 33.3 45.1 21.4 activities Information and communication 30.6 7.9 40.8 44.8 13.4 28.0 28.4 Real estate activities; Professional, 1.7 1.3 33.3 24.2 0.7 scientific and technical activities Administrative and support service 100.0 20.7 35.9 31.7 100.0 activities; Repair of computers

9.9

7.0

25.8

4.4

17.0

8.9



Total

8.6

<sup>1)</sup> The results refer only to enterprises that answered YES in question D1.

D2: Does your enterprise pay any of the following computing services over the Internet (excluding free of charge services)?  $^{1)}$ 

in percentages								
		S	ize clas	SS		Region		
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	Computer power to run	the e	nterpri	ise's ov	vn soft	ware		
	Manufacturing	6.2	6.4	15.1	-	9.9	9.5	7.3
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	44.9	100.0	44.9	100.0	-	53.6
	Construction	-	-	-	-	-	-	-
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	35.0	35.0	10.8	48.7	-	11.4	34.3
Acti	Transportation and storage	34.3	-	-	-	40.3	-	27.4
	Accommodation and food service activities	42.5	44.4	-	31.6	40.8	45.1	41.3
	Information and communication	36.5	21.2	12.2	26.9	-	36.1	32.3
	Real estate activities; Professional, scientific and technical activities	23.1	-	33.3	-	-	22.1	19.9
	Administrative and support service activities; Repair of computers	7.3	-	100.0	-	-	20.7	15.3
Total		26.7	15.7	20.8	37.8	23.6	17.8	24.3

<sup>1)</sup> The results refer only to enterprises that answered YES in question D1.

D3: Does your enterprise pay any cloud computing services delivered by providers from? 1)

In percentages								
		S	ize clas	ss		Region		
	Enterprise	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	Sha	red se	rvers					
	Manufacturing	60.2	27.2	46.5	30.6	13.9	66.5	48.5
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	44.9	100.0	44.9	100.0	-	53.6
	Construction	-	12.2	-	100.0	-	-	4.7
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	4.8	14.8	10.8	6.6	-	5.7	6.2
Acti	Transportation and storage	68.7	-	40.6	-	84.0	8.6	59.5
	Accommodation and food service activities	31.3	77.8	-	31.6	33.6	45.1	37.5
	Information and communication	46.3	41.8	63.3	58.2	26.8	47.9	47.1
	Real estate activities; Professional, scientific and technical activities	1.3	5.6	66.7	14.0	24.2	1.5	3.2
	Administrative and support service activities; Repair of computers	34.7	-	100.0	-	-	51.8	38.4
Tota	I	23.2	22.2	47.3	14.8	42.9	25.1	24.5
	Servers exclusive	vely fo	r your	enterp	rise			
	Manufacturing	19.5	76.5	61.3	43.5	90.4	26.4	41.7
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	100.0	100.0	100.0	100.0	-	100.0
	Construction	-	59.0	100.0	-	-	29.7	25.1
ivity	Wholesale and retail trade; repair of motor vehicles and motorcycles	45.5	57.7	73.0	67.7	100.0	13.7	47.8
Activity	Transportation and storage	31.3	100.0	40.1	100.0	12.7	91.4	38.3
	Accommodation and food service activities	65.9	44.4	-	100.0	62.2	45.1	60.3
	Information and communication	59.1	33.4	100.0	77.1	73.2	55.6	59.0
	Real estate activities; Professional, scientific and technical activities	5.1	5.6	100.0	86.0	15.2	1.5	7.1
	Administrative and support service activities; Repair of computers	48.3	-	100.0	100.0	-	60.1	49.9
Tota	l	34.5	56.9	72.9	66.7	43.0	27.4	40.8

<sup>1)</sup> The results refer only to enterprises that answered YES in question D1.



#### **MODULE 2.E: BIG DATA ANALYSIS**

# E1: During 2015, did your enterprise use big data analysis from the following data sources?

sources?						Ir	n perce	ntages
		S	Size clas	S		Region	•	
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	Enterprise's databases from smar				•			0-
	machine, digital sensors, RF							4.4
	Manufacturing Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	4.3	4.1	-	1.0	3.5	-
	Construction	3.7	-	-	8.3	-	-	2.8
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	-	4.5	10.9	0.4	1.1	1.0	0.8
	Transportation and storage	-	-	10.1	0.4	0.9		0.5
	Accommodation and food service activities	2.2	1.5	-	3.3	-	2.3	2.1
	Information and communication	1.4	10.0	-	1.1	6.4	2.2	2.7
	Real estate activities; Professional, scientific and technical activities	1.3	-	-	-	5.6	-	1.1
	Administrative and support service activities; Repair of computers	-	-	-	-		-	-
Tota	I	0.6	3.1	4.2	1.1	1.3	1.3	1.2
	Redirecting dat		-					
	(mobile telephone ne				rks, Gl	•		
	Manufacturing	2.0	2.4	6.5	-	6.6	2.3	2.4
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities							-
	Construction	3.7	-	-	8.3	-	-	2.8
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	0.2	3.6	2.2	0.8	1.1	0.3	0.7
Acti	Transportation and storage	-	-	-	-	-	-	-
·	Accommodation and food service activities	1.5	1.5	-	1.0	-	2.3	1.5
	Information and communication	2.6	6.0	-	5.1	7.8	1.1	3.1
	Real estate activities; Professional, scientific and technical activities	-	-	-	-	-	-	-
	Administrative and support service activities; Repair of computers	-	-	-	-	-	-	-
Tota	I	1.2	2.0	3.2	1.1	2.8	8.0	1.4

<sup>1)</sup> The results refer only to enterprises that answered YES in question A1.

E1: During 2015, did your enterprise use big data analysis from the following data sources?

In percentages Size class Region

		S	Size clas	SS		Region			
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total	
Da	ata generated from social media (			ks, blo	gs, mu	ltimed	lia con	tent	
	sharing websites)								
	Manufacturing	0.7	2.2	1.8	0.1	2.1	2.1	1.1	
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-			-	-			
	Construction	-	-	-	-	-	-	-	
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	-	2.2	3.7	0.1	-	0.8	0.4	
Act	Transportation and storage	-	-	-	-	-	-	-	
	Accommodation and food service activities	1.5	-	-	-	-	2.3	1.2	
	Information and communication	-	6.0	11.8	-	1.4	1.7	1.4	
	Real estate activities; Professional, scientific and technical activities	-	-	-	-	-	-	-	
	Administrative and support service activities; Repair of computers	-	-	-	-	-	-	-	
Tota	I	0.3	1.6	1.8	0.1	0.8	0.9	0.6	
	Other	data s	ources	3					
	Manufacturing	0.5	2.4	0.7	1.3	-	1.3	0.9	
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	-	-	-	-	-	-	
	Construction	3.7	-	-	8.3	-	-	2.8	
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	-	-	7.2	0.1	-	0.3	0.2	
Act	Transportation and storage	-	-	7.3	-	-	1.4	0.3	
	Accommodation and food service activities	-	-	-	-	-	-	-	
	Information and communication	1.2	2.9	11.8	6.2	1.4	0.7	1.9	
	Real estate activities; Professional, scientific and technical activities	-	-	7.1	-	-	0.2	0.1	
	Administrative and support service activities; Repair of computers	-	-	-	-	-	-	-	
Tota		0.5	1.1	2.7	1.4	0.0	0.5	0.7	



# E2: Who performed big data analysis in your enterprises, during 2015? $^{1)}$

In percentages									
		S	ize clas	SS		Region			
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total	
	Enterpr	ise's e	mploye	ees					
	Manufacturing	24.7	84.9	92.0	100.0	21.8	85.1	56.4	
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	-	-	-	-	-	-	
	Construction	-	-	-	-	-	-	-	
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	100.0	76.6	100.0	100.0	100.0	77.4	86.3	
Act	Transportation and storage	-	-	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	
	Information and communication	46.0	100.0	100.0	100.0	18.3	100.0	73.8	
	Real estate activities; Professional, scientific and technical activities	-	-	100.0	-	-	100.0	10.1	
	Administrative and support service activities; Repair of computers	-	-	-	-	-	-	-	
Tota	ıl	26.6	84.2	96.5	64.2	28.0	85.8	57.5	
	External	service	provi	ders					
	Manufacturing	42.3	47.3	24.5	85.8	33.7	14.9	41.6	
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	-	-	-	-	-	-	
	Construction	100.0	-	-	100.0	-	-	100.0	
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	-	23.4	7.9	11.3	-	22.6	16.1	
Act	Transportation and storage	-	-	-	-	-	-	-	
	Accommodation and food service activities	68.1	-	-	-	-	100.0	59.4	
	Information and communication	54.0	-	100.0	-	81.7	23.1	35.7	
	Real estate activities; Professional, scientific and technical activities	-	-	100.0	-	-	100.0	10.1	
	Administrative and support service activities; Repair of computers	-	-	-	-	-	-	-	
Tota	ıl	53.2	33.6	21.5	70.1	30.3	24.9	41.3	

<sup>1)</sup> The results refer only to enterprises that answered YES in question E1.

### MODULE 2.F: INVOICING1)

### F1: During 2015, did your enterprise send electronic invoices or invoices in paper form?

in percentage								
		S	ize clas	ss		Region		
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	Othe	r enter	prises					
	Manufacturing	96.2	97.0	98.6	95.3	100.0	95.1	96.5
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Construction	97.5	100.0	97.4	93.9	100.0	100.0	97.9
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	95.8	98.4	100.0	95.7	95.3	97.2	96.2
Acti	Transportation and storage	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Accommodation and food service activities	99.3	100.0	100.0	97.6	100.0	100.0	99.4
	Information and communication	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Real estate activities; Professional, scientific and technical activities	91.3	96.6	92.9	100.0	58.2	100.0	92.0
	Administrative and support service activities; Repair of computers	89.7	94.1	100.0	100.0	65.0	100.0	91.5
Tota		96.2	98.1	98.9	96.3	94.8	98.1	96.6

<sup>1)</sup> The results refer only to enterprises that answered YES in question A1.



F1: During 2015, did your enterprise send electronic invoices or invoices in paper form?

	or invoices in paper form?  In percentages								
		S	Size clas	SS		Region		900	
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total	
	Publi	c auth	orities						
	Manufacturing	68.2	70.8	74.4	88.8	32.3	72.6	69.2	
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	76.2	86.7	85.5	94.3	53.7	100.0	81.9	
	Construction	75.5	76.2	65.4	70.8	66.2	83.8	75.2	
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	71.6	79.1	87.3	67.0	38.4	97.4	72.9	
Act	Transportation and storage	61.2	63.4	89.8	67.3	30.6	99.0	62.8	
	Accommodation and food service activities	82.2	93.1	100.0	86.5	52.9	94.5	84.2	
	Information and communication	87.2	86.3	82.4	79.3	70.4	93.9	86.9	
	Real estate activities; Professional, scientific and technical activities	91.5	97.8	85.7	78.7	78.5	99.8	92.3	
	Administrative and support service activities; Repair of computers	88.5	88.2	96.8	79.7	71.3	99.4	89.3	
Tota	l	73.9	77.3	80.5	79.0	43.9	91.2	74.8	
	Priva	te cons	sumers	;					
	Manufacturing	58.0	52.9	47.9	75.5	28.1	49.7	56.1	
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	65.4	74.3	71.5	76.5	58.7	70.6	70.1	
	Construction	63.4	63.7	49.3	51.2	61.9	72.9	62.9	
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	51.0	60.0	67.1	42.7	50.9	61.5	52.4	
Act	Transportation and storage	43.2	44.8	61.7	54.2	40.3	31.9	44.3	
	Accommodation and food service activities	74.8	83.3	100.0	70.0	50.3	89.0	76.5	
	Information and communication	66.1	66.8	82.4	56.6	51.2	74.3	66.8	
	Real estate activities; Professional, scientific and technical activities	79.1	94.7	71.4	43.6	53.5	98.9	81.1	
	Administrative and support service activities; Repair of computers	78.8	71.5	60.9	54.3	44.1	94.9	75.7	
Tota	I	59.0	61.3	57.5	60.7	43.2	68.8	59.4	

### **MODULE 2.G:** e-commerce<sup>1)</sup>

G1: Did your enterprise receive orders for goods or services via a website or mobile application (excluding orders sent by e-mail), during 2015?

						"	1 perce	ntages
		S	ize clas	ss	Region			
Enterprises		Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
		YES						
	Manufacturing	14.6	26.2	28.6	13.9	21.4	23.1	18.2
	Electricity, gas, steam and air conditioning; Water supply, sewerage, waste management and remediation activities	8.9	12.0	33.3	10.2	18.3	8.3	12.6
	Construction	13.9	12.3	27.8	12.0	18.2	13.7	14.2
īţ	Wholesale and retail trade; repair of motor vehicles and motorcycles	25.6	26.0	54.0	20.3	46.2	19.5	26.3
Activity	Transportation and storage	12.8	20.7	47.2	11.1	22.0	15.1	15.6
∢	Accommodation and food service activities; Professional, scientific and technical activities	40.6	27.7	66.7	48.3	36.6	34.6	38.6
	Information and communication	40.0	48.8	69.4	4.8	22.3	59.7	42.4
	Real estate activities; Repair of computers	34.8	23.1	24.3	12.6	14.9	43.5	33.0
	Administrative and support service activities; Repair of computers	31.0	16.7	12.8	16.7	-	40.8	26.8
Total		22.5	23.9	34.5	15.7	27.3	27.9	23.3

<sup>1)</sup> The results refer only to enterprises that answered YES in question A1.

### G2: Please, provide an estimate of the percentage of the total turnover resulting from orders received via a website or mobile application, during 2015:<sup>1)</sup>

In percentage **Enterprises** Size class Region Vojvodina Total Medium (50-249) Belgrade Central Serbia 1-24% 74.7 78.8 83.5 86.5 83.5 65.3 76.0 25-49% 12.1 7.3 6.0 5.1 4.6 18.1 10.8 50-74% 7.1 9.5 5.4 5.1 8.5 8.1 7.5 75-100% 6.0 4.4 5.1 3.2 3.4 8.5 5.7

# G3: Please, provide an estimate of the percentage of the total turnover resulting from orders received via a website or mobile application, during 2015: 1) In percentage

in percentage										
			Eı	nterprise	es					
	S	ize clas	SS		Region					
	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total			
Sale to private consumers (B2C)										
1- 24%	16.2	13.1	26.2	16.9	19.0	14.0	16.2			
25- 49%	0.1	2.6	0.7	0.9	1.2	0.0	0.6			
50-74%	14.8	15.8	6.3	16.0	19.6	10.3	14.5			
75-100%	68.9	68.4	66.8	66.2	60.2	75.7	68.7			
Sale to ent	erprise	s (B2B	, B2G)							
1- 24%	67.7	68.4	66.8	62.6	60.2	75.7	67.8			
25- 49%	2.9	3.9	0.0	10.0	1.2	0.2	2.9			
50-74%	13.2	14.5	6.3	10.6	19.4	10.1	13.0			
75-100%	16.2	13.1	26.9	16.9	19.1	14.0	16.2			

<sup>1)</sup> The results refer only to enterprises that answered YES in question G1.

G4: Which of the following means of payment are you offereing for sales via your website or mobile application?<sup>1)</sup>

In percentage									
		S	ize clas	SS		Region			
	Enterprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total	
	Online payment, i.e. payment	integra	ited in	the or	dering	trans	action		
	Manufacturing	50.2	67.7	90.5	75.6	65.7	34.8	59.9	
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	100.0	100.0	80.6	100.0	90.0	100.0	95.3	
	Construction	48.6	100.0	100.0	6.8	60.6	100.0	61.1	
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	47.6	59.6	57.0	50.7	38.1	64.4	49.5	
Ą	Transportation and storage	76.3	50.8	45.0	93.6	73.1	17.9	66.6	
	Accommodation and storage	85.6	92.6	50.0	78.7	66.0	98.6	86.0	
	Information and communication	71.0	60.6	89.8	54.8	64.9	71.1	70.2	
	Real estate activity; Professional, scientific and technical activities	67.8	72.5	29.4	85.5	-	73.3	67.8	
	Administrative and support service activities; Repair of computers	67.2	100.0	25.0	50.9	-	70.5	68.5	
Tota	l	58.1	69.4	73.5	64.1	51.3	66.1	61.2	
	Offline payment, i.e. payment n	ot incl	uded i	n the c	orderin	g tran	saction	1	
	Manufacturing	95.8	99.2	97.9	100.0	92.2	99.1	97.2	
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	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	
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	90.9	100.0	95.9	86.4	90.7	99.4	92.2	
Ą	Transportation and storage	100.0	75.4	100.0	100.0	88.5	100.0	94.7	
	Accommodation and storage	94.2	75.3	100.0	95.9	80.6	93.6	92.0	
	Information and communication	90.4	96.7	100.0	100.0	53.1	96.1	92.1	
	Real estate activity; Professional, scientific and technical activities	96.4	91.0	100.0	100.0	52.1	100.0	95.9	
	Administrative and support service activities; Repair of computers	100.0	100.0	100.0	100.0	-	100.0	100.0	
Tota		94.1	96.6	98.2	94.9	89.0	98.6	94.8	

<sup>1)</sup> The results refer only to enterprises that answered YES in question G1.



### G5: Do any of the following obstacles limit or prevent your enterprise from selling via a website or mobile application: 1)

			u proc	entima				
		S	ize clas	ss		Region		
	Enteprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	The enterprise's goods or se	rvices v	were n	ot suit	able fo	r web	sale	
	Manufacturing	5.9	1.1	-	10.0	-	-	3.7
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	-	-	-	-	-	-
	Construction	26.3	-	-	69.2	-	-	19.9
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	19.5	6.0	-	4.5	-	51.7	17.0
Act	Transportation and storage	-	-	6.8	3.0	-	-	0.9
	Accommodation and food service activities	-	-	-	-	-	-	-
	Information and communication	1.3	3.3	-	45.2	6.4	-	1.6
	Real estate activities; Professional, scientific and technical activities	-	9.0	-	-	10.2	-	0.9
	Administrative and support service activities; Repair of computers	-	-	-	-	-	-	-
Tota	l	9.8	2.6	0.7	10.1	0.5	11.5	7.9
	Problems related to logistics (sl	nipping	of goo	ods or	deliver	y of se	rvices	)
	Manufacturing	31.2	55.6	65.9	51.6	55.4	18.5	42.8
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	100.0	100.0	46.8	87.0	90.0	70.0	87.1
	Construction	15.9	12.2	100.0	6.8	45.6	15.7	22.3
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	38.0	44.4	5.5	22.5	39.3	47.4	37.3
Act	Transportation and storage	76.3	50.8	38.2	90.5	73.1	17.9	65.6
	Accommodation and food service activities	18.4	7.4	50.0	7.7	-	30.6	17.4
	Information and communication	63.0	24.6	25.4	45.2	11.6	58.6	53.9
	Real estate activities; Professional, scientific and technical activities	63.3	50.4	-	21.4	-	70.4	61.2
	Administrative and support service activities; Repair of computers	28.1	78.4	25.0	11.1	-	35.6	33.0
Tota	l	41.3	48.5	43.1	36.6	44.3	45.2	42.8

<sup>1)</sup> The results refer only to enterprises that answered YES in question G1.

# G5: Do any of the following obstacles limit or prevent your enterprise from selling via a website or mobile application: 1)

u procentima

							u proc	entima
		S	ize clas	ss				
	Enteprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	Problems re	elated	to pay	ments				
	Manufacturing	2.1	2.0	-	3.8	-	1.7	1.9
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	-	-	-	-	-	-
	Construction	-	-	-	-	-	-	-
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	2.0	-	-	6.1	-	-	1.6
Act	Transportation and storage	-	-	-	-	-	-	-
	Accommodation and food service activities	-	24.7	-	-	-	6.4	3.1
	Information and communication	-	-	10.2	-	-	0.7	0.6
	Real estate activities; Professional, scientific and technical activities	11.9	9.0	-	-	10.2	12.5	11.5
	Administrative and support service activities; Repair of computers	4.3	-	-	11.1	-	2.8	3.7
Tota	I	3.0	2.4	0.8	3.7	0.3	3.7	2.7
	ICT security	and da	ata pro	tectio	n			
	Manufacturing	-	1.5	-	-	-	1.7	0.5
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	-	-	-	-	-	-
	Construction	-	-	-	-	-	-	-
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	-	-	-	-	-	-	-
Act	Transportation and storage	-	-	-	-	-	-	-
	Accommodation and food service activities	-	-	-	-	-	-	-
	Information and communication	-	13.7	10.2	-	-	3.5	3.1
	Real estate activities; Professional, scientific and technical activities	-	-	-	-	-	-	-
	Administrative and support service activities; Repair of computers	3.0	-	-	-	-	2.8	2.5
Tota	I	0.1	1.8	8.0	-	-	1.1	0.5

<sup>1)</sup> The results refer only to enterprises that answered YES in question G1.



# G5: Do any of the following obstacles limit or prevent your enterprise from selling via a website or mobile application: 1)

u procentima

							u proc	entima
		S	ize clas	ss				
	Enteprises	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
	(Inadequat	e) lega	l frame	work				
	Manufacturing	-	-	-	-	-	-	-
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	-	-	-	-	-	-
	Construction	-	-	-	-	-	-	-
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	1.8	-	2.8	-	0.3	5.0	1.6
Act	Transportation and storage	-	-	-	-	-	-	-
	Accommodation and food service activities	-	-	-	-	-	-	-
	Information and communication	-	8.4	-	-	-	1.7	1.5
	Real estate activities; Professional, scientific and technical activities	11.9	-	-	-	-	12.5	10.6
	Administrative and support service activities; Repair of computers	14.0	-	-	-	-	13.3	11.9
Total		3.0	0.7	0.7	-	0.1	5.2	2.4
	The costs of introdu	ıcing w	eb sal	es are	too hig	(h		
	Manufacturing	31.2	55.7	65.9	51.6	55.4	18.5	42.8
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	100.0	100.0	46.8	87.0	90.0	70.0	87.1
	Construction	15.9	12.2	100.0	6.8	45.6	15.7	22.3
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	19.9	36.5	8.3	22.5	26.6	13.0	21.3
Act	Transportation and storage	76.3	50.8	38.2	90.5	73.1	17.9	65.6
	Accommodation and food service activities	18.4	7.4	50.0	7.7	-	30.6	17.4
	Information and communication	55.8	28.8	35.6	45.2	11.6	53.9	49.7
	Real estate activities; Professional, scientific and technical activities	51.3	55.1	-	28.6	-	57.9	51.1
	Administrative and support service activities; Repair of computers	28.1	78.4	25.0	11.1	-	35.6	33.0
Total		32.4	47.5	44.6	36.8	38.3	34.1	36.0

<sup>1)</sup> The results refer only to enterprises that answered YES in question G1.

G6: During 2015, did your enterprise receive orders for goods or services via EDI-type messages?<sup>1)</sup>

						II	ı perce	ntages
		S	ize clas	ss	Region			
Enterprises		Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
		YES						
	Manufacturing	0.4	2.5	3.6	0.8	8.0	2.1	1.1
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	-	-	-	-	-	-	-
	Construction	-	3.5	-	-	2.7	-	0.6
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	0.5	-	11.6	1.4	0.3	0.3	0.7
Act	Transportation and storage	6.0	-	-	11.0	-	-	4.7
	Accommodation and food service activities	0.6	-	-	2.0	-	-	0.5
	Information and communication	-	2.6	7.1	-	-	1.0	0.7
	Real estate activities; Professional, scientific and technical activities	4.1	5.1	-	-	-	6.5	4.2
	Administrative and support service activities; Repair of computers	-	5.9	-	-	3.9	-	1.0
Tota	I	1.1	1.9	3.7	1.7	0.7	1.5	1.4

# G7: Please, indicate an estimate of the percentage of the total turnover resulting from orders received that were placed via EDI-type messages, in $2015^{1)}$

					II	ı perce	ntages
	Enterprises						
	S	ize clas	S				
	Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
1-24%	8.4	62.5	59.0	22.2	17.0	34.7	25.4
25-49%	42.5	7.4	5.4	19.6	63.0	18.2	31.0
50-74%	49.1	14.8	12.6	51.7	11.7	44.2	37.9
75-100%	0.0	15.4	23.0	6.5	8.3	2.9	5.7

<sup>1)</sup> The results refer only to enterprises that answered YES in question G1.



G8: Did your enterprise place for goods/services via a website, mobile application or EDI-type messages, during 2015?<sup>1)</sup>

						Ir	n perce	ntages
		S	ize clas	ss	Region			
Enterprises		Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
		YES						
	Manufacturing	25.1	44.3	56.7	26.6	43.0	28.1	31.6
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	13.9	22.6	43.0	20.0	27.1	5.8	20.6
	Construction	16.1	37.3	40.3	16.3	28.2	20.8	21.0
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	45.4	54.2	57.4	53.8	55.8	35.3	46.7
Act	Transportation and storage	43.8	36.4	59.7	36.6	40.9	58.7	43.3
	Accommodation and food service activities	55.6	30.9	100.0	58.3	42.7	51.7	51.6
	Information and communication	70.9	72.3	36.5	35.2	71.8	79.9	69.9
	Real estate activities; Professional, scientific and technical activities	59.6	55.6	58.6	44.3	17.8	75.0	59.0
	Administrative and support service activities; Repair of computers	53.1	52.0	33.3	43.3	10.0	70.0	50.9
Total		39.4	44.9	51.9	35.6	42.7	45.0	41.0

<sup>1)</sup> The results refer only to enterprises that answered YES in question G1.

G9: Was the percentage of the total orders placed electronicallu more than 1% of the total purchases, during 2015? $^{1)}$ 

						II	i perce	ntages
		S	ize clas	ss		Region		
Enterprises		Small (10-49)	Medium (50-249)	Large (250+)	Central Serbia	Vojvodina	Belgrade	Total
		YES						
	Manufacturing	50.9	33.5	51.0	35.6	46.2	60.7	45.0
	Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	35.7	30.3	8.8	28.3	25.4	50.0	27.8
	Construction	42.0	52.4	18.2	4.9	35.2	74.4	43.5
Activity	Wholesale and retail trade; repair of motor vehicles and motorcycles	63.3	44.7	57.6	63.4	64.1	53.4	60.5
Act	Transportation and storage	29.2	30.4	23.4	27.9	39.2	20.6	29.0
	Accommodation and food service activities	63.6	39.8	33.3	82.8	60.4	48.7	60.6
	Information and communication	48.9	59.3	51.6	81.4	38.9	49.5	50.6
	Real estate activities; Professional, scientific and technical activities	33.8	47.7	70.7	74.8	100.0	25.9	36.2
	Administrative and support service activities; Repair of computers	62.0	31.9	90.4	73.1	60.9	56.4	59.0
Tota		52.1	40.1	47.8	50.8	52.5	46.5	49.5

<sup>1)</sup> The results refer only to enterprises that answered YES in question G8.

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### 2.5. QUESTIONNAIRE

### USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN ENTERPRISES

#### MODULE 2.A: USE OF COMPUTERS

	YES	NO
A1 : Does your enterprise use computers?		□ end
A2 : Please, indicate an estimate of the percentage of employees who use computers for business purposes, at least once a week:		%
	YES	NO
A3: Did your e nterprise use free of charge open source software LINUX, during 2016?		

#### MODULE 2.B: ICT SPECIALISTS AND SKILLS

B1: Does your enterprise employ ICT specialists?	YES	NO
ICT specialists are employees for whom ICT is the main job. For example, to develop, operate or maintain ICT systems or applications.		
<b>B2</b> : Did your enterprise provide any type of training to develop ICT related skills of employees, during 2015?	YES	NO
Training for ICT specialists     (Tick "No" if your enterprise didn't employ ICT specialists)		
b) Training for other persons employed		
R3 - Did your enterprise recruit or try to recruit ICT specialists	YES	NO
B3: Did your enterprise recruit or try to recruit ICT specialists, during 2015?		☐ go to B5
B4 : Did your enterprise have vacancies for ICT specialists that		NO
were difficult to fill, during 2015?		

<b>B5</b> : Please indicate who mainly performed the following ICT functions of your enterprise in 2015:	Own employees	External persons	Not applicable
a) Maintenance of ICT infrastructure			
b) Support for office software			
c) Development of business management software/systems (ERP, CRM) ERP (Enterprise Resource planning) used to manage resources by sharing information among different functional areas such as accounting, planning, production, marketing; CRM (Customer Relationship Management) - software application for managing information about customers; Human Resources information management, databases)			
d) Support for business management software/systems (ERP, CRM, HR, databases)			
e) Development of web solutions (websites, ecommerce solutions)			
f) Support for web solutions (websites, ecommerce solutions)			
g) Security and data protection (security testing, security software)			

## MODULE 2.C: ACCESS TO AND USE OF THE INTERNET

C1: Does your enterprise have access to the Internet?		NO
		□ go to G1
C2: Please, indicate the percentage of employees who use the Internet for business purposes		%
Use of fixed broadband connection to the Internet for busine	ess purpose	s
C3: Does your enterprise use DSL or any other type of fixed broadband connection to the Internet (ADSL, Cable Internet, and public WiFi))?		NO
		go to C5
C4: What is the maximum contracted speed of the Internet connection in your enterprise?		
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 mobile connection to the Internet for business purposes			
The use of a mobile connection to the Internet for business purposes means the usage of portable devices paid for and provided by the enterprise and that are connected to the Internet via a mobile telephone network			
C5 : Does your enterprise use a mobile broadband Internet		NO	
connection (3G or 4G) via a portable device (Smartphone, laptop, tablet)?			
C6: Does your enterprise use a mobile broadband connection to the internet via the following portable devices?	YES	NO	
<ul> <li>a) via portable computer using mobile telephone networks (3G or 4G) - notebook, netbook, laptop, tablet, etc.</li> </ul>			
b) via other portable devices such as smartphones, using mobile telephone networks (3G or 4G)			
C7: Please, provide an estimate of the percentage of employees who use portable devices (provided by the enterprise) for business purposes, that allow Internet connection via mobile telephone network (portable computer, tablet, smart phone)		%	
C8: Does your enterprise provide the persons employed with portable devices that allow mobile connection to the internet for business use to:	YES	NO	
a) access the enterprise's e-mail system			
b) access and modify enterprise's documents			
<ul> <li>use dedicated business software applications (for orders or sales management, ERP related applications)</li> </ul>			
Use of a website			
	YES	NO	
C9: Does your enterprise have a website?		go to C11	
C10: Does your website have any of the following:	YES	NO	
a) Description of goods or services, price lists			
b) Online ordering or reservation or booking of goods/services			
<ul> <li>Possibility for visitors to customise or design online goods or services</li> </ul>			
d) Tracking of status of orders placed			
e) Personalised content in the website for regular/recurrent visitors			
f) Links or references to social media (Facebook, Twitter)			
g) Advertisement of open job positions or online job application			

Use of social media		
Use of social media implies the use of Internet applications or communication platforms in or outside the enterprise, the creation and sharing of content with customers and suppliers. Enterprises that use social media are those that have a user profile or account dependent on the requirements and types of social media.		
C11: Does your enterprise use any of the following social media:	YES	NO
a) Social networks (Facebook, LinkedIn, Xing, Yammer)		
b) Enterprise's blog (Twitter)		
c) Multimedia content sharing websites (Youtube, Flickr, Picassa)		
d) Wikipedia		
Other use of the Internet		
C12: Do the employees in your enterprise have remote access to	YES	NO
the enterprise's e-mail system, documents or applications?		
C13: Does your enterprise pay to advertise on the internet	YES	NO
(via adverts, social media, on other websites)?		
C14: Does your enterprise pay to advertise on the internet using any of the following targeted advertising methods?		NO
Based on webpages' content or keywords searched by users		
b) Based on the tracking of internet users' past activities or profile		
c) Based on the geolocation of internet users		
Any other method of targeted advertising on the internet not specified above		
Public authorities' Internet services		
Public authorities refer to both public services and administration – tax, customs, business registration, social security, public health, environment, etc. Public authorities can be on local, regional or national level.		
C15: During 2015, did your enterprise use public authorities' services over the Internet to:	YES	NO
a) Obtain information		
b) obtain forms, e.g. tax declarations		
c) return filled in forms, e.g. sending of statistical information to public authorities		
d) treat administrative procedures completely electronically (e.g. declaration, registration, request for licenses) without the need for paper work (including payment, if required)		
d1) Pay VAT		
d2) Pay social contributions		



Automatic exchange of information between different functions of the enterprise means any of the following:  - using one single software application to support the different functions of the enterprise;  - data linking between the software applications that support the different functions of the enterprise;  - using a common database of data warehouse accessed by the software applications that support the different functions of the enterprise;  - automatic exchange of data between the different software systems (see the definition in module C).			
C16: Does your enterprise use the software package ERP for exchanging information on sales and/or purchases with its other		NO	
functions (e.g. finances, planning, marketing)?			
C17: Does your enterprise use any software application for managing information about customers (CRM) that allows to:	YES	NO	
<ul> <li>a) Capture, store and make available to other business functions information about customers</li> </ul>			
<ul> <li>Analyse information about customers for marketing purposes (setting prices, making sales promotion, choosing distribution channels)</li> </ul>			

# MODULE 2.D: USE OF CLOUD COMPUTING SERVICES Cloud computing refers to ICT services that are used over the internet to access software, computing power, storage capacity

and similar services have all of the following characteristics: - are delivered from servers of service providers - can be used on-demand by the user, at least after the initial set up (without human interaction with the service provider) - are paid for, either per user, by capacity used, or they are pre-paid			
D1: Does your enterprise pay cloud computing services over the	YES	NO	
Internet?			
D2: Does your website have any of the following:	YES	NO	
a) E- mail			
b) Office software (Word, Excel)			
c) Hosting the enterprise's database(s)			
d) Storage of files			
e) Finance or accounting software applications			
f) CRM software			
g) Computing power to run the enterprise's own software			
D3 : Does your enterprise buy any cloud computing services delivered from:	YES	NO	
Shared servers of service providers			
<ul> <li>Servers of service providers exclusively reserved for your enterprise</li> </ul>			

## MODULE 2.E: BIG DATA ANALYSIS

Big data are generated from activities that are carried out electronically and from machine-tomachine communications (e.g. data produced from social media activities, from production processes, etc.)  Big data typically have characteristics such as:  Significant volume referring to vast amounts of data generated over time.  Variety referring to the different format of complex data, either structured or unstructured (e.g. text, video, images, voice, docs, sensor data, activity logs, click streams, coordinates, etc.).  Velocity referring to the high speed at which data is generated, becomes available and changes over time.  Big data analysis refers to the use of techniques, technologies and software tools for analysing big data extracted from your own enterprise's data sources or other data sources.		
E1: During 2015, did your enterprise analyse big data from any of the following data sources?	YES	NO
<ul> <li>a) Enterprise's own data from smart devices or sensors (Machine to Machine -M2M- communications, digital sensors, Radio frequency identification tags RFID9)</li> </ul>		
b) Geolocation data from the use of portable devices ( portable devices using mobile telephone networks, wireless connections or GPS)		
c) Data generated from social media (social networks, blogs, multimedia content sharing websites)		
d) Other big data sources not specified above		
E2: During 2015, who performed big data analysis for your enterprise?	YES	NO
a) Enterprise's own employees		
b) External service provider		

## MODULE 2.F: ELECTRONIC INVOICING

There are two forms of electronic invoices:     e-invoice in standard form (suitable for automatic processing) – such invoices may be exchanged directly between the supplier and buyer, via the service operator or electronic banking;     Invoice sen t ele ctronically that i s no t suita ble for auto matic processing (e.g. invoice sent by e-mail).			
End: During 2015, did your enterprise issue/send any type of invoices, whether in electronic or in paper form, to:  If F1 has a) or b) answered with "Yes" then continue, else go to F3	YES	NO	
a) other enterprises			
b) public authorities			
c) private consumers			



	: Of all invoices your enterprise issued/sent to other enterprises public authorities during 2015	%
a)	Invoices in electronic form, in a standard structure suitable for automated processing (elnvoices)	%
b)	Invoices in electronic form, not suitable for automated processing (e-mails, e-mail attachment as pdf, images in TIF, JPEG or other format)	%
c)	Invoices only in paper form	%
	TOTAL	100%
F3	: Of all invoices your enterprise received during 2015	%
a)	Invoices in electronic form, in a standard structure suitable for automated processing (elnvoices)	%
b)	Invoices in paper form or in electronic form not suitable for automated processing	%
	TOTAL	100%

## MODULE 2.G: 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 of 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.		
Web sales		
G1: During 2015, did your enterprise receive orders for goods or		NO
place services via a website (excluding manually typed e-mails)?		□ go to G6
G2: 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 2015:	%	
G3: Indicate an estimate of the percentage of the total turnover resulting from orders received via a website in 2014, by type of customers:	%	
a) Sales to private consumers (B2C)		%
b) Sales to enterprises (B2B,B2G)		%
TOTAL	100%	
G4: Which of the following means of payment do you propose for sales via a website or mobile application?	YES	NO
a) Online payment, i.e. payment integrated in the ordering transaction (credit card payment)		
<ul> <li>Offline payment, i.e. payment process is not included in the ordering transaction (cash on delivery, bank transfer, cheque payment)</li> </ul>		

<b>G5</b> : Did any of the following obstacles limit or prevent your enterprise from selling via a website or mobile application:		YES	NO
a) The enterpris	e's goods or services were not suitable for web		
b) Problems relatives services)	ated to logistics (shipping of goods or delivery of		
c) Problems rela	ated to payments		
d) Problems rela	ated to ICT security and data protection		
e) Problems rela	ated to legal framework (unsuitable)		
f) Costs for intr	oducing web sales too high		
EDI-type sales  EDI-type sales  EDI-type sales are sales made via EDI-type messages (EDI: Electronic Data interchange) meaning: in an agreed or standard format suitable for automated processing ( (EDI ( EDIFACT), XML, without the individual messages being typed manually			
G6: Did your enterprise order goods/services via a website or EDI-type messages during 2015.		YES	NO
			go to G9
	G7: Did your enterprise receive orders for goods or services via EDI-type messages during 2015.  National current		currency
	Orders placed over the Internet		
Orders placed over the Internet may be: - via online shops (web shopping carts) or via web forms on the website - via EDI-type messages suitable for automatic processing (EDIFACT, XML), excluding manually typed messages			
G8: Did your enterprise order goods/services via a website or EDI- type messages during 2015?		YES	NO
			the end
	entage of all the orders that your enterprise placed	YES	NO
over the Internet exceed 1% of the total purchases made by your enterprise 2015?			the end



## **ICT GLOSSARY**

## 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 bite.

#### **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 and through other computer networks.

#### B2C (Business-to-Customer):

Transactions that are carried out between business and private customer through IP networks and via 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.

#### Downloading

Electronic transmission of information from a remote computer to your computer. Downloading of data files from anonymous FTP 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 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 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. etc.

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 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). Each 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 range, linked with cables, wireless, permanently, temporary linked, ... The Internet is the largest network, 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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