



Ministry of National economy  
of the Republic of Kazakhstan  
Committee on Statistics

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# Development of communication and information and communication technologies in the Republic of Kazakhstan 2015-2019



Nur-Sultan 2020



**Ministry of National economy of the Republic of Kazakhstan  
Committee on Statistics**

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# **Development of communication and information and communication technologies in the Republic of Kazakhstan**

**2015-2019**

**Statistical compilation**

**Nur-Sultan 2020**

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Legend:

- - no phenomenon

0,0 - insignificant value

x - confidential data

... - no data

In some cases, minor discrepancies between the total and the sum of the items are due to rounding of data.

## Foreword

This publication has been prepared to monitor the development of communications and information and communication technologies.

Over the past decades, the world is rapidly moving towards a new type of economy, where information technologies are becoming the main instrument for its formation. In modern conditions, information technologies are a major factor in technological change and a condition for ensuring competitiveness both at the level of individual enterprises and at the level of countries and supranational associations, leading to the restructuring of all economic and production processes, a radical increase in productivity, quality and cost reduction.

The development of information technologies in our country is determined by such conditions and factors as strengthening the role of information and communication services on the world market and providing support to domestic enterprises and companies engaged in the production and export of information services to increase the competitiveness of the information industry and modernize our economy.

Communication statistics provides information support to users at all levels on the state and development of the communications industry, both in general and its constituent types of communications, on the development of the Internet, including broadband Internet, mobile communications, on technical means of communication, on the contribution of the industry to the republic's GDP.

The compilation contains information on the status and use of information and communication technologies in enterprises of the republic and in households.

In preparing the collection, using data from the state statistical bodies of legal entities and individuals by means of statistical surveys as well as data from the Ministry of Education and Science of the Republic of Kazakhstan.

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## Overview of the state of development of communications in 2019

Communication is a dynamically developing production and business complex, designed to meet the growing communication needs of the economy and society. The share of the «communications» industry in the republic's GDP in 2019 was 1.2%.

In 2019, postal and courier services provided services in the amount of 42,9 billion tenge, which is 21% more than in 2018 in comparable prices, 25% of the volume of postal and courier services provided to the population. In 2019, communication enterprises rendered services in the amount of 854,6 billion tenge, which in comparable prices by 4,7% more than in 2018, 53,8% of the volume of communication services was rendered to the population.

A significant share in the total volume of communication services is occupied by Internet services, mobile communication services and other telecommunication services, the specific weights of which were 33%, 30,5% and 19%, respectively.

In recent years, the structure of communication services has changed significantly. In connection with the introduction of various types of cellular communications and Internet access, the share of fixed telephony services in the total volume of communication services is noticeably reduced.

At the end of 2019, the number of fixed telephone lines in the country amounted to 3072,5 thousand units, which is 4,2% less than in 2018, of which the population – 2455,7 thousand units (a decrease of 5,4%) . The number of fixed telephone lines in rural areas amounted to 835,7 thousand units.

In the cities of the republic, there are 17 fixed telephone lines per 100 inhabitants, 11 fixed telephone lines in the countryside.

At the end of 2019, the number of mobile subscribers in the republic was 25717,7 thousand, and the number of fixed Internet subscribers is 2513,1 thousand, of which using high-speed broadband access, 99.9%.

# 1. The main economic indicators of communication services

## 1.1 The dynamics of the development of communication services

	million tenge									
	1991*	1992*	1993	1994	1995	1996	1997	1998	1999	2000
The volume of services of postal and courier activities	275.0	1 811.9	41.2	514.1	1 555.5	1 868.6	1 736.2	2 053.1	2 314.4	4 613.6
Volume of communication services	719.0	8 047.2	222.1	5 069.7	15 834.5	23 673.6	25 874.9	30 224.9	47 179.4	63 665.6
including:										
long distance and international telephone services	248.3	3 177.4	88.4	2 196.7	8 963.7	12 952.4	13 856.0	16 987.4	22 720.5	27 417.4
local telephone services	251.7	2 983.3	91.3	1 976.6	5 056.4	7 809.6	8 703.2	10 183.1	13 360.8	16 230.5
data services	55.4	372.0	7.3	185.1	429.1	514.5	477.4	453.6	564.5	1 607.1
internet services	-	-	-	-	-	-	-	-	1 004.1	1 892.2
mobile services	-	-	-	-	-	-	-	26.4	4 981.7	11 063.9
other telecommunication services	163.6	1 514.5	35.1	711.3	1 385.3	2 397.1	2 838.3	2 574.4	4 547.8	5 454.4

\* 1991-1992 in million rubles.

	Continuation							
	2001	2002	2003	2004	2005	2006	2007	2008
The volume of services of postal and courier activities	4 429.0	4 398.5	5 369.8	5 874.3	7 537.0	9 421.0	10 634.8	12 236.7
Volume of communication services	85 887.8	94 719.1	120 470.1	161 352.4	215 148.0	278 879.5	357 811.6	403 292.1
including:								
long distance and international telephone services	33 565.4	35 338.0	42 001.4	46 813.7	44 227.7	50 890.2	53 578.8	55 477.8
local telephone services	19 768.9	18 768.0	13 229.5	15 147.1	17 437.6	20 095.0	22 890.3	26 826.3
data services	2 227.0	4 058.4	4 967.2	4 653.0	3 192.4	4 419.1	5 641.5	9 460.3
internet services	3 268.5	3 735.0	3 121.1	6 283.2	9 661.1	14 579.3	22 188.7	36 227.1
distribution services for cable, wireless and satellite networks	-	-	5 031.7	6 671.5	7 681.8	8 824.2	11 058.3	12 654.8
mobile services	20 025.1	23 379.0	36 193.7	58 364.1	93 400.2	138 364.9	194 588.7	218 058.4
other telecommunication services	7 032.9	9 440.7	15 925.5	23 419.8	39 547.2	41 706.8	47 865.3	44 587.4

Continuation						
	2009	2010	2011	2012	2013	2014
The volume of services of postal and courier activities	13 025.5	15 721.2	17 658.7	20 136.5	24 287.0	29 039.2
Volume of communication services	438 434.1	479 905.3	582 740.4	599 656.9	647 331.5	680 813.6
including:						
long distance and international telephone services	51 454.9	48 510.4	44 434.9	40 354.0	42 590.4	41 499.1
local telephone services	31 293.6	34 840.5	41 467.2	45 241.4	51 553.0	51 408.3
data services	9 171.4	9 873.6	14 322.7	15 002.5	20 340.0	21 794.7
internet services	43 592.4	65 399.3	96 324.4	116 006.6	137 864.7	168 454.8
distribution services for cable, wireless and satellite networks	11 974.2	9 701.0	12 221.4	14 139.7	18 192.0	21 530.8
mobile services	244 820.4	260 944.9	294 721.1	297 647.1	296 615.2	281 258.5
other telecommunication services	46 127.2	50 635.6	79 248.7	71 265.6	80 176.2	94 867.4
Continuation						
	2015	2016	2017	2018	2019	
The volume of services of postal and courier activities	28 658.0	28 297.9	33 688.3	37 034.3	42 938.0	
Volume of communication services	702 148.0	722 217.4	752 332.0	782 459.1	854 566.4	
including:						
long distance and international telephone services	33 981.1	34 092.9	30 188.1	29 702.0	26 562.2	
local telephone services	47 826.4	44 642.0	41 999.8	38 394.6	35 435.0	
data services	23 798.5	34 118.2	35 316.9	43 639.1	50 344.7	
internet services	190 437.5	206 418.7	228 686.1	243 322.7	282 270.8	
distribution services for cable, wireless and satellite networks	28 026.3	29 462.5		35 064.1	36 630.4	
mobile services	257 460.5	245 732.9		250 682.1	261 042.5	
other telecommunication services	120 617.8	127 750.1	129 079.3	141 654.5	162 280.7	

## 1.2 Key indicators of communication development

	2015	2016	2017	2018	2019
The volume of postal and courier services, mln. tenge	28 658.0	28 297.9	33 688.3	37 034.3	42 938.0
The index of the physical volume of postal and courier services, as a percentage of the previous year	92.3	92.4	121.0	109.4	121.0
Volume of communication services, mln. tenge	702 148.0	722 217.4	752 332.0	782 459.1	854 566.4
Index of the physical volume of communication services, as a percentage of the previous year	102.0	101.8	103.7	102.9	104.7
The number of enterprises of postal and courier activities, units	128	157	188	201	231
Number of communications enterprises, units	479	474	479	475	462
The list number of employees of the enterprises of postal and courier activities, thousand people	23.3	24.4	24.0	24.0	23.7
List number of employees of telecommunications enterprises, thousand people	51.1	47.4	40.2	39.0	39.3
Average monthly salary of employees of enterprises of postal and courier activities, tenge	95 634	101 944	106 635	113 021	121 187
Average monthly salary of employees of communication enterprises, tenge	183 292	201 115	219 839	231 658	257 873
Fixed assets for postal and courier activities at the end of the year; at initial (current) cost, mln. tenge	47 212.3	53 153.4	60 154.4	54 602.1	56 712.0
Fixed assets for telecommunications enterprises, at the end of the year; at initial (current) cost, mln. tenge	1 695 230.6	1 810 924.7	1 747 228.3	2 156 210.2	2 022 984.7
Profit (loss) from ordinary activities of enterprises of postal and courier activities, million tenge	3 618.3	3 391.5	2 377.5	2 520.1	2 676.4
Profit (loss) from ordinary activities of telecommunications enterprises, mln. tenge	109 455.1	76 511.9	102 440.5	195 933.0	170 130.2
Tariff index for postal and courier services, as a percentage of the previous year:					
provided to legal entities	107.2	111.5	105.4	103.4	104.4
provided to individuals	100.7	100.0	100.0	103.9	100.3
Index of tariffs for communication services, as a percentage of the previous year:					
provided to legal entities	98.6	99.7	104.9	100.7	111.3
provided to individuals	104.7	101.4	100.2	101.8	102.5
Level of profitability of enterprises of postal and courier activities, in percentage	7.8	5.7	3.6	3.3	3.2
Level of profitability of communication enterprises, in percentage, in percentage	14.7	10.2	12.7	20.5	17.8
Investments in fixed capital of enterprises of postal and courier activities, mln. tenge	1 095	6 131	10 947	5 796	2 521

	Continuation				
	2015	2016	2017	2018	2019
Investments in fixed assets of telecommunications enterprises, mln. tenge	90 788	47 241	57 941	69 256	54 295
Number of cellular subscribers, thousand units	26 309.3	25 534.7	26 693.3	26 065.6	25 717.7
The number of cellular subscribers per 10,000 people, units	14 996	14 347	14 799	14 262	13 891
Number of fixed Internet subscribers, thousand units	2 305.6	2 352.7	2 580.2	2 462.4	2 513.1
The number of fixed Internet subscribers per 10,000 people, units	1 314	1 322	1 430	1 347	1 357
Provision of the population with computers per 1000 persons, units	316	283	280	282	292

### 1.3 The volume of certain types of communication services

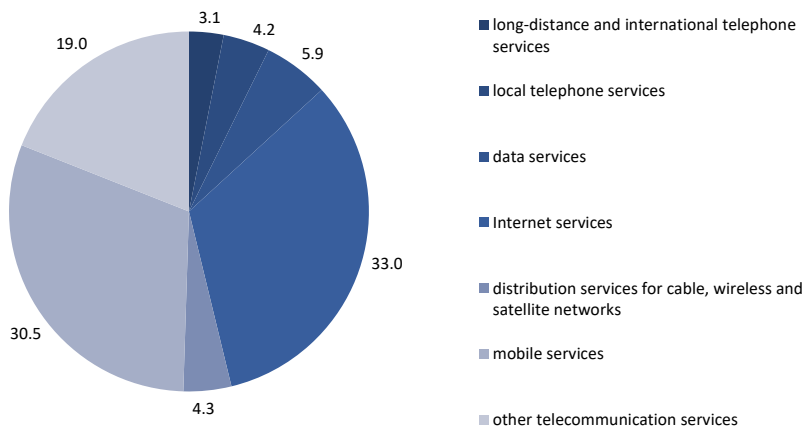
	million tenge				
	2015	2016	2017	2018	2019
Volume of the postal and courier activities	28 658.0	28 297.9	33 688.3	37 034.3	42 938.0
Volume of communication services including:	702 148.0	722 217.4	752 332.0	782 459.1	854 566.4
long-distance and international telephone services	33 981.1	34 092.9	30 188.1	29 702.0	26 562.2
local telephone services	47 826.4	44 642.0	41 999.8	38 394.6	35 435.0
data services	23 798.5	34 118.2	35 316.9	43 639.1	50 344.7
Internet services	190 437.5	206 418.7	228 686.1	243 322.7	282 270.8
distribution services for cable, wireless and satellite networks	28 026.3	29 462.5	x	35 064.1	36 630.4
mobile services	257 460.5	245 732.9	x	250 682.1	261 042.5
other telecommunication services	120 617.8	127 750.1	129 079.3	141 654.5	162 280.7

### 1.4 The index of the physical volume of services of certain types of communication

	as a percentage of the previous year				
	2015	2016	2017	2018	2019
Volume of the postal and courier activities	92.3	92.4	121.0	109.4	121.0
Volume of communication services including:	102.0	101.8	103.7	102.9	104.7
long-distance and international telephone services	80.2	80.3	91.1	98.6	84.7
local telephone services	93.0	93.3	94.1	91.4	92.3
data services	110.7	143.8	98.7	122.7	103.7
Internet services	114.8	109.3	111.9	106.2	113.4
distribution services for cable, wireless and satellite networks	92.5	100.1	109.1	100.5	97.1
mobile services	91.5	95.7	104.3	96.8	102.6
other telecommunication services	140.6	106.2	96.5	108.9	103.8

## The structure of the volume of communication services for 2019

as a percentage of the total



## 1.5 The volume of the postal and courier activities

	Volume of postal and courier services - total							Of which the population							million tenge
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
<b>Republic of Kazakhstan</b>	28 658.0	28 297.9	33 688.3	37 034.3	42 938.0	7 712.7	8 969.5	11 109.4	9 961.3	10 734.4					
Akmola	166.6	553.1	609.4	791.8	749.5	86.4	264.2	286.5	388.0	299.9					
Aktobe	740.1	735.7	839.8	1 021.2	940.8	289.1	278.1	304.3	332.6	269.2					
Almaty	927.5	980.1	1 158.8	1 243.5	1 256.6	506.2	547.9	573.7	523.7	406.6					
Atyrau	426.9	368.6	432.8	506.0	643.7	151.4	146.1	184.6	220.8	238.7					
Batys Kazakhstan	445.6	465.1	492.0	494.4	648.6	238.0	267.8	260.2	238.8	281.7					
Zhambyl	534.6	582.1	802.1	1 011.8	1 058.0	273.9	373.0	538.0	636.0	651.2					
Karagandy	1 206.4	1 284.8	1 407.9	1 458.5	1 612.1	416.9	469.0	500.8	533.2	581.7					
Kostanai	782.2	851.8	948.6	1 098.6	1 034.9	358.0	504.2	521.7	551.8	466.3					
Kyzylorda	437.3	416.7	409.6	446.3	523.9	239.5	168.8	160.5	161.7	166.7					
Mangystau	421.2	394.6	462.4	521.6	617.7	153.0	165.5	185.0	185.1	195.8					
Pavlodar	703.2	672.7	749.8	741.7	717.0	436.9	435.8	464.6	420.4	459.9					
Soltestik Kazakhstan	560.5	591.6	651.5	757.9	753.6	301.7	301.6	305.2	308.3	303.4					
Turkistan	411.6	470.4	537.1	559.7	604.4	242.2	261.9	221.4	252.9	274.2					
Shyngys Kazakhstan	1 058.7	1 139.7	1 198.4	1 556.4	1 573.9	406.2	423.2	455.6	792.3	709.3					
Nur-Sultan city	5 174.9	2 169.4	2 544.5	3 307.1	3 964.5	1 615.9	509.8	612.0	621.6	781.6					
Almaty city	14 220.1	16 117.9	19 868.6	20 649.2	25 307.1	1 737.9	3 572.3	5 298.5	3 521.5	4 340.5					
Shymkent city	440.5	503.6	574.9	868.6	931.7	259.3	280.4	237.0	272.5	307.7					

## 1.6 Volume of communication services

	Volume of communication services - total							Of which the population							million tenge
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
<b>Republic of Kazakhstan</b>	702 148.0	722 217.4	752 332.0	782 459.1	854 566.4	407 511.8	415 246.0	423 555.9	434 346.4	459 601.9					
Akmola	9 808.2	9 963.4	10 157.9	10 527.3	11 353.8	6 955.2	7 234.0	7 061.1	7 272.6	7 754.3					
Aktobe	11 624.5	11 286.6	11 453.3	12 138.7	12 777.3	6 540.8	6 092.9	6 466.2	6 717.7	6 879.8					
Almaty	13 187.1	12 966.8	13 849.2	14 245.3	14 926.8	10 486.8	10 586.6	11 296.8	x	11 413.5					
Atyrau	12 718.7	16 225.0	13 776.8	14 340.6	13 638.9	5 040.2	5 119.5	5 203.1	5 661.1	5 909.5					
Batys Kazakhstan	6 802.7	6 982.6	6 383.0	6 717.9	6 571.2	3 886.9	3 693.6	3 484.7	3 763.0	3 765.5					
Zhambyl	6 255.6	5 955.4	5 904.8	6 655.2	7 092.6	3 820.9	3 566.6	3 505.5	3 971.1	4 425.5					
Karagandy	18 638.8	17 928.6	17 815.4	20 152.7	20 177.0	12 504.8	12 204.2	12 172.4	14 204.9	14 560.2					
Kostanai	11 828.0	11 779.6	11 785.6	12 811.5	13 060.0	8 265.7	8 123.7	8 227.4	8 916.1	9 196.7					
Kyzylorda	4 712.2	4 716.8	4 875.5	5 390.7	5 464.0	2 692.1	2 733.0	2 824.9	2 960.8	3 292.3					
Mangystau	11 849.8	15 996.3	11 355.8	11 452.1	10 282.4	3 631.5	3 853.3	3 999.3	4 255.7	4 528.6					
Pavlodar	12 952.1	14 463.9	13 246.4	14 273.5	14 583.4	8 584.9	8 357.2	8 148.1	8 924.3	9 329.0					
Southstik Kazakhstan	7 270.5	7 477.1	7 782.3	8 378.9	8 628.7	5 433.0	5 688.8	5 793.3	6 058.9	6 330.5					
Turkistan	5 136.0	5 033.8	5 205.9	5 270.0	5 960.8	3 069.6	2 933.4	2 961.3	2 852.3	3 240.1					
Shyghys Kazakhstan	16 929.5	17 062.6	16 918.9	18 569.3	18 975.7	11 555.6	11 550.5	11 437.5	11 942.6	11 707.7					
Nur-Sultan city	146 389.7	145 814.6	159 528.6	172 370.7	193 879.9	100 163.0	93 464.7	101 268.3	x	104 348.7					
Almaty city	400 368.0	413 000.8	436 538.5	442 395.1	490 621.9	211 488.3	226 802.0	226 432.9	223 796.3	248 860.3					
Shymkent city	5 676.6	5 563.6	5 753.9	6 769.6	6 572.0	3 392.7	3 242.1	3 273.0	4 019.9	4 059.4					

### 1.7 Number of fixed telephone lines

	thousand units				
	2015	2016	2017	2018	2019
<b>Republic of Kazakhstan</b>	4 147.8	3 925.2	3 686.6	3 206.1	3 072.5
Akmola	225.1	215.2	206.6	189.1	180.5
Aktobe	220.8	210.9	193.2	171.6	158.9
Almaty	312.0	298.5	x	x	262.4
Atyrau	164.8	168.5	164.4	117.1	111.0
Batys Kazakhstan	148.0	140.1	114.2	x	89.9
Zhambyl	142.9	121.3	105.9	101.2	97.9
Karagandy	412.8	398.2	361.0	327.2	304.9
Kostanai	268.6	256.0	247.9	231.8	220.0
Kyzylorda	102.8	94.3	84.0	76.8	75.8
Mangystau	108.9	102.5	110.0	79.0	72.3
Pavlodar	251.6	237.4	217.7	198.7	181.7
Soltustik Kazakhstan	188.8	178.1	169.9	157.8	151.0
Turkistan	118.7	98.1	92.5	90.2	86.3
Shygyz Kazakhstan	381.8	347.7	320.6	288.7	272.6
Nur-Sultan city	273.4	267.7	x	234.0	245.6
Almaty city	716.0	699.5	663.4	492.1	487.5
Shymkent city	110.7	91.4	86.2	76.7	74.2

### 1.8 Number of fixed telephone lines in urban area

	thousand units				
	2015	2016	2017	2018	2019
<b>Republic of Kazakhstan</b>	3 043.8	2 921.6	2 738.7	2 320.2	2 236.8
Akmola	132.3	125.9	119.9	110.3	105.1
Aktobe	162.1	156.1	142.2	126.0	117.6
Almaty	106.2	x	x	x	98.5
Atyrau	114.3	120.3	118.0	71.2	67.5
Batys Kazakhstan	97.3	90.4	77.0	x	x
Zhambyl	82.1	68.3	55.9	53.7	52.3
Karagandy	350.3	337.6	304.5	275.4	255.7
Kostanai	173.5	164.8	159.2	149.5	141.9
Kyzylorda	48.6	46.4	39.9	35.8	36.0
Mangystau	86.2	79.5	89.3	60.5	55.6
Pavlodar	198.6	185.9	168.9	153.4	140.5
Soltustik Kazakhstan	96.7	92.6	87.6	81.4	77.7
Turkistan	35.2	31.4	29.2	29.6	29.0
Shygyz Kazakhstan	265.9	246.9	225.8	201.1	191.0
Nur-Sultan city	273.1	x	x	233.7	x
Almaty city	710.7	694.3	658.4	487.3	487.5
Shymkent city	110.7	91.4	86.2	76.7	74.2

## 1.9 Number of fixed telephone lines in rural areas

thousand units

	2015	2016	2017	2018	2019
<b>Republic of Kazakhstan</b>	1 104.0	1 003.7	947.9	885.9	835.7
Akmola	92.9	89.3	86.7	78.8	75.4
Aktobe	58.7	54.8	51.0	45.6	41.3
Almaty	205.9	x	x	x	163.9
Atyrau	50.5	48.2	46.4	45.9	43.5
Batys Kazakhstan	50.7	49.7	37.2	x	x
Zhambyl	60.8	53.0	50.0	47.5	45.6
Karagandy	62.5	60.5	56.5	51.8	49.2
Kostanai	95.1	91.2	88.7	82.3	78.1
Kyzylorda	54.2	47.9	44.1	41.0	39.8
Mangystau	22.7	23.0	20.7	18.5	16.7
Pavlodar	53.0	51.5	48.8	45.3	41.2
Soltustik Kazakhstan	92.1	85.5	82.3	76.4	73.3
Turkistan	83.5	66.7	63.3	60.6	57.3
Shygys Kazakhstan	115.9	100.9	94.8	87.6	81.6
Nur-Sultan city	x	x	x	0.3	x
Almaty city	5.3	5.2	5.0	4.8	-

## 1.10 Provision of the population of the Republic of Kazakhstan with fixed telephone lines

number of fixed telephone lines telephone per 100 inhabitants, units

	2015	2016	2017	2018	2019
<b>Republic of Kazakhstan</b>	18.7	17.2	15.7	14.2	13.3
Akmola	26.1	24.9	23.9	21.9	20.8
Aktobe	21.5	20.1	18.0	15.7	14.3
Almaty	14.6	13.6	12.9	x	11.2
Atyrau	19.1	17.6	16.5	14.9	13.8
Batys Kazakhstan	19.8	18.5	14.4	x	10.8
Zhambyl	10.9	8.9	7.6	7.4	7.1
Karagandy	25.9	24.7	22.1	20.1	18.7
Kostanai	26.4	25.0	24.2	22.9	21.6
Kyzylorda	11.5	10.3	8.9	8.1	7.8
Mangystau	13.3	11.9	12.2	8.5	7.5
Pavlodar	27.9	26.1	23.8	21.7	19.8
Soltustik Kazakhstan	29.1	27.4	26.3	25.0	23.8
Turkistan	4.8	3.8	3.5	3.7	3.5
Shygys Kazakhstan	23.5	21.2	19.5	17.7	16.7
Nur-Sultan city	21.6	19.8	17.4	15.8	16.0
Almaty city	26.2	24.5	22.2	19.4	17.9
Shymkent city	10.7	8.3	7.5	x	5.4

### 1.11 Number of fixed Internet subscribers

thousand units

	2015	2016	2017	2018	2019
<b>Republic of Kazakhstan</b>	2 305.6	2 352.7	2 580.2	2 462.4	2 513.1
Akmola	96.8	102.2	108.0	110.6	112.7
Aktobe	79.3	82.3	88.3	112.1	115.7
Almaty	128.8	148.6	x	x	178.9
Atyrau	69.5	73.4	78.7	93.2	94.2
Batys Kazakhstan	46.2	45.8	x	x	72.8
Zhambyl	54.2	58.0	61.5	84.8	85.5
Karagandy	164.5	164.0	170.2	264.0	265.0
Kostanai	109.4	111.4	116.0	163.1	166.2
Kyzylorda	43.9	47.0	52.5	59.6	62.2
Mangystau	57.1	62.9	70.1	80.2	86.3
Pavlodar	105.3	106.2	110.2	153.2	155.6
Soltustik Kazakhstan	79.9	85.8	90.5	110.1	109.8
Turkistan	44.4	48.4	55.3	60.9	61.5
Shygys Kazakhstan	137.2	145.9	153.9	202.3	206.5
Nur-Sultan city	145.8	161.4	171.1	241.3	262.9
Almaty city	899.5	861.7	984.0	403.6	401.7
Shymkent city	43.8	47.8	54.6	75.5	75.8

### 1.12 Number of fixed Internet subscribers using high-speed broadband access

thousand units

	2015	2016	2017	2018	2019
<b>Republic of Kazakhstan</b>	2 301.0	2 349.9	2 576.0	2 461.3	2 512.6
Akmola	96.5	102.1	107.9	110.5	112.7
Aktobe	79.2	82.2	88.2	112.0	115.7
Almaty	128.7	148.5	168.1	176.6	178.9
Atyrau	69.5	73.4	78.7	93.2	94.2
Batys Kazakhstan	46.2	45.7	47.3	71.1	72.8
Zhambyl	54.1	58.0	61.5	84.8	85.5
Karagandy	164.2	163.8	170.2	264.0	265.0
Kostanai	108.6	110.8	115.5	162.9	166.1
Kyzylorda	43.0	47.0	52.4	59.5	62.2
Mangystau	57.1	62.9	70.1	80.2	86.3
Pavlodar	105.1	106.1	110.2	153.2	155.6
Soltustik Kazakhstan	79.3	85.5	90.3	110.0	109.7
Turkistan	45.4	49.5	55.3	60.9	61.5
Shygys Kazakhstan	136.5	145.4	153.9	202.3	206.5
Nur-Sultan city	145.8	161.4	171.1	241.3	262.9
Almaty city	899.2	861.0	983.3	403.0	401.5
Shymkent city	42.8	46.6	52.1	75.5	75.8

### 1.13 Availability of communications, number of services provided

	2015	2016	2017	2018	2019
Number of services provided:					
Newspapers and other periodicals, million units	185.2	179.6	164.3	135.6	118.7
written correspondence was sent, million units	64.6	52.7	44.6	43.4	49.1
shipped packages and parcels, million units	7.9	6.3	7.1	6.6	8.9
Number of telegrams sent, million units	2.1	1.6	1.7	1.4	1.1
Long-distance (including intra-zone) and international outgoing telephone traffic, million minutes	2 191.0	2 584.0	1 431.8	1 166.9	994.4
Number of fixed telephone lines, thousand units	4 147.8	3 925.2	3 686.6	3 206.1	3 072.5
of them – the population	3 289.1	3 065.3	2 839.9	2 595.5	2 455.7

## Overview of the state of information and communication technologies for 2019

In 2019, industrial output in the information and communication technology (ICT) industry amounted to 30,3 billion tenge. The number of employees in enterprises in the ICT industry amounted to 91,9 thousand people, the average monthly wage per employee was 262982 tenge.

The volume of imports of goods in the ICT industry in 2019 amounted to – 2367,0 million US dollars, the export volume amounted to 98,6 million USD.

The number of fixed telephone lines per 100 inhabitants was 17 units, the number of cellular subscribers per 100 inhabitants reached 139 units.

The most active age group of ICT users among the population is the group aged 25-74 years old and makes up 66,0%. By education level, most ICT users had a higher education (30,9%).

Of the total population aged 6 years and older, 89,8% of the population consider themselves computer-literate. In terms of computer literacy, the population was divided into ordinary users 59,1%, novice users 23,6%, experienced users 7,1%, and those without computer literacy skills 10,2%.

To access the Internet, most households chose mobile broadband technology (84,9%) and fixed (wired) broadband (47,3%), 6,9% are users of a standard modem.

In 2019, the share of organizations using a computer was 83,9%. The share of organizations with access to the Internet was 81,1%. In 2019, the share of organizations using the Internet to receive orders for goods and services amounted to 5,0%, ordering goods and services – 7,7%. For access to the Internet, most organizations used fixed (wired) broadband (51,8%) and standard modem (23,3%).

In 2019, the costs of organizations for information technology amounted to 337,7 billion tenge, including government organizations – 37,6 billion tenge.

## 2. The offer information and communication technologies

### Key performance indicators of ICT industry organizations

#### 2.1 Number of enterprises and main characteristics of the ICT industry

	2015	2016	2017	2018	2019
Number of ICT industry organizations, units	7 715	8 506	9 334	10 192	10 958
including:					
large	73	65	59	42	51
medium	96	92	87	89	82
small	7 546	8 349	9 188	10 061	10 825
Share of volume of production and sale of goods (services) of the ICT industry in total GDP	3.9	3.5	3.4	3.3	3.4
Proportion of the ICT industry in the total number of employees	1.8	1.7	1.5	1.5	1.5
Index of the physical volume of investments in the fixed capital of the ICT industry	83.2	49.6	127.0	122.2	96.4
Coefficient of renewal of fixed assets in the ICT industry organizations	12.1	12.7	8.1	7.3	5.8
Coefficient of disposal of fixed assets in the ICT industry organizations	5.8	3.8	3.2	2.4	2.0
Level of profitability of the ICT industry organizations	7.6	8.3	10.0	18.2	18.0
From the total number of organizations					
unprofitable organizations	26.6	29.0	28.7	23.0	23.3
profitable organizations	73.4	71.0	71.3	76.9	76.7

#### 2.2 The number and average monthly nominal wage of employees in enterprises in the ICT industry\*

	2019				
	listed number of employees, persons	the actual number of workers (assumed for the calculation of the average wage), the person	average monthly wage per employee, tenge	wage fund of employees, mln. tenge	payments and expenses not included in wages, million tenge
Total for ICT industry	91 880	85 649	262 982	270 289.6	22 189.9
Production of electronic components and boards	92	89	260 723	278.5	58.0
Manufacture of computers and peripheral equipment	144	141	245 361	415.2	35.5
Consumer Electronics	176	165	874 620	1 731.7	171.9
Wholesale information and communication equipment	4 686	4 346	180 726	9 425.2	81.5
Software release	299	256	172 907	531.2	5.8
Connection	45 575	42 171	248 990	126 001.7	15 682.7

Continuation

	2019				
	listed number of employees, persons	the actual number of workers (assumed for the calculation of the average wage), the person	average monthly wage per employee, tenge	wage fund of employees, mln. tenge	payments and expenses not included in wages, million tenge
Computer programming, consulting and other related services	24 405	23 280	294 107	82 161.6	2 685.4
Services for the placement and processing of data, web portals	13 238	12 019	270 064	38 950.8	3 415.3
Repair of computers and communication equipment	3 265	3 182	282 675	10 793.7	53.8

\* Indicated taking into account a sample survey of small enterprises.

## Products and services related to ICT

### 2.3 The volume of industrial production (goods, services) of the ICT industry

	Volume of products (goods, services) in existing prices of enterprises, million tenge				
	2015	2016	2017	2018	2019
Total for ICT industry	17 492.8	22 804.0	21 244.5	22 509.3	30 273.8
Production of electronic components and boards	2 226.2	159.8	124.7	11.3	426.9
Manufacture of computers and peripheral equipment	4 327.6	3 210.9	2 807.3	3 638.3	5 537.1
Production of communication equipment	3 666.2	9 046.5	6 274.7	5 886.3	12 979.7
Manufacture of consumer electronics	7 272.8	10 386.8	12 037.8	12 973.4	11 330.1

### 2.4 ICT Services

	Volume of services provided, million tenge				
	2015	2016	2017	2018	2019
Total	882 915.3	946 076.6	1 037 771.4	1 118 822.6	1 304 870.1
Software release	995.2	1 175.8	2 864.1	2 422.5	1 730.5
services in the edition of computer games, in separate packing	1.5	0.4	85.3	16.6	17.1
services for downloading computer games, in a separate package	0.6	0.5	1.5	0.2	0.4
services for publishing (placing) games on the Internet	-	-	-	0.8	28.2
services for the publication of ready-made operating systems, in a separate package	235.2	122.4	312.1	123.5	127.1
services in the edition of the ready software network, in separate packing	19.6	345.8	477.2	476.7	19.1
services for the publication of ready-made database management software, in a separate package	440.9	521.4	593.9	12.2	10.4

	Continuation				
	Volume of services provided, million tenge				
	2015	2016	2017	2018	2019
services for the publication of finished software development tools and programming languages, in a separate package	50.2	16.1	79.1	425.1	552.9
services in the edition of ready programs of applied business of general purpose and for internal use, in separate packing	-	-	8.2	7.5	0.6
services in the edition of the ready software of applied other, in separate packing	138.4	97.3	1 032.3	1 168.9	430.6
services for downloading ready-made system software	17.7	11.8	199.6	92.1	66.2
services for downloading application software	86.3	13.4	73.6	1.0	150.3
services for the publication (placement) of software on the network	4.8	46.7	1.3	87.2	101.8
services for granting licenses for the right to use computer software	-	-	-	10.7	225.8
Connection	702 148.0	722 217.4	752 332.0	782 459.1	854 566.4
Computer programming, consulting and other related services	117 383.0	141 501.9	183 895.4	209 057.1	277 711.9
services in design and development of programs of applied	58 275.6	69 390.6	87 356.9	94 327.6	103 730.2
network and system design and development services	3 247.4	8 088.0	6 276.3	8 407.5	17 145.5
originals of computer game software	821.3	1 092.5	1 766.2	503.5	1 040.6
originals of other software	3 248.1	7 872.3	7 032.5	3 393.1	15 793.9
consulting services for technical support	8 398.7	7 057.1	11 290.5	18 145.9	23 826.0
software consulting services	8 720.3	10 052.6	5 726.9	5 190.5	5 550.9
information technology technical support services	10 149.4	9 418.7	21 092.3	9 682.2	12 752.1
network management services	419.1	156.1	76.0	555.9	974.1
computer systems management services	1 058.2	531.3	2 302.5	1 269.7	5 090.2
computer and peripheral equipment installation services	1 793.7	3 964.7	3 039.4	3 080.1	4 326.1
information technology and computer system services, other, not elsewhere classified	21 251.2	23 878.0	37 935.9	64 501.1	87 482.3
Services for the placement and processing of data; web portals	45 021.5	62 426.7	79 449.7	102 201.8	139 263.2
data processing services	25 563.8	30 387.1	34 986.7	46 851.6	71 392.2
Services for processing sites in the « Internet»	1 299.0	1 726.4	555.1	893.7	2 777.0
services for software applications	2 432.2	584.4	755.0	1 548.3	2 922.4
infrastructure services for hosting data and information technology other	13 553.6	21 523.7	33 846.7	40 200.0	45 905.9
video data streaming	-	12.1	356.1	37.1	2 776.70
audio data streaming	0.3	1 669.9	2 566.4	2 954.20	2 581.30
services to provide space or time for advertising on the Internet	481.8	703.1	2 475.1	2 441.2	2 624.1
content of web portals	1 690.8	5 823.0	3 908.6	7 275.7	8 303.6
Repair of computers and communication equipment	17 367.6	18 754.8	19 230.2	22 682.1	31 598.1

Continuation

	Volume of services provided, million tenge				
	2015	2016	2017	2018	2019
computer and peripheral equipment repair services	14 560.5	15 510.0	15 781.0	17 033.2	25 276.1
repair services for communication equipment	2 807.1	3 244.8	3 449.2	5 648.9	6 322.0

## 2.5 Wholesale information and communication equipment

	Volume of wholesale trade, million tenge				
	2015	2016	2017	2018	2019
Total	705 572.7	682 683.8	807 169.6	911 797.9	1 047 542.4
including:					
computers and peripherals	277 726.2	325 323.2	388 824.7	477 337.7	539 641.3
electronic and other equipment, its parts	427 846.5	357 360.6	418 344.9	434 460.2	507 901.1

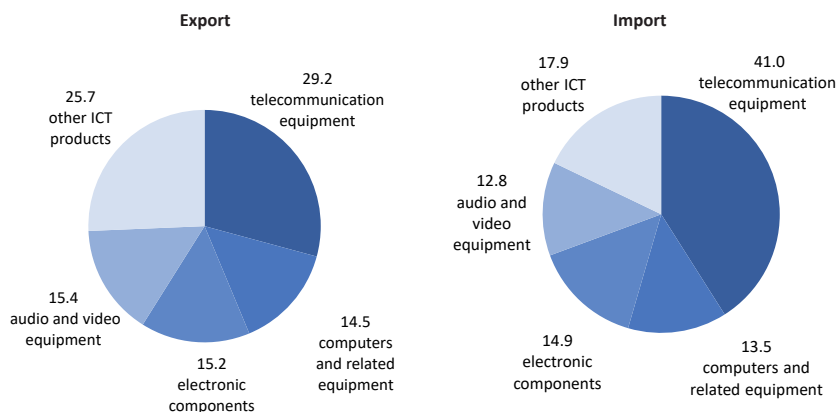
## 2.6 Exports and imports of ICT goods industry

million US dollars

	2015		2016		2017		2018		2019	
	export	import	export	import	export	import	export	import	export	import
Total	104.3	1 938.1	76.9	1 651.5	82.0	2 051.0	92.9	2 293.6	98.6	2 367.0
including:										
telecommunication equipment	45.3	755.3	28.7	647.0	23.5	915.2	30.5	1 038.3	28.8	970.6
computers and related equipment	8.5	403.0	7.4	224.4	9.6	249.5	11.6	285.9	14.3	319.6
electronic components	9.4	177.2	12.1	168.8	16.0	189.2	18.8	268.9	15.0	351.6
audio and video equipment	12.8	259.2	10.6	249.9	16.2	275.4	16.5	321.7	15.2	302.3
other ICT products	28.3	343.4	18.1	361.4	16.7	421.7	15.6	378.9	25.3	422.9

## Structure of exports and imports of goods in the ICT industry for 2019

in percentage



## 2.7 Main indicators of technical means of communication

	2015	2016	2017	2018	2019
The length of long-distance and international communication channels, million channel-km	5 011.9	5 095.0	2 761.5	2 882.7	3 003.9
Installed capacity of switching stations (points), thousand numbers	5 961.8	5 674.5	5 626.3	5 742.9	5 612.4
The involved capacity of switching stations (points), thousand numbers	4 007.3	3 488.9	3 443.2	3 237.8	3 009.2
Number of wireless base stations, thousand units	26.9	27.3	27.2	27.4	31.3

## ICT infrastructure

### 2.8 ICT Access Indicators

	2015	2016	2017	2018	2019
The density of fixed telephone lines per 100 people, units	24	22	20	17	17
Tariff index for Internet access services for individuals (to previous year),%	100.0	99.9	100.0	100.8	103.3
Tariff index for Internet access services for legal entities (December of the reporting year to December of the previous reporting year),%	96.9	95.3	99.8	98.5	100.1
broadband access	96.3	95.1	100.0	100.0	100.1
dial-up access	100.3	100.1	100.0	99.9	100.3

### 2.9 Indicators of the global index of competitiveness by the factor «The level of technological development»

	units				
	2015	2016	2017	2018	2019
Density of cellular subscribers per 100 people	150	143	148	143	139
The density of fixed Internet subscribers per 100 people	13	13	14	13	14
of them using high-speed broadband access per 100 people	13	13	14	13	14
Number of Internet users per 100 people	73	77	79	81	84

### 3. The use of information and communication technologies in households

#### Characteristics of the use of computer and the Internet in households

##### 3.1 The proportion of households with access to the Internet\*

in percentage

	2015	2016	2017	2018	2019
<b>Republic of Kazakhstan</b>	82.2	84.4	84.9	87.6	90.3
Akmola	72.0	73.2	73.7	75.7	81.5
Aktobe	79.5	82.4	86.0	90.8	91.7
Almaty	93.9	95.1	92.7	96.4	97.0
Atyrau	79.0	85.6	88.4	93.6	93.9
Batys Kazakhstan	92.1	87.4	81.3	88.6	88.9
Zhambyl	75.1	83.6	89.9	92.5	94.2
Karagandy	74.0	74.0	78.6	78.3	86.4
Kostanai	77.9	78.3	79.9	80.3	83.4
Kyzylorda	95.4	96.9	98.8	99.6	99.7
Mangystau	71.9	82.3	86.7	88.1	90.0
Pavlodar	87.6	88.4	79.0	83.8	90.9
Soltustik Kazakhstan	80.4	80.3	78.9	81.9	82.6
Turkistan	93.5	88.4	92.5	93.3	96.7
Shygys Kazakhstan	81.0	73.3	73.3	79.7	83.1
Nur-Sultan city	97.6	99.0	93.3	95.6	99.0
Almaty city	70.3	88.0	87.4	89.4	89.7
Shymkent city	89.8	84.9	90.3	90.7	91.3

\* Including mobile internet users.

##### 3.2 Distribution of households by type of Internet access in 2019

in percentage

	Standard modem (via analog telephone connection) or narrowband ISDN connection	Fixed (wired) broadband	Terrestrial fixed (wireless) broadband	Satellite broadband	Mobile broadband connection	Other types of mobile Internet connections (via analog mobile phone, GSM, GPRS)
<b>Republic of Kazakhstan</b>	6.9	47.3	2.3	0.1	84.9	5.6
Akmola	0.6	60.1	2.0	0.2	76.9	5.2
Aktobe	3.9	49.3	3.9	0.5	85.6	5.7
Almaty	9.1	37.8	0.7	0.1	91.8	3.3
Atyrau	12.3	61.9	0.9	0.2	90.3	2.2
Batys Kazakhstan	1.4	40.8	3.3	0.1	96.5	0.3
Zhambyl	11.1	18.8	1.9	-	96.8	0.2
Karagandy	3.4	65.2	7.3	-	80.9	12.5
Kostanai	0.2	52.8	2.6	0.1	78.7	0.7
Kyzylorda	4.5	22.6	-	-	79.2	44.7

Continuation

	Standard modem (via analog telephone connection) or narrowband ISDN connection	Fixed (wired) broadband	Terrestrial fixed (wireless) broadband	Satellite broadband	Mobile broadband connection	Other types of mobile Internet connections (via analog mobile phone, GSM, GRPS)
Mangystau	-	62.1	-	-	97.8	-
Pavlodar	11.2	55.7	5.4	0.1	81.6	2.2
Soltustik Kazakhstan	1.5	66.4	1.9	-	80.7	0.3
Turkistan	1.1	9.6	2.0	-	94.3	1.8
Shygys Kazakhstan	10.8	45.7	2.6	0.1	64.1	8.7
Nur-Sultan city	7.5	50.8	0.4	0.1	96.1	0.5
Almaty city	17.4	70.8	1.2	0.1	76.9	4.6
Shymkent city	2.3	21.9	1.2	0.1	98.3	4.6

### 3.3 Share of households using ICT in the context of the regions for 2019

in percentage

	Fixed telephone line	Mobile phone	Cable television	Satellite television	Desktop computer	Laptop computer (laptop, netbook, ultrabook)	Tablet
<b>Republic of Kazakhstan</b>	56.2	98.6	31.2	38.8	54.2	55.0	35.8
Akmola	59.4	96.2	22.9	68.6	35.7	50.2	26.9
Aktobe	71.5	99.5	39.2	36.8	41.6	54.2	21.2
Almaty	49.6	99.8	23.2	62.7	77.3	54.8	44.8
Atyrau	76.3	100.0	51.1	33.7	33.5	60.1	36.0
Batys Kazakhstan	47.6	97.4	26.0	47.2	35.5	67.9	40.7
Zhambyl	28.0	99.0	7.8	37.7	52.9	35.9	26.5
Karagandy	58.3	97.0	28.4	22.9	49.5	47.9	29.1
Kostanai	70.5	99.7	35.8	42.1	36.7	38.8	17.2
Kyzylorda	31.9	100.0	3.7	54.1	76.6	53.0	44.3
Mangystau	36.0	99.3	27.1	58.1	34.4	56.0	30.0
Pavlodar	48.7	98.4	22.5	61.0	34.3	51.1	18.5
Soltustik Kazakhstan	71.3	96.9	18.4	57.5	39.5	39.7	17.4
Turkistan	26.7	99.9	14.4	32.2	57.2	62.9	29.4
Shygys Kazakhstan	56.2	97.3	31.2	42.6	69.0	51.1	28.6
Nur-Sultan city	70.5	100.0	63.3	3.8	72.0	71.8	84.8
Almaty city	87.4	98.3	50.2	17.2	67.5	71.3	57.9
Shymkent city	23.4	98.4	45.2	21.7	40.3	52.2	19.9

## Internet users and computer in households

### 3.4 Share of ICT users for 2019

in percentage

	Percentage of computer users, regardless of where they are used				Share of Internet users regardless of where you connect*			
	of the total population				of the total population			
	6 years and older	at the age of 6-74	at the age of 6-15	at the age of 16-74	6 years and older	at the age 6-74	at the age of 6-15	at the age of 16-74
<b>Republic of Kazakhstan</b>	79.8	82.2	80.8	82.5	81.9	84.2	75.0	86.6
Akmola	68.3	70.9	78.9	69.2	76.6	79.4	76.4	80.0
Aktobe	76.6	78.6	80.7	78.1	83.6	85.7	75.7	88.2
Almaty	82.5	85.0	73.8	88.1	83.2	85.4	69.7	89.8
Atyrau	75.3	76.7	74.1	77.5	79.2	80.7	72.5	83.3
Batys Kazakhstan	83.1	86.0	75.9	88.3	77.6	80.4	76.2	81.3
Zhambyl	80.1	82.0	80.5	82.5	79.8	81.6	71.8	84.9
Karagandy	77.3	80.8	83.7	80.1	77.1	80.5	63.0	84.3
Kostanai	78.1	82.1	77.8	82.9	82.7	86.9	77.1	88.6
Kyzylorda	81.7	83.3	76.7	85.4	76.5	77.9	65.9	81.9
Mangystau	84.7	86.0	94.7	83.2	81.1	82.3	70.8	86.0
Pavlodar	69.2	72.3	79.2	70.9	82.4	85.7	80.9	86.6
Soltustik Kazakhstan	76.7	80.6	79.6	80.8	77.4	81.2	75.2	82.3
Turkistan	85.3	86.7	85.7	87.1	88.2	89.6	84.2	91.7
Shygys Kazakhstan	76.5	79.8	78.0	80.2	78.7	81.7	77.5	82.6
Nur-Sultan city	90.0	91.1	91.0	91.1	90.2	91.7	89.4	92.3
Almaty city	81.1	83.7	88.5	82.8	85.1	87.7	77.9	89.5
Shymkent city	76.9	78.3	69.8	81.0	78.6	80.1	66.3	84.4

\* Including mobile internet users.

### 3.5 Distribution of ICT users by gender

in percentage

	Total	Including	
		male	female
2015	100.0	48.4	51.6
2016	100.0	48.8	51.2
2017	100.0	48.5	51.5
2018	100.0	48.7	51.3
2019	100.0	48.6	51.4

### 3.6 Age structure of ICT users for 2019

in percentage

	6-14 years old	15 years old	16-24 years old	25-74 years old	75 years old and older
<b>Republic of Kazakhstan</b>	17.7	1.3	13.4	66.0	1.6
Akmola	15.7	0.9	12.6	69.5	1.3
Aktobe	17.7	1.2	12.7	67.0	1.5

Continuation

	6-14 years old	15 years old	16-24 years old	25-74 years old	75 years old and older
Almaty	18.2	1.3	13.0	66.2	1.3
Atyrau	19.8	1.4	15.0	63.3	0.6
Batys Kazakhstan	15.8	0.9	13.0	68.0	2.4
Zhambyl	21.1	1.7	14.8	61.0	1.5
Karagandy	15.0	1.2	12.6	69.1	2.1
Kostanai	12.2	1.0	11.2	71.7	4.0
Kyzylorda	21.5	1.8	15.6	60.3	0.8
Mangystau	22.4	1.1	14.6	61.4	0.5
Pavlodar	14.1	1.1	10.6	71.9	2.3
Soltustik Kazakhstan	13.7	1.1	11.4	71.8	2.1
Turkistan	24.9	2.1	16.7	55.5	0.8
Shygys Kazakhstan	14.8	0.9	10.7	70.4	3.2
Nur-Sultan city	17.2	1.1	12.7	67.7	1.4
Almaty city	14.2	1.2	12.5	70.6	1.5
Shymkent city	19.4	1.9	17.4	60.7	0.7

## Computer literacy rate and computer user share for 2019

### 3.7 Computer literacy rate of population aged 6 and over

in percentage

	Total	Novice user	Regular user	Advanced user
<b>Republic of Kazakhstan</b>	89.8	23.6	59.1	7.1
Akmola	80.3	26.0	52.0	2.3
Aktobe	90.4	26.0	61.4	3.0
Almaty	90.4	26.3	61.0	3.1
Atyrau	84.1	19.8	56.3	8.0
Batys Kazakhstan	94.7	23.0	70.3	1.4
Zhambyl	89.4	27.0	58.0	4.4
Karagandy	94.1	22.1	65.3	6.7
Kostanai	85.1	23.3	60.4	1.4
Kyzylorda	93.5	21.8	64.2	7.5
Mangystau	94.0	14.3	74.8	4.9
Pavlodar	84.1	20.8	59.7	3.6
Soltustik Kazakhstan	83.2	18.1	60.7	4.4
Turkistan	92.3	23.5	50.7	18.1
Shygys Kazakhstan	83.8	32.9	47.2	3.7
Nur-Sultan city	97.4	13.1	63.6	20.7
Almaty city	93.8	24.4	59.6	9.8
Shymkent city	85.1	26.3	55.6	3.2

### 3.8 Computer literacy rate of the population aged 6 and over by gender

in percentage

	Total	Including	
		male	female
No skills	100.0	42.6	57.4
Novice user	100.0	48.3	51.7
Regular user	100.0	48.0	52.0
Advanced user	100.0	55.3	44.7

### 3.9 Computer literacy rate of the population aged 6 years and over by age

in percentage

	No skills	Novice user	Regular user	Advanced user
6-14 years old	8.9	58.1	30.2	1.7
15 years old	0.3	27.3	56.4	2.6
16-24 years old	0.1	11.1	78.4	9.1
25-74 years old	8.2	16.8	66.3	8.7
75 years old and older	70.2	14.1	7.2	0.1

### 3.10 Percentage of computer users, regardless of the place of use by age

in percentage

	6-15 years old	16-24 years old	25-34 years old	35-44 years old	45-54 years old	55-64 years old	65-74 years old	75 years old and older
<b>Republic of Kazakhstan</b>	20.2	15.4	23.1	17.6	13.2	8.2	2.2	0.2
Akmola	19.7	17.2	20.8	16.3	13.9	8.7	3.1	0.2
Aktobe	20.5	15.0	19.1	18.3	13.2	12.3	1.4	0.2
Almaty	19.2	14.3	20.2	19.1	15.9	8.4	2.9	-
Atyrau	22.9	17.7	26.1	17.8	10.3	4.7	0.4	0.1
Batys Kazakhstan	16.4	14.8	21.4	17.2	16.3	12.3	1.2	0.4
Zhambyl	24.6	16.6	17.6	13.9	15.0	9.6	2.4	0.2
Karagandy	18.1	14.6	21.3	18.8	14.6	10.3	2.3	-
Kostanai	14.3	13.6	19.7	19.6	16.4	11.6	4.6	0.2
Kyzylorda	22.7	16.5	19.3	14.7	13.9	10.7	2.3	0.0
Mangystau	27.0	16.7	23.7	17.1	13.1	2.3	-	-
Pavlodar	18.3	13.3	21.1	20.2	13.6	11.0	2.5	0.1
Soltustik Kazakhstan	15.7	13.6	16.7	19.6	14.8	15.0	4.1	0.4
Turkistan	28.0	17.7	16.6	16.4	13.6	6.1	1.3	0.2
Shygyz Kazakhstan	16.5	12.7	20.5	17.1	15.4	12.4	4.6	0.7
Nur-Sultan city	18.5	14.0	44.9	11.8	6.9	2.7	0.7	0.5
Almaty city	16.5	14.2	31.4	21.3	9.4	4.5	2.4	0.3
Shymkent city	21.1	20.7	26.7	18.5	8.6	3.9	0.4	-

### 3.11 Percentage of male users of computers regardless of their place of use by age

in percentage

	6-15 years old	16-24 years old	25-34 years old	35-44 years old	45-54 years old	55-64 years old	65-74 years old	75 years old and older
<b>Republic of Kazakhstan</b>	21.2	16.0	22.7	17.0	13.1	7.8	2.1	0.1
Akmola	20.7	17.8	22.1	14.5	13.9	7.9	3.0	0.2
Aktobe	22.7	15.9	18.5	18.1	12.2	11.2	1.3	0.1
Almaty	19.5	14.9	19.5	18.3	16.3	8.2	3.3	-
Atyrau	23.9	18.3	24.9	17.9	10.1	4.4	0.4	0.1
Batys Kazakhstan	17.9	15.2	22.0	16.4	16.0	11.4	1.0	0.1
Zhambyl	25.4	17.0	17.5	13.3	14.5	9.5	2.5	0.2
Karagandy	18.9	15.3	20.7	17.9	14.6	10.1	2.5	-
Kostanai	15.3	14.4	19.8	19.4	16.3	11.0	3.6	0.2
Kyzylorda	22.7	17.3	19.3	14.2	13.9	10.0	2.5	-
Mangystau	27.5	17.0	24.0	15.7	14.1	1.7	-	-
Pavlodar	19.5	14.7	20.7	19.3	14.0	9.6	2.1	0.1
Soltustik Kazakhstan	16.7	13.6	16.0	19.1	15.2	15.9	2.9	0.6
Turkistan	28.3	18.2	17.3	14.9	13.6	6.3	1.3	0.1
Shygys Kazakhstan	17.8	13.6	21.1	17.3	14.0	11.7	4.1	0.5
Nur-Sultan city	19.4	14.3	42.3	12.7	7.6	2.8	0.7	0.2
Almaty city	18.6	14.9	31.3	20.5	9.1	3.8	1.8	0.1
Shymkent city	22.4	20.6	25.6	18.5	8.3	4.0	0.5	-

### 3.12 Computer frequency over the past three months

in percentage

	At least once a day	At least once a week, but not every day	Less than once a week
<b>Republic of Kazakhstan</b>	70.6	21.2	8.2
Akmola	79.7	16.7	3.6
Aktobe	65.0	24.0	11.1
Almaty	71.8	22.2	6.0
Atyrau	75.1	20.7	4.2
Batys Kazakhstan	61.7	24.5	13.7
Zhambyl	69.8	21.2	9.0
Karagandy	76.2	17.7	6.1
Kostanai	78.6	15.5	5.9
Kyzylorda	65.2	26.9	8.0
Mangystau	77.7	12.4	10.0
Pavlodar	72.5	23.0	4.5
Soltustik Kazakhstan	66.6	26.2	7.2
Turkistan	54.1	32.5	13.4
Shygys Kazakhstan	65.4	25.6	8.9
Nur-Sultan city	70.5	14.0	15.6
Almaty city	79.6	16.1	4.3
Shymkent city	80.9	13.7	5.3

### 3.13 Computer actions of household members\*

	in percentage				
	2015	2016	2017	2018	2019
Sending e-mail with attached files (document, photo, video)	58.4	59.3	62.6	61.3	64.8
Search, download and install software	14.6	15.8	20.5	21.7	22.0
Configuring the software, including changing the operating system or security software	7.9	10.9	12.2	12.5	12.1
Working in the Excel spreadsheet editor (using basic arithmetic formulas in tables)	42.5	44.5	45.4	49.9	50.0
Working in a graphical editor (including presentations, text, images, sound, video, or charts)	20.9	22.1	24.0	61.5	24.0
Working in a word text editor	63.8	63.0	58.3	24.2	59.8
Connecting and installing new devices (printer, modem, etc)	13.8	16.0	18.2	18.8	18.8
Development of computer programs using a special software language	3.7	5.9	6.4	7.6	8.1
Copy or transfer a file or folder	31.9	35.4	33.2	35.1	31.6
Use the copy and paste tools to copy and paste information or part of information to get copies or move information in a document	21.6	18.0	18.3	20.3	17.9
Transfer files between computers and other devices	22.5	23.7	23.2	24.7	25.0
Other	10.6	8.4	9.0	10.1	11.7

## Using the Internet for 2019

### 3.14 The main places to use the Internet

	in percentage							
	At home	At work	By place of study	In the commercial center	In a public place	Neighbors, friends or relatives	Anywhere via mobile phone	Anywhere via other mobile access devices
<b>Republic of Kazakhstan</b>	84.9	30.8	9.0	4.3	8.0	21.4	99.1	18.2
Akmola	80.2	26.9	8.8	2.3	6.7	13.8	99.5	19.5
Aktobe	88.1	36.0	8.9	0.9	9.1	42.1	99.8	34.1
Almaty	83.7	25.6	6.3	0.5	3.9	12.3	99.7	19.8
Atyrau	91.2	38.4	11.4	2.1	5.5	31.9	100.0	19.3
Batys Kazakhstan	92.3	36.8	7.5	1.8	4.4	11.3	99.2	12.0
Zhambyl	61.3	18.2	8.5	0.9	2.4	12.4	99.9	20.4
Karagandy	91.1	46.2	11.6	9.5	17.6	46.4	99.5	35.5
Kostanai	91.0	32.4	12.6	10.5	20.3	21.7	98.9	17.8
Kyzylorda	84.5	39.0	18.3	4.7	5.7	32.4	100.0	9.6
Mangystau	68.1	27.9	6.8	0.5	0.3	2.2	100.0	4.4
Pavlodar	84.8	15.9	6.1	1.0	2.7	9.2	99.1	10.4
Soltustik Kazakhstan	94.0	29.6	11.6	1.0	4.9	24.9	98.7	13.5
Turkistan	74.3	23.2	11.6	1.3	3.7	27.9	99.2	17.5
Shygyz Kazakhstan	88.1	14.1	4.2	3.2	8.0	18.8	99.9	7.8

Continuation								
	At home	At work	By place of study	In the commercial center	In a public place	Neighbors, friends or relatives	Anywhere via mobile phone	Anywhere via other mobile access devices
Nur-Sultan city	90.4	49.0	8.8	14.4	24.7	28.5	95.0	24.5
Almaty city	94.1	46.3	8.5	9.1	6.4	12.1	99.6	14.7
Shymkent city	89.0	16.5	6.4	3.2	6.2	14.4	96.4	16.5

### 3.15 The frequency of using the Internet over the past three months

in percentage			
	At least once a day	At least once a week, but not every day	Less than once a week
<b>Republic of Kazakhstan</b>	86.7	11.0	2.3
Akmola	88.4	10.1	1.5
Aktobe	83.5	14.0	2.5
Almaty	81.5	14.8	3.7
Atyrau	89.5	9.6	0.9
Batys Kazakhstan	89.6	8.0	2.4
Zhambyl	90.0	8.7	1.4
Karagandy	93.2	5.0	1.8
Kostanai	87.3	10.6	2.1
Kyzylorda	83.3	13.3	3.4
Mangystau	93.3	5.7	0.9
Pavlodar	93.2	5.6	1.2
Soltustik Kazakhstan	87.3	10.2	2.4
Turkistan	77.6	19.9	2.5
Shygys Kazakhstan	82.8	13.2	4.0
Nur-Sultan city	93.9	4.6	1.5
Almaty city	88.5	10.3	1.3
Shymkent city	87.9	9.1	3.0

### 3.16 Communication goals using the Internet

in percentage			
	Sending and receiving email	Telephone calls via the Internet / VoIP	Access to chats, blogs, news and online discussions
<b>Republic of Kazakhstan</b>	33.7	20.8	27.1
Akmola	36.2	26.3	27.8
Aktobe	50.3	34.6	36.4
Almaty	30.9	16.1	25.1
Atyrau	35.3	16.7	29.5
Batys Kazakhstan	32.0	18.2	37.9
Zhambyl	25.2	17.0	19.8
Karagandy	65.8	43.2	40.3
Kostanai	32.7	26.2	16.9
Kyzylorda	20.3	14.2	17.5
Mangystau	41.4	37.8	48.9
Pavlodar	25.3	17.3	44.1

Continuation

	Sending and receiving email	Telephone calls via the Internet / VoIP	Access to chats, blogs, news and online discussions
Soltustik Kazakhstan	35.2	21.1	27.5
Turkistan	23.7	13.4	27.8
Shygys Kazakhstan	17.7	12.6	18.7
Nur-Sultan city	54.6	13.8	19.9
Almaty city	37.4	22.0	23.8
Shymkent city	10.5	15.5	18.7

### 3.17 Using the Internet in order to search for information and online services

in percentage

	Getting information about products and services	Finding health-related information or health services	Posting or instant messaging	Downloading software or applications	Downloading movies, images, music, watching videos, listening to music, playing or downloading games	Reading or downloading online newspapers or magazines, e-books
<b>Republic of Kazakhstan</b>	37.1	16.0	75.7	11.8	63.6	12.7
Akmola	38.5	19.1	85.4	15.0	80.0	22.2
Aktobe	36.2	13.5	79.9	11.2	68.7	12.0
Almaty	50.6	6.8	62.4	4.2	45.3	6.7
Atyrau	27.8	6.1	84.2	18.4	81.4	11.4
Batys Kazakhstan	52.9	21.4	75.7	20.5	65.2	17.0
Zhambyl	15.9	7.8	81.7	8.3	59.6	11.0
Karagandy	54.6	37.3	86.6	23.1	80.9	28.5
Kostanai	47.0	22.9	81.7	16.2	70.8	14.7
Kyzylorda	22.5	19.1	68.4	12.3	49.3	9.2
Mangystau	24.1	17.5	73.6	5.2	51.8	6.9
Pavlodar	53.9	15.4	70.5	8.1	74.3	11.5
Soltustik Kazakhstan	39.5	26.9	84.5	22.0	83.3	15.2
Turkistan	19.4	11.5	78.7	5.0	71.6	6.8
Shygys Kazakhstan	37.2	7.7	66.4	11.7	41.8	6.4
Nur-Sultan city	27.3	21.0	80.4	20.1	73.7	24.4
Almaty city	51.3	19.7	69.0	13.1	54.1	13.2
Shymkent city	17.7	8.9	81.5	1.6	68.5	6.1

### 3.18 Using the Internet to buy and sell goods and services

in percentage

	Buying or ordering goods or services	Selling goods or services
<b>Republic of Kazakhstan</b>	19.0	12.5
Akmola	17.3	10.1
Aktobe	22.2	17.3
Almaty	10.9	4.3
Atyrau	11.9	6.6
Batys Kazakhstan	11.9	5.4

Continuation			
	Buying or ordering goods or services		Selling goods or services
Zhambyl	20.6		13.7
Karagandy	34.0		24.8
Kostanai	26.1		21.6
Kyzylorda	17.3		10.7
Mangystau	24.0		15.7
Pavlodar	12.9		5.6
Soltustik Kazakhstan	14.0		8.0
Turkistan	16.1		6.3
Shygys Kazakhstan	8.5		17.9
Nur-Sultan city	29.0		23.3
Almaty city	27.9		13.6
Shymkent city	9.6		5.7

### 3.19 Using the Internet for Education

in percentage			
	Activities in the field of education and training		Use of official online courses
<b>Republic of Kazakhstan</b>	14.7		4.6
Akmola	25.5		8.0
Aktobe	8.7		6.0
Almaty	9.5		1.5
Atyrau	6.3		10.7
Batys Kazakhstan	15.2		3.3
Zhambyl	7.3		1.4
Karagandy	17.3		6.9
Kostanai	14.6		2.1
Kyzylorda	16.3		1.5
Mangystau	12.8		16.9
Pavlodar	5.5		2.4
Soltustik Kazakhstan	21.4		1.2
Turkistan	18.2		4.7
Shygys Kazakhstan	7.2		0.9
Nur-Sultan city	49.0		8.3
Almaty city	12.4		6.2
Shymkent city	2.2		1.6

### 3.20 Percentage of users of e-government services

in percentage				
	E-government service users, total	Distribution of users by type of e-government services		
		getting information through the government website	loading (downloading) official forms from the government site	electronic submission of completed forms
<b>Republic of Kazakhstan</b>	30.4	25.2	12.7	12.1
Akmola	30.3	30.2	14.8	16.6
Aktobe	21.2	9.7	8.0	16.3
Almaty	56.9	46.3	26.9	16.9

Continuation

	E-government service users, total	Distribution of users by type of e-government services		
		getting information through the government website	loading (downloading) official forms from the government site	electronic submission of completed forms
Atyrau	15.2	11.9	7.3	7.2
Batys Kazakhstan	41.7	39.8	33.3	34.1
Zhambyl	10.7	7.3	2.2	4.6
Karagandy	43.6	33.8	22.6	24.5
Kostanai	32.3	30.4	10.3	9.0
Kyzylorda	28.6	24.8	23.5	25.8
Mangystau	14.7	10.1	3.2	7.1
Pavlodar	28.5	18.6	12.0	7.9
Soltustik Kazakhstan	26.3	23.8	13.2	13.6
Turkistan	22.7	19.1	13.2	9.1
Shygys Kazakhstan	34.5	33.2	3.3	1.6
Nur-Sultan city	29.0	25.9	14.5	12.4
Almaty city	25.6	22.2	4.2	3.2
Shymkent city	24.9	16.9	5.5	13.2

## E-commerce for 2019

### 3.21 Distribution of users who purchased goods and services via the Internet

in percentage

	Number of users who made a purchase	Distribution of users who made the purchase, by type of seller of goods and services			
		domestic sellers	sellers of CIS countries	among them sellers are the EEU countries	sellers from other countries (except the EEU country)
<b>Republic of Kazakhstan</b>	15.6	77.0	30.4	12.1	13.3
Akmola	14.7	69.7	36.9	33.7	24
Aktobe	21.1	87.0	41.6	11.9	5.4
Almaty	18.7	69.9	23.9	19.7	6.5
Atyrau	11.3	91.5	45.0	23.2	19.7
Batys Kazakhstan	17.5	75.7	21.4	2.8	16.3
Zhambyl	14.2	85.2	18.0	3.1	2.8
Karagandy	30.0	68.1	32.8	9.3	23.6
Kostanai	20.8	62.2	47.4	20.0	15.7
Kyzylorda	11.1	70.8	6.3	7.7	15.6
Mangystau	16.6	93.0	42.1	4.2	-
Pavlodar	11.3	77.3	18.6	3.6	23.3
Soltustik Kazakhstan	14.0	41.7	33.5	17.1	41.2
Turkistan	3.3	91.1	4.5	1.3	5.9
Shygys Kazakhstan	7.0	56.3	32.7	12.4	15.8
Nur-Sultan city	22.1	93.8	51.8	26.0	23
Almaty city	19.1	93.5	11.5	2.2	4.7
Shymkent city	13.8	58.9	45.5	1.8	0.9

### 3.22 The distribution of users by type of goods and services ordered via the Internet

in percentage

	Foodstuffs of the population	Medi- cations	Movies, music	Books, magazines, newspapers	Clothing, shoes, sporting goods	Electronic learning materials	Computer programs, video games	Computer goods
<b>Republic of Kazakhstan</b>	28.9	19.4	14.0	13.8	59.5	7.6	9.1	7.8
Akmola	2.9	8.9	2.9	4.9	68.7	3.3	1.7	7.2
Aktobe	18.0	13.4	7.4	4.7	69.4	4.7	3.9	3.6
Almaty	19.2	12.5	7.7	19.8	29.2	9.9	6.5	7.8
Atyrau	22.3	28.3	28.7	28.1	73.1	10.0	15.1	8.1
Batys Kazakhstan	25.0	7.4	5.8	5.5	59.0	6.0	3.1	7.2
Zhambyl	16.0	14.4	3.0	3.8	37.9	1.5	2.1	2.4
Karagandy	22.2	23.4	11.4	15.2	63.8	7.5	8.5	9.1
Kostanai	20.7	17.0	7.2	5.7	74.7	4.6	2.3	3.8
Kyzylorda	9.9	29.2	10.8	10.7	44.6	10.7	5.8	1.8
Mangystau	77.1	18.9	3.3	5.7	60.6	6.1	8.2	1.4
Pavlodar	23.7	8.1	5.9	4.9	38.4	2.6	1.2	2.7
Soltustik Kazakhstan	9.9	7.4	6.2	6.0	61.9	2.5	5.4	3.0
Turkistan	52.6	26.8	20.0	8.4	40.5	4.7	9.8	6.8
Shygys Kazakhstan	6.2	8.8	5.4	10.1	75.8	2.9	1.7	3.4
Nur-Sultan city	70.8	33.6	45.2	36.6	91.1	16.8	19.7	20.9
Almaty city	45.7	22.1	23.9	16.3	63.7	11.2	22.2	11.3
Shymkent city	4.9	35.6	14.2	7.6	53.5	2.3	7.6	5.9

### 3.23 Distribution of users by the total cost of goods and services ordered via the Internet

in percentage

	0 - up to 5000 tenge	5000 - up to 25,000 tenge	25,000 - up to 50,000 tenge	over 50,000 tenge
<b>Republic of Kazakhstan</b>	14.3	47.9	25.2	12.7
Akmola	16.0	59.0	17.8	7.1
Aktobe	7.7	41.9	34.2	16.2
Almaty	34.8	48.2	14.4	2.6
Atyrau	7.4	54.5	28.1	10.1
Batys Kazakhstan	13.0	40.6	37.4	9.0
Zhambyl	12.0	63.3	13.8	10.9
Karagandy	6.6	43.4	26.9	23.1
Kostanai	9.3	62.1	24.8	3.8
Kyzylorda	11.6	55.4	23.4	9.6
Mangystau	4.6	40.7	32.1	22.5
Pavlodar	9.4	58.7	18.7	13.2
Soltustik Kazakhstan	12.6	54.9	25.3	7.2
Turkistan	14.0	66.5	17.9	1.6
Shygys Kazakhstan	10.9	36.8	37.8	14.4
Nur-Sultan city	5.0	40.2	34.8	20.0
Almaty city	14.4	39.4	29.9	16.3
Shymkent city	36.1	51.6	7.8	4.5

### 3.24 Distribution of users by type of payment for goods and services via the Internet

in percentage

	Cash payment by bank cards via the Internet	Payment by bank transfer	Bank card prepay	Cash payment upon delivery of goods or provision of services	Mobile payments
<b>Republic of Kazakhstan</b>	40.6	26.1	18.9	40.9	21.8
Akmola	55.5	14.6	11.8	27.4	26.3
Aktobe	40.8	14.1	5.2	41.6	38.6
Almaty	42.9	31.3	18.3	26.4	24.3
Atyrau	34.2	39.9	42.6	51.5	6.1
Batys Kazakhstan	48.6	29.6	21.6	23.2	6.1
Zhambyl	28.3	19.0	16.4	34.9	21.7
Karagandy	31.8	33.9	22.1	33.9	18.6
Kostanai	34.6	22.0	5.0	66.4	18.2
Kyzylorda	41.5	25.6	22.6	16.9	5.2
Mangystau	68.5	36.9	6.3	23.2	12.0
Pavlodar	62.9	23.5	11.9	22.7	21.9
Soltustik Kazakhstan	25.9	11.2	18.6	41.2	22.1
Turkistan	57.8	31.3	35.6	15.7	3.5
Shygyz Kazakhstan	26.1	9.3	14.5	55.5	3.9
Nur-Sultan city	62.7	23.1	23.4	73.9	30.2
Almaty city	35.3	36.2	27.0	46.3	27.0
Shymkent city	12.0	6.5	19.9	54.7	31.7

## 4. The use of information and communication technology by organizations

### Level of ICT use by organizations

#### 4.1 Key ICT utilization indicators for 2019

	Organizations, total	units
		Of them Government organizations
Number of own data centers	1 163	47
Number of server rooms	22 644	2 260
Number of servers	44 929	5 706
Number of storage systems	17 408	1 247
The number of organizations using th conductive Cloud IT Services	11 577	348
Number of organizations w using conductive web portal	63 825	6 454
Number of organizations using digital technology in manufacturing	2 795	-
Number of organizations using robotics	2 196	2
Number of organizations conducting big data analysis	1 772	38
Number of organizations using the Internet to communicate with government agencies	88 722	7 360
Number of organizations ordering goods and services on the Internet	6 513	-
Number of organizations integrated into international Internet booking systems	1 276	-
Number of organizations with automated internal business processes	9 246	244

#### 4.2 Indicators of ICT use by organizations

	in percentage					
	2015		2016		2017	
	total	in government organizations	total	in government organizations	total	in government organizations
Share of organizations using computers	69.2	97.9	75.6	98.5	72.6	98.3
Share of organizations with access to the Internet	63.6	86.5	71.0	90.3	69.3	90.3
Share of organizations receiving orders for goods and Internet services	11.5	10.8	4.0	-	1.4	-
Share of organizations ordering goods and services on the Internet	16.3	25.7	6.1	-	5.7	-

continuation

	2018		2019	
	total	in government organizations	total	in government organizations
Share of organizations using computers	79.0	98.6	83.9	98.3
Share of organizations with access to the Internet	76.2	91.7	81.1	92.3
Share of organizations receiving orders for goods and Internet services	1.6	-	5.0	-
Share of organizations ordering goods and services on the Internet	4.6	-	7.7	-

### 4.3 Number of organizations using ICT

units

	2015		2016		2017	
	Total	Of them in government organizations	Total	Of them in government organizations	Total	Of them in government organizations
<b>Using computers</b>						
<b>Republic of Kazakhstan</b>	70 990	9 279	80 717	7 989	83 478	8 061
Akmola	3 108	887	3 055	748	3 168	753
Aktobe	3 994	572	3 798	517	3 933	519
Almaty	3 230	831	3 393	760	3 643	791
Atyrau	2 600	309	2 455	284	2 459	294
Batys Kazakhstan	2 001	564	2 524	492	2 420	459
Zhambyl	2 144	538	2 039	455	2 110	453
Karagandy	6 211	821	6 809	698	7 261	699
Kostanai	3 607	843	3 928	729	4 199	747
Kyzylorda	1 977	414	1 906	387	1 788	394
Mangystau	2 193	279	1 875	252	2 733	256
Pavlodar	3 386	589	3 973	488	4 101	497
Soltustik Kazakhstan	2 583	660	2 706	586	3 026	583
Turkistan	1 629	572	1 488	503	1 502	511
Shygyz Kazakhstan	4 642	943	4 988	765	5 201	760
Nur-Sultan city	6 182	223	9 267	158	10 456	172
Almaty city	18 676	104	23 289	67	22 209	72
Shymkent city	2 827	130	3 224	100	3 269	101
<b>Using the Internet</b>						
<b>Republic of Kazakhstan</b>	65 186	8 195	75 779	7 320	79 658	7 408
Akmola	2 782	828	2 906	727	3 008	715
Aktobe	3 721	502	3 484	458	3 714	460
Almaty	2 911	789	3 121	727	3 434	746
Atyrau	2 455	292	2 303	276	2 346	269
Batys Kazakhstan	1 769	441	2 418	455	2 352	431
Zhambyl	1 947	496	1 838	418	1 930	424
Karagandy	5 732	707	6 321	602	6 896	616

Continuation						
	2015		2016		2017	
	Total	Of them in government organizations	Total	Of them in government organizations	Total	Of them in government organizations
Kostanai	3 238	758	3 601	643	3 939	678
Kyzylorda	1 719	402	1 695	353	1 635	367
Mangystau	2 079	252	1 744	236	2 667	240
Pavlodar	2 979	493	3 691	447	3 770	453
Soltustik Kazakhstan	2 294	555	2 500	511	2 852	517
Turkistan	1 306	468	1 274	453	1 358	462
Shygys Kazakhstan	4 148	792	4 452	692	4 940	692
Nur-Sultan city	5 855	213	9 000	156	10 225	169
Almaty city	17 688	94	22 384	67	21 438	69
Shymkent city	2 563	113	3 047	99	3 154	100

Continuation				
	2018		2019	
	Total	Of them	Total	Of them
		in government organizations		in government organizations

#### Using computers

<b>Republic of Kazakhstan</b>	104 435	8 145	109 172	8 105
Akmola	3 329	748	3 490	737
Aktobe	4 123	516	4 286	499
Almaty	4 129	810	4 474	819
Atyrau	2 737	290	3 191	285
Batys Kazakhstan	2 174	460	2 452	459
Zhambyl	2 052	455	2 124	457
Karagandy	7 971	706	8 363	709
Kostanai	4 374	744	4 480	739
Kyzylorda	2 041	400	2 022	402
Mangystau	3 108	259	2 853	251
Pavlodar	4 394	497	4 662	467
Soltustik Kazakhstan	3 153	586	3 029	574
Turkistan	3 055	601	3 345	642
Shygys Kazakhstan	5 729	754	5 643	755
Nur-Sultan city	21 951	164	22 668	161
Almaty city	24 767	71	26 959	71
Shymkent city	5 348	84	5 131	78

#### Using the Internet

<b>Republic of Kazakhstan</b>	100 702	7 571	105 531	7 612
Akmola	3 183	695	3 347	677
Aktobe	3 981	460	4 101	459
Almaty	3 982	774	4 394	803
Atyrau	2 656	268	3 127	262
Batys Kazakhstan	2 120	453	2 410	448
Zhambyl	1 925	442	2 012	443
Karagandy	7 673	618	8 175	647

Continuation

	2018		2019	
	Total	Of them	Total	Of them
		in government organizations		in government organizations
Kostanai	4 162	681	4 309	701
Kyzylorda	1 894	380	1 909	374
Mangystau	2 956	241	2 780	231
Pavlodar	4 104	458	4 370	426
Soltustik Kazakhstan	2 999	513	2 939	511
Turkistan	2 801	581	2 937	629
Shygys Kazakhstan	5 375	695	5 351	695
Nur-Sultan city	21 427	162	22 146	160
Almaty city	24 199	68	26 255	68
Shymkent city	5 265	82	4 969	78

#### 4.4 The number of organizations with an Internet resource

units

	2015	2016	2017	2018	2019
<b>Republic of Kazakhstan</b>	25 250	21 007	25 950	30 628	25 913
Akmola	390	564	738	738	607
Aktobe	989	878	1 002	1 249	1 076
Almaty	331	795	1 022	1 086	977
Atyrau	1 062	636	755	900	753
Batys Kazakhstan	532	670	863	724	667
Zhambyl	893	598	618	573	479
Karagandy	2 514	1 597	2 088	2 381	2 095
Kostanai	1 237	869	1 008	1 307	864
Kyzylorda	551	518	580	441	487
Mangystau	237	563	1 054	818	747
Pavlodar	1 252	722	969	1 091	865
Soltustik Kazakhstan	738	638	652	609	629
Turkistan	369	529	620	759	475
Shygys Kazakhstan	1 749	998	1 403	1 626	938
Nur-Sultan city	3 208	2 184	2 926	4 682	3 540
Almaty city	8 299	7 451	8 721	10 165	9 822
Shymkent city	899	797	931	1 479	892

#### 4.5 The number of organizations using information technology systems, by region, for 2019

units

	RFID technology	Electronic invoices	3D printers	Printing (3D printers) services provided by other companies
<b>Republic of Kazakhstan</b>	1 408	93 022	1 381	1 952
Akmola	43	3 212	18	62
Aktobe	47	3 618	2	81
Almaty	28	3 413	18	13

	RFID technology	Electronic invoices	3D printers	Printing (3D printers) services provided by other companies
Atyrau	56	2 804	82	121
Batys Kazakhstan	10	2 337	-	49
Zhambyl	21	1 810	1	1
Karagandy	48	7 385	5	5
Kostanai	55	4 037	7	-
Kyzylorda	35	1 741	2	92
Mangystau	31	2 379	-	43
Pavlodar	20	4 236	-	106
Soltustik Kazakhstan	70	2 877	1	-
Turkistan	12	1 485	-	-
Shygys Kazakhstan	46	5 211	4	3
Nur-Sultan city	127	19 529	294	26
Almaty city	731	23 405	893	1 226
Shymkent city	28	3 543	54	124

#### 4.6 Number of organizations using robotics by region

units

	Number of organizations using robotics	Distribution of the number of organizations by species using robotics		
		collaborative robots	industrial robots	service robots
<b>Republic of Kazakhstan</b>	2 196	222	650	1 812
Akmola	48	3	3	43
Aktobe	22	5	11	19
Almaty	13	3	4	10
Atyrau	105	4	25	79
Batys Kazakhstan	1	-	1	1
Zhambyl	24	1	18	7
Karagandy	33	-	19	14
Kostanai	38	1	1	38
Kyzylorda	70	-	18	59
Mangystau	1	-	1	-
Pavlodar	3	-	1	2
Soltustik Kazakhstan	5	1	2	5
Turkistan	11	2	8	1
Shygys Kazakhstan	353	75	6	275
Nur-Sultan city	1 316	124	470	1 169
Almaty city	153	3	62	90
Shymkent city	2 196	222	650	1 812

## Internet access in organizations

### 4.7 Number of organizations using the Internet by access type for 2019

units

	Standard modem (via analog telephone connection) or narrowband connection to ISDN	Fixed (wired) broadband	Terrestrial fixed (wireless) broadband	Mobile broadband connection	Other types of mobile Internet connections (via analog mobile phone, GSM, GRPS)
<b>Republic of Kazakhstan</b>	24 588	54 645	9 775	4 767	11 756
Akmola	-	2 643	291	95	318
Aktobe	1	3 233	258	80	529
Almaty	152	2 641	1 303	183	115
Atyrau	1 719	560	317	101	430
Batys Kazakhstan	-	1 613	215	287	295
Zhambyl	612	965	145	74	216
Karagandy	1 025	4 824	927	307	1 092
Kostanai	20	3 417	457	388	27
Kyzylorda	5	1 351	189	59	305
Mangystau	-	2 037	178	70	495
Pavlodar	2 460	647	293	160	810
Soltustik Kazakhstan	24	2 449	232	216	18
Turkistan	305	1 859	253	100	420
Shygyz Kazakhstan	613	3 164	442	284	848
Nur-Sultan city	590	17 634	915	968	2 039
Almaty city	14 882	4 956	1 907	1 206	3 304
Shymkent city	2 180	652	1 453	189	495

Note: Hereinafter, taking into account government organizations.

### 4.8 Purpose of using the Internet in organizations

units

	2015
Sending and receiving email	63 603
Telephone calls via the Internet / VoIP ( video conferencing )	11 778
Posting or instant messaging	30 580
Getting information about products and services	36 838
Getting information from government	39 944
Taken and the interacting with the government	33 158
Implementation of banking Internet operations	41 658
Accessing other financial services	10 420
Provision of customer services	7 463
Online product delivery	2 150
Receive orders via the Internet	11 758
Placing orders on the Internet	16 670

	Continuation
	2015
Staff recruitment	4 211
Staff training	3 524
Other	9 442

#### 4.9 Goals of using the Internet in organizations to communicate with government agencies

	units			
	2016	2017	2018	2019
Getting Information	56 447	63 591	78 699	73 534
Download (download) forms	47 331	54 891	67 468	53 509
Download (download) forms	50 318	58 487	71 848	67 572
Full electronic, paperless document submission process	37 436	44 351	56 731	49 702
Placing an offer over the Internet in an open electronic tender	19 278	22 037	30 212	21 095

#### 4.10 ICT organization costs

	million tenge
	2015
Total ICT costs	375 600.5
of them:	
the cost of the acquisition (including installation and commissioning) computing equipment	122 603.2
the cost of purchasing software used on the basis of the license agreement	69 208.5
independent software development costs within the organization	8 726.6
expenses for Internet communication services	74 197.3
staff training costs associated with the development and use of ICT	1 491.0
the cost of the services of third-party organizations and professionals associated with information technology (except communication services and training)	36 676.1
ICT rental	-
other ICT costs	62 697.8

	Continuation			
	2016	2017	2018	2019
Total ICT costs	269 526.7	349 943.6	305 217.4	337 712.7
Of them:				
the cost of purchasing software used on the basis of the license agreement	37 131.4	75 042.4	52 257.5	55 661.4
independent software development costs within the organization	11 603.0	10 931.0	5 177.8	13 127.1
staff training costs associated with the development and use of ICT	1 276.0	11 816.0	2 134.0	8 137.7
the cost of the services of third-party organizations and professionals associated with information technology (except communication services and training)	78 586.8	105 111.7	107 510.2	121 670.3

#### 4.11 Costs of organizations for ICT in the context of areas

million tenge

	2015	2016	2017	2018	2019
<b>Republic of Kazakhstan</b>	375 600.4	269 526.7	349 943.6	305 217.4	337 712.7
Akmola	2 805.1	2 102.6	3 365.9	19 674.3	3 275.3
Aktobe	5 195.0	5 529.1	5 683.7	10 365.0	6 977.8
Almaty	4 120.4	3 640.7	4 244.8	5 295.2	6 802.0
Atyrau	42 449.9	8 514.1	13 464.1	38 711.7	47 072.2
Batys Kazakhstan	6 525.5	10 705.3	15 164.3	14 739.2	16 091.9
Zhambyl	2 491.8	2 390.0	2 191.8	2 044.9	2 028.0
Karagandy	7 771.5	6 939.5	7 730.9	10 163.8	11 711.4
Kostanai	2 392.8	2 779.8	3 200.3	3 709.8	3 390.5
Kyzylorda	12 399.5	2 167.8	3 290.5	2 761.0	8 716.7
Mangystau	6 769.4	8 825.5	11 639.9	11 655.4	8 611.7
Pavlodar	5 427.2	6 673.4	13 687.6	9 423.0	10 285.7
Soltustik Kazakhstan	1 401.8	1 355.7	2 447.2	2 113.5	2 300.8
Turkistan	2 006.3	2 302.4	2 166.9	2 827.4	3 236.7
Shygys Kazakhstan	5 840.5	12 898.6	13 376.9	12 752.5	9 768.8
Nur-Sultan city	160 794.1	83 603.8	71 930.2	103 365.2	110 211.0
Almaty city	103 840.7	106 103.3	172 271.6	53 088.3	81 303.7
Shymkent city	3 368.9	2 995.0	4 087.0	2 527.3	5 928.7

## Methodological notes

Communication - reception, collection, processing, accumulation, transfer (transportation), delivery, distribution of information, postal and special items, postal money transfers.

Types of communication vary depending on the nature of the information provided and the methods of its transmission. Taking into account the types of communication, the communication industry is subdivided into a number of sub-sectors of the main activity.

Postal communication - receiving, processing, transportation and delivery of postal and special items, as well as postal money transfer.

Courier postal services - services for receiving, transporting and delivering registered mailings provided by courier.

Special postal service - a type of courier postal service, carried out by the structural unit of the National Mail Operator and providing reception, processing, security, transportation and delivery (delivery) of postal, special and other items containing any secret protected by law and valuables, including precious metals, precious stones and products from them.

Postal services are the activities of postal operators for sending registered and unregistered mailings, postal money transfers, hybrid mailings, distribution of periodicals, sale of postage marks and philatelic products.

Postal activities - provision of postal services through postal networks.

Subscriber is a natural or legal person with whom an agreement has been concluded for the provision of communication services with the allocation for this purpose of the ABOUT line, subscriber number and (or) identification code.

Long-distance telephone communication is a telephone connection between users of communication services located in the Republic of Kazakhstan, with the exception of local telephone connections.

Cellular communication is a type of electrical communication that uses the division of the service area into a number of cells, providing the possibility of continuity of communication when a subscriber moves from cell to cell and is intended for two-way (multilateral) information exchange, mainly in the form of speech transmitted via radio waves.

International telephone communication is a telephone connection between users of communication services located on the territory of the Republic of Kazakhstan and users of communication services on the territory of another state.

By «data transmission service» is meant the product of a telecom operator's operation in receiving and transmitting data, which can be carried out over both specialized and non-specialized telecommunication networks, both over switched and non-switched its networks.

Communication channel - a set of telecommunications facilities and a propagation medium that provides signal transmission between telecommunications facilities in a frequency band or at a transmission rate characteristic of a given communication channel. Depending on the type of communication channels are divided into telephone, telegraph, data transmission, and on a territorial basis - into international, long-distance, zonal and local.

Broadband access provides not only high-speed data transmission, but also a continuous Internet connection (without the need to establish a dial-up connection) and the so-called «two-way» connection, that is, the ability to both receive («download») and transmit («upload») information at high speeds.

The volume of services of the primary and secondary activities of telecommunications enterprises include the receipt of funds from the public, enterprises and organizations for communication services rendered in the reporting period, regardless of the date of receipt of payment for the services rendered. The volume of communication services in terms of value including the payment proceeds from services received only for the services provided to citizens at their expense.

The volume of services from all types of communication activities includes the volumes of services:

- long-distance and international telephone services;
- local telephone services;
- services for data transmission over telecommunications networks, wired and wireless;
- Internet services via wired and wireless telecommunication networks;
- services for the dissemination of programs for cable infrastructure, wireless networks and via satellite;
- mobile services;
- services telecommunications others (services, technology related to the provision of telecommunications services on the connection and the connection to the telecommunications network of other operators and communication services for organization of subscriber access to telecommunications networks, services for the provision of leased lines services for the maintenance and repair of telecommunications equipment and elements of network infrastructure, services for the provision of Bani equipment rental of telecommunication equipment, a set of infrastructure elements and traffic transmission services ( interconnect ) for telecom operators).

In the volume of postal and courier services rendered in the main type of activity, enterprises in value terms include receipts from the public and legal entities for communications services rendered in the reporting period, regardless of the payment deadline for the services rendered.

The volume of postal and courier services includes all types of domestic and international postal items in value terms, including those received for:

- realized signs of postage;
- written correspondence (with the exception of EMS departures and special communication items);
- Delivered invoice notices, pension statements;
- parcels (except for EMS shipments and special communication items);
- parcels, small packages;
- periodicals on a contractual basis (shipping, shipping, forwarding);
- services of post offices (income from sales of products): philatelic products, postcards, envelopes, packaging and packaging materials, strict reporting forms and other goods;
- other postal services: reception and delivery of telegrams, additional special communication services, additional postal services, return of mail items, EMS services of items, special communication, postal services for the delivery and forwarding of large-size mail items, direct mail services and other services not included in other groups.

The provision of population with fixed telephone lines is calculated as the ratio of the number of fixed telephone lines among the population to the number of families.

A fixed telephone line is an active line that connects the subscriber's terminal equipment with a public switched network and has a dedicated port in the telephone station equipment, including using wireless access systems ( WiFi , WiMax , etc.), telephones connected in a paired manner and having different numbers on the automatic telephone station.

Information and communication technologies (ICT) - a set of methods of working with electronic information resources and methods of information interaction carried out using a hardware-software complex and a telecommunications network.

Cloud computing - ICT services used over the Internet in order to gain access to software, computing power, storage capacity.

Satellite television - television signal transmission system from the transmitting center to the consumer through the suit with governmental satellite land located in a geostationary orbit above the Earth's equator.

Cable television is a model of television broadcasting (as well as sometimes FM broadcasting) in which the television signal is propagated by means of high-frequency signals transmitted through a cable laid to the consumer and the television.

The Internet is a worldwide system of integrated telecommunications networks and computing resources for transmitting electronic information resources.

Internet resource - an electronic information resource displayed in text, graphic, audiovisual or other form, placed on a hardware-software complex, having a unique network address and / or domain name and functioning on the Internet.

Intranet is a distributed corporate network using software products and Internet technologies designed to systematize, store and process internal corporate information that employees access to which is organized through the organization's local network or secure connections over global networks.

Computer literacy is defined as the knowledge and ability to effectively use a computer and related technologies. The range of skills covers levels from basic computer skills to the use of information technology in their professional activities. The latter category of persons is divided into four main classes according to their level of qualification, which allows for a more detailed assessment of the depth of perception of computer technologies by society.

A population without computer skills is a population that doesn't have even a minimal PC experience.

Novice users - people who own a minimum of computer skills, able to copy files to work with disk devices with a computer w Terni games.

Regular users - people who own basic skills in the office software products, n and an example, the package Microsoft Office (Excel, Word).

Advanced users - people with extensive experience working with widely used programs and special software, for example, Corel Draw, MS Project, AutoCAD, SPSS, and so on, as well as persons who are able to program in standard programming languages, such as Basic, Pascal, Java, C ++, and so on, along with working with ordinary software.

A server is a special computer that differs in configuration from an ordinary personal one in that it is able to provide some services, namely the ability to connect many computers into one whole, a kind of team.

E-government is a system of information interaction of state bodies among themselves and with individuals and legal entities, based on the automation and optimization of state functions, and also intended to provide services in electronic form.

Extranet - the union of several (two or more) intranets. The extranet may include both intranets of business partners and intranets of various departments of the same organization.

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