



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 2014-2018**



Nur-Sultan 2019

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

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**2014-2018**

**Statistical compilation**

**Nur-Sultan 2019**

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Address: Republic of Kazakhstan, 010000  
Nur-Sultan city, Mangilik El, 8  
House of Ministries, 4 entrance  
Ministry of National Economy of the Republic of Kazakhstan  
Committee on Statistics  
Information service: +7 7172 74 90 10, 74 90 11  
Fax: +7 7172 74 95 46  
Electronic address: [kazstat.rk@gmail.com](mailto:kazstat.rk@gmail.com)  
Internet resource: <http://stat.gov.kz>

Legend:

-- no phenomenon  
0,0 - insignificant value  
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In some cases, minor discrepancies between the total and the sum of the items are due to rounding of data.

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## 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.

## Overview of the state of development of communications in 2018.

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 2018 was 1.1%.

In 2018, postal and courier services provided services in the amount of 37 billion tenge, which is 9,4% more than in 2017 in comparable prices, 26,9% of the volume of postal and courier services provided to the population. In 2018, communication enterprises rendered services in the amount of 782,5 billion tenge, which in comparable prices by 2,9% more than in 2017, 55,5% of the volume of communication services was rendered to the population.

A significant share in the total volume of communication services is occupied by mobile communication services, Internet services and other telecommunication services, the specific weights of which were 32%, 31,1% and 18,1%, 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 2018, the number of fixed telephone lines in the country amounted to 3206,1 thousand units, which is 13% less than in 2017, of which the population – 2595,5 thousand units (a decrease of 8,6%) . The number of fixed telephone lines in rural areas amounted to 885,9 thousand units..

In the cities of the republic, there are 22 fixed telephone lines per 100 inhabitants, 11 fixed telephone lines in the countryside.

At the end of 2018, the number of mobile subscribers in the republic was 26065,6 thousand, and the number of fixed Internet subscribers is 2462,4 thousand, of which using high-speed broadband access, 99.8%.

# 1. The main economic indicators of communication services

## 1.1 The dynamics of the development of communication services

	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.

million tenge

	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		



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
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	28 658,0	28 297,9	33 688,3	37 034,3
Volume of communication services	438 434,1	479 905,3	582 740,4	599 656,9	647 331,5	680 813,6	702 148,0	722 217,4	752 332,0	782 459,1
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	33 981,1	34 092,9	30 188,1	29 702,0
local telephone services	31 293,6	34 840,5	41 467,2	45 241,4	51 553,0	51 408,3	47 826,4	44 642,0	41 999,8	38 394,6
data services	9 171,4	9 873,6	14 322,7	15 002,5	20 340,0	21 794,7	23 798,5	34 118,2	35 316,9	43 639,1
internet services	43 592,4	65 399,3	96 324,4	116 006,6	137 864,7	168 454,8	190 437,5	206 418,7	228 686,1	243 322,7
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	28 026,3	29 462,5	x	35 064,1
mobile services	244 820,4	260 944,9	294 721,1	297 647,1	296 615,2	281 258,5	257 460,5	245 732,9	x	250 682,1
other telecommunication services	46 127,2	50 635,6	79 248,7	71 265,6	80 176,2	94 867,4	120 617,8	127 750,1	129 079,3	141 654,5

## 1.2 Key indicators of communication development

	2013	2014	2015	2016	2017	2018
The volume of postal and courier services, mln. tenge	24 287,0	29 039,2	28 658,0	28 297,9	33 688,3	37 034,3
The index of the physical volume of postal and courier services, as a percentage of the previous year	109,6	105,4	92,3	92,4	121,0	109,4
Volume of communication services, mln. tenge	647 331,5	680 813,6	702 148,0	722 217,4	752 332,0	782 459,1
Index of the physical volume of communication services, as a percentage of the previous year	116,0	110,3	102,0	101,8	103,7	102,9
The number of enterprises of postal and courier activities, units	103	114	128	157	188	201
Number of communications enterprises, units	471	468	479	474	479	475
The list number of employees of the enterprises of postal and courier activities, thousand people	22,9	23,7	23,3	24,4	24,0	24,0
List number of employees of telecommunications enterprises, thousand people	50,6	48,1	51,1	47,4	40,2	39,0
Average monthly salary of employees of enterprises of postal and courier activities, tenge	72 300	85 460	95 634	101 944	106 635	113 021
Average monthly salary of employees of communication enterprises, tenge	154 395	172 427	183 292	201 115	219 839	231 658
Fixed assets for postal and courier activities at the end of the year; at initial (current) cost, mln. tenge	41 211,0	43 204,9	47 212,3	53 153,4	60 154,4	54 602,1
Fixed assets for telecommunications enterprises, at the end of the year; at initial (current) cost, mln. tenge	1 021 164,5	1 668 063,1	1 695 230,6	1 810 924,7	1 747 228,3	2 156 210,2
Profit (loss) from ordinary activities of enterprises of postal and courier activities, million tenge	1 408,3	744,5	3 618,3	3 391,5	2 377,5	2 520,1
Profit (loss) from ordinary activities of telecommunications enterprises, mln. tenge	151 758,8	118 606,4	109 455,1	76 511,9	102 440,5	195 933,0
Tariff index for postal and courier services, as a percentage of the previous year:						
provided to legal entities	105,7	115,9	107,2	111,5	105,4	103,4
provided to individuals	130,5	100,7	100,7	100,0	100,0	103,9
Index of tariffs for communication services, as a percentage of the previous year:						
provided to legal entities	94,8	92,6	98,6	99,7	104,9	100,7
provided to individuals	107,8	99,2	104,7	101,4	100,2	101,8
Level of profitability of enterprises of postal and courier activities, in percentage	3,0	1,7	7,8	5,7	3,6	3,3

	Continuation					
	2013	2014	2015	2016	2017	2018
Level of profitability of communication enterprises, in percentage, in percentage	27,7	17,5	14,7	10,2	12,7	20,5
Investments in fixed capital of enterprises of postal and courier activities, mln. tenge	993	1 012	1 095	6 131	10 947	5 796
Investments in fixed assets of telecommunications enterprises, mln. tenge	95 545	107 222	90 788	47 241	57 941	69 256
Number of cellular subscribers, thousand units	30 364,9	28 595,6	26 309,3	25 534,7	26 693,3	26 065,6
The number of cellular subscribers per 10000 people, units	17 829	16 540	14 996	14 347	14 799	14 262
Number of fixed Internet subscribers, thousand units	1 976,0	2 100,9	2 305,6	2 352,7	2 580,2	2 462,4
The number of fixed Internet subscribers per 10000 people, units	1 160	1 215	1 314	1 322	1 430	1 347
Provision of the population with computers per 1000 persons, units	291	339	316	283	280	282

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

	million tenge				
	2014	2015	2016	2017	2018
Volume of the postal and courier activities	29 039,2	28 658,0	28 297,9	33 688,3	37 034,3
Volume of communication services	680 813,6	702 148,0	722 217,4	752 332,0	782 459,1
including:					
long-distance and international telephone services	41 499,1	33 981,1	34 092,9	30 188,1	29 702,0
local telephone services	51 408,3	47 826,4	44 642,0	41 999,8	38 394,6
data services	21 794,7	23 798,5	34 118,2	35 316,9	43 639,1
Internet services	168 454,8	190 437,5	206 418,7	228 686,1	243 322,7
distribution services for cable, wireless and satellite networks	21 530,8	28 026,3	29 462,5	x	35 064,1
mobile services	281 258,5	257 460,5	245 732,9	x	250 682,1
other telecommunication services	94 867,4	120 617,8	127 750,1	129 079,3	141 654,5

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

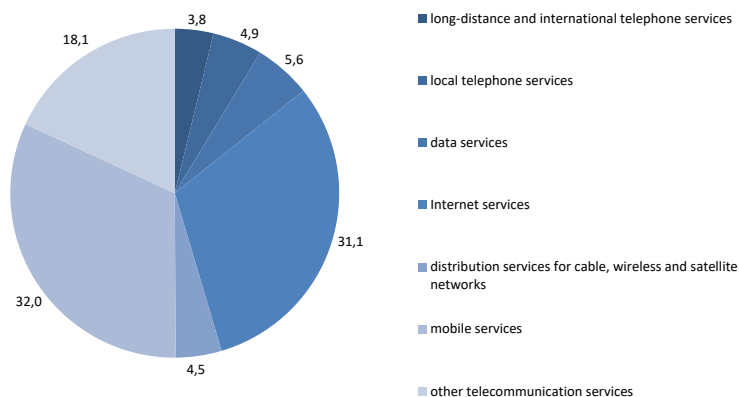
	as a percentage of the previous year				
	2014	2015	2016	2017	2018
Volume of the postal and courier activities	105,4	92,3	92,4	121,0	109,4
Volume of communication services	110,3	102,0	101,8	103,7	102,9
including:					
long-distance and international telephone services	97,8	80,2	80,3	91,1	98,6
local telephone services	98,7	93,0	93,3	94,1	91,4
data services	115,7	110,7	143,8	98,7	122,7
Internet services	126,4	114,8	109,3	111,9	106,2

Continuation

	2014	2015	2016	2017	2018
distribution services for cable, wireless and satellite networks	118,7	92,5	100,1	109,1	100,5
mobile services	98,6	91,5	95,7	104,3	96,8
other telecommunication services	131,8	140,6	106,2	96,5	108,9

### The structure of the volume of communication services for 2018

as a percentage of the total



### 1.5 The volume of the postal and courier activities

million tenge

	Volume of postal and courier services - total					Of which the population				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
<b>Republic of Kazakhstan</b>	29 039,2	28 658,0	28 297,9	33 688,3	37 034,3	7 657,0	7 712,7	8 969,5	11 109,4	9 961,3
Akmola	669,5	166,6	553,1	609,4	791,8	324,3	86,4	264,2	286,5	388,0
Aktobe	806,1	740,1	735,7	839,8	1 021,2	319,1	289,1	278,1	304,3	332,6
Almaty	915,4	927,5	980,1	1 158,8	1 243,5	512,7	506,2	547,9	573,7	523,7
Atyrau	460,7	426,9	368,6	432,8	506,0	183,2	151,4	146,1	184,6	220,8
Batys Kazakhstan	471,1	445,6	465,1	492,0	494,4	251,6	238,0	267,8	260,2	238,8
Zhambyl	506,5	534,6	582,1	802,1	1 011,8	259,7	273,9	373,0	538,0	636,0
Karagandy	1 270,1	1 206,4	1 284,8	1 407,9	1 458,5	439,2	416,9	469,0	500,8	533,2
Kostanai	864,0	782,2	851,8	948,6	1 098,6	389,9	358,0	504,2	521,7	551,8
Kyzylorda	435,8	437,3	416,7	409,6	446,3	295,8	239,5	168,8	160,5	161,7
Mangystau	494,9	421,2	394,6	462,4	521,6	186,1	153,0	165,5	185,0	185,1
Pavlodar	782,7	703,2	672,7	749,8	741,7	497,2	436,9	435,8	464,6	420,4
Soltustik Kazakhstan	593,9	560,5	591,6	651,5	757,9	318,4	301,7	301,6	305,2	308,3
Turkistan	367,0	411,6	470,4	537,1	559,7	225,0	242,2	261,9	221,4	252,9

Continuation

	Volume of postal and courier services - total					Of which the population				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Shygyys Kazakhstan	1 148,7	1 058,7	1 139,7	1 198,4	1 556,4	531,1	406,2	423,2	455,6	792,3
Nur-Sultan city	2 227,7	5 174,9	2 169,4	2 544,5	3 307,1	617,1	1 615,9	509,8	612,0	621,6
Almaty city	16 632,1	14 220,1	16 117,9	19 868,6	20 649,2	2 065,5	1 737,9	3 572,3	5 298,5	3 521,5
Shymkent city	392,9	440,5	503,6	574,9	868,6	240,9	259,3	280,4	237,0	272,5

## 1.6 Volume of communication services

million tenge

	Volume of communication services - total					Of which the population				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
<b>Republic of Kazakhstan</b>	680 813,6	702 148,0	722 217,4	752 332,0	782 459,1	434 785,5	407 511,8	415 246,0	423 555,9	434 346,4
Akmola	8 884,7	9 808,2	9 963,4	10 157,9	10 527,3	6 472,5	6 955,2	7 234,0	7 061,1	7 272,6
Aktobe	10 671,9	11 624,5	11 286,6	11 453,3	12 138,7	6 167,7	6 540,8	6 092,9	6 466,2	6 717,7
Almaty	12 422,8	13 187,1	12 966,8	13 849,2	14 245,3	9 970,3	10 486,8	10 586,6	11 296,8	x
Atyrau	11 106,9	12 718,7	16 225,0	13 776,8	14 340,6	4 803,7	5 040,2	5 119,5	5 203,1	5 661,1
Batys Kazakhstan	6 361,9	6 802,7	6 982,6	6 383,0	6 717,9	3 830,2	3 886,9	3 693,6	3 484,7	3 763,0
Zhambyl	5 945,6	6 255,6	5 955,4	5 904,8	6 655,2	3 983,0	3 820,9	3 566,6	3 505,5	3 971,1
Karagandy	17 042,4	18 638,8	17 928,6	17 815,4	20 152,7	12 063,6	12 504,8	12 204,2	12 172,4	14 204,9
Kostanai	10 708,3	11 828,0	11 779,6	11 785,6	12 811,5	7 855,2	8 265,7	8 123,7	8 227,4	8 916,1
Kyzylorda	4 620,4	4 712,2	4 716,8	4 875,5	5 390,7	2 866,6	2 692,1	2 733,0	2 824,9	2 960,8
Mangystau	9 930,4	11 849,8	15 996,3	11 355,8	11 452,1	3 486,1	3 631,5	3 853,3	3 999,3	4 255,7
Pavlodar	11 487,0	12 952,1	14 463,9	13 246,4	14 273,5	7 911,7	8 584,9	8 357,2	8 148,1	8 924,3
Soltustik Kazakhstan	6 747,6	7 270,5	7 477,1	7 782,3	8 378,9	5 131,4	5 433,0	5 688,8	5 793,3	6 058,9
Turkistan	4 831,6	5 136,0	5 033,8	5 205,9	5 270,0	3 179,2	3 069,6	2 933,4	2 961,3	2 852,3
Shygyys Kazakhstan	15 275,0	16 929,5	17 062,6	16 918,9	18 569,3	10 706,0	11 555,6	11 550,5	11 437,5	11 942,6
Nur-Sultan city	144 822,5	146 389,7	145 814,6	159 528,6	172 370,7	103 138,8	100 163,0	93 464,7	101 268,3	x
Almaty city	394 614,7	400 368,0	413 000,8	436 538,5	442 395,1	239 705,8	211 488,3	226 802,0	226 432,9	223 796,3
Shymkent city	5 340,1	5 676,6	5 563,6	5 753,9	6 769,6	3 513,8	3 392,7	3 242,1	3 273,0	4 019,9

## 1.7 Number of fixed telephone lines

thousand units

	2014	2015	2016	2017	2018
<b>Republic of Kazakhstan</b>	4 353,4	4 147,8	3 925,2	3 686,6	3 206,1
Akmola	228,7	225,1	215,2	206,6	189,1
Aktobe	225,2	220,8	210,9	193,2	171,6
Almaty	322,2	312,0	298,5	x	x
Atyrau	165,2	164,8	168,5	164,4	117,1
Batys Kazakhstan	158,7	148,0	140,1	114,2	x
Zhambyl	179,8	142,9	121,3	105,9	101,2
Karagandy	423,6	412,8	398,2	361,0	327,2
Kostanai	270,9	268,6	256,0	247,9	231,8
Kyzylorda	117,1	102,8	94,3	84,0	76,8
Mangystau	102,2	108,9	102,5	110,0	79,0

Continuation

	2014	2015	2016	2017	2018
Pavlodar	260,9	251,6	237,4	217,7	198,7
Soltustik Kazakhstan	192,1	188,8	178,1	169,9	157,8
Turkistan	150,9	118,7	98,1	92,5	90,2
Shygyz Kazakhstan	403,2	381,8	347,7	320,6	288,7
Nur-Sultan city	277,5	273,4	267,7	x	234,0
Almaty city	734,6	716,0	699,5	663,4	492,1
Shymkent city	140,6	110,7	91,4	86,2	76,7

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

thousand units

	2014	2015	2016	2017	2018
<b>Republic of Kazakhstan</b>	3 161,6	3 043,8	2 921,6	2 738,7	2 320,2
Akmola	134,8	132,3	125,9	119,9	110,3
Aktobe	166,4	162,1	156,1	142,2	126,0
Almaty	114,2	106,2	x	x	x
Atyrau	113,1	114,3	120,3	118,0	71,2
Batys Kazakhstan	103,4	97,3	90,4	77,0	x
Zhambyl	96,2	82,1	68,3	55,9	53,7
Karagandy	357,6	350,3	337,6	304,5	275,4
Kostanai	173,7	173,5	164,8	159,2	149,5
Kyzylorda	54,7	48,6	46,4	39,9	35,8
Mangystau	77,4	86,2	79,5	89,3	60,5
Pavlodar	205,1	198,6	185,9	168,9	153,4
Soltustik Kazakhstan	100,5	96,7	92,6	87,6	81,4
Turkistan	37,3	35,2	31,4	29,2	29,6
Shygyz Kazakhstan	284,0	265,9	246,9	225,8	201,1
Nur-Sultan city	277,2	273,1	x	x	233,7
Almaty city	725,3	710,7	694,3	658,4	487,3
Shymkent city	140,6	110,7	91,4	86,2	76,7

### 1.9 Number of fixed telephone lines in rural areas

thousand units

	2014	2015	2016	2017	2018
<b>Republic of Kazakhstan</b>	1 191,8	1 104,0	1 003,7	947,9	885,9
Akmola	93,9	92,9	89,3	86,7	78,8
Aktobe	58,8	58,7	54,8	51,0	45,6
Almaty	208,0	205,9	x	x	x
Atyrau	52,1	50,5	48,2	46,4	45,9
Batys Kazakhstan	55,3	50,7	49,7	37,2	x
Zhambyl	83,6	60,8	53,0	50,0	47,5
Karagandy	66,0	62,5	60,5	56,5	51,8
Kostanai	97,2	95,1	91,2	88,7	82,3
Kyzylorda	62,4	54,2	47,9	44,1	41,0
Mangystau	24,8	22,7	23,0	20,7	18,5
Pavlodar	55,8	53,0	51,5	48,8	45,3
Soltustik Kazakhstan	91,6	92,1	85,5	82,3	76,4
Turkistan	113,5	83,5	66,7	63,3	60,6
Shygyz Kazakhstan	119,2	115,9	100,9	94,8	87,6

Continuation

	2014	2015	2016	2017	2018
Nur-Sultan city	0,3	x	x	x	0,3
Almaty city	9,3	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

	2014	2015	2016	2017	2018
<b>Republic of Kazakhstan</b>	20,3	18,7	17,2	15,7	14,2
Akmola	26,8	26,1	24,9	23,9	21,9
Aktobe	22,3	21,5	20,1	18,0	15,7
Almaty	15,4	14,6	13,6	12,9	x
Atyrau	20,3	19,1	17,6	16,5	14,9
Batys Kazakhstan	21,8	19,8	18,5	14,4	x
Zhambyl	14,3	10,9	8,9	7,6	7,4
Karagandy	26,8	25,9	24,7	22,1	20,1
Kostanai	26,6	26,4	25,0	24,2	22,9
Kyzylorda	13,4	11,5	10,3	8,9	8,1
Mangystau	13,0	13,3	11,9	12,2	8,5
Pavlodar	29,4	27,9	26,1	23,8	21,7
Soltustik Kazakhstan	29,4	29,1	27,4	26,3	25,0
Turkistan	6,3	4,8	3,8	3,5	3,7
Shygyz Kazakhstan	25,0	23,5	21,2	19,5	17,7
Nur-Sultan city	22,8	21,6	19,8	17,4	15,8
Almaty city	28,6	26,2	24,5	22,2	19,4
Shymkent city	15,5	10,7	8,3	7,5	x

### 1.11 Number of fixed Internet subscribers

thousand units

	2014	2015	2016	2017	2018
<b>Republic of Kazakhstan</b>	2 100,9	2 305,6	2 352,7	2 580,2	2 462,4
Akmola	90,0	96,8	102,2	108,0	110,6
Aktobe	76,1	79,3	82,3	88,3	112,1
Almaty	120,9	128,8	148,6	x	x
Atyrau	70,8	69,5	73,4	78,7	93,2
Batys Kazakhstan	47,0	46,2	45,8	x	x
Zhambyl	60,5	54,2	58,0	61,5	84,8
Karagandy	164,2	164,5	164,0	170,2	264,0
Kostanai	110,7	109,4	111,4	116,0	163,1
Kyzylorda	44,1	43,9	47,0	52,5	59,6
Mangystau	54,3	57,1	62,9	70,1	80,2
Pavlodar	100,1	105,3	106,2	110,2	153,2
Soltustik Kazakhstan	75,0	79,9	85,8	90,5	110,1
Turkistan	44,0	44,4	48,4	55,3	60,9
Shygyz Kazakhstan	123,9	137,2	145,9	153,9	202,3
Nur-Sultan city	130,2	145,8	161,4	171,1	241,3
Almaty city	745,9	899,5	861,7	984,0	403,6

Continuation

	2014	2015	2016	2017	2018
Shymkent city	43,4	43,8	47,8	54,6	75,5

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

thousand units

	2014	2015	2016	2017	2018
<b>Republic of Kazakhstan</b>	2 093,2	2 301,0	2 349,9	2 576,0	2 461,3
Akmola	89,2	96,5	102,1	107,9	110,5
Aktobe	75,8	79,2	82,2	88,2	112,0
Almaty	120,7	128,7	148,5	168,1	176,6
Atyrau	70,7	69,5	73,4	78,7	93,2
Batys Kazakhstan	46,9	46,2	45,7	47,3	71,1
Zhambyl	60,4	54,1	58,0	61,5	84,8
Karagandy	163,6	164,2	163,8	170,2	264,0
Kostanai	109,2	108,6	110,8	115,5	162,9
Kyzylorda	44,0	43,0	47,0	52,4	59,5
Mangystau	54,3	57,1	62,9	70,1	80,2
Pavlodar	99,5	105,1	106,1	110,2	153,2
Soltustik Kazakhstan	73,4	79,3	85,5	90,3	110,0
Turkistan	45,0	45,4	49,5	55,3	60,9
Shygyz Kazakhstan	122,6	136,5	145,4	153,9	202,3
Nur-Sultan city	130,1	145,8	161,4	171,1	241,3
Almaty city	745,5	899,2	861,0	983,3	403,0
Shymkent city	42,3	42,8	46,6	52,1	75,5

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

	2014	2015	2016	2017	2018
Number of services provided:					
Newspapers and other periodicals, million units	219,1	185,2	179,6	164,3	135,6
written correspondence was sent, million units	51,9	64,6	52,7	44,6	43,4
shipped packages and parcels, million units	5,3	7,9	6,3	7,1	6,6
Number of telegrams sent, million units	3,1	2,1	1,6	1,7	1,4
Long-distance (including intra-zone) and international outgoing telephone traffic, million minutes	2 429,9	2 191,0	2 584,0	1 431,8	1 166,9
Number of fixed telephone lines, thousand units	4 353,4	4 147,8	3 925,2	3 686,6	3 206,1
of them – the population	3 503,3	3 289,1	3 065,3	2 839,9	2 595,5



## Overview of the state of information and communication technologies for 2018

In 2018, industrial output in the information and communication technology (ICT) industry amounted to 22,5 billion tenge. The number of employees in enterprises in the ICT industry amounted to 89,1 thousand people, the average monthly wage per employee was 224177 tenge.

The volume of imports of goods in the ICT industry in 2018 amounted to – 2293,6 million USD, the export volume amounted to 92,9 million USD.

The number of fixed telephone lines per 100 inhabitants was 17 units, the number of cellular subscribers per 100 inhabitants reached 143 units.

The most active age group of ICT users among the population is the group aged 25-74 years old and makes up 65,8%. By education level, most ICT users had a higher education (30,6%).

Of the total population aged 6 years and older, 87,4% of the population consider themselves computer-literate. In terms of

computer literacy, the population was divided into ordinary users 57,1%, novice users 23,5%, experienced users 6,8%, and those without computer literacy skills 12,6%.

To access the Internet, most households chose mobile broadband technology (81,5%) and fixed (wired) broadband (48,5%), 7,2% are users of a standard modem.

In 2018, the share of organizations using a computer was 79%. The share of organizations with access to the Internet was 76,2%. In 2018, the share of organizations using the Internet to receive orders for goods and services amounted to 1,6%, ordering goods and services – 4,9%. For access to the Internet, most organizations used fixed (wired) broadband (51%) and standard modem (25,6%).

In 2018, the costs of organizations for information technology amounted to 305,2 billion tenge, which is 36,2% more than in 2017.

## 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

	2014	2015	2016	2017	2018
Number of ICT industry organizations, units	7 120	7 715	8 506	9 334	10 192
including:					
large					
medium	68	73	65	59	42
small	90	96	92	87	89
Share of volume of production and sale of goods (services) of the ICT industry in total GDP	6 962	7 546	8 349	9 188	10 061
Proportion of the ICT industry in the total number of employees	3,9	3,9	3,5	3,4	3,3
Index of the physical volume of investments in the fixed capital of the ICT industry	1,7	1,8	1,7	1,5	1,5
Coefficient of renewal of fixed assets in the ICT industry organizations	101,8	83,2	49,6	127,0	122,2
Coefficient of disposal of fixed assets in the ICT industry organizations	13,0	12,1	12,7	8,1	7,3
Level of profitability of the ICT industry organizations	4,8	5,8	3,8	3,2	2,4
From the total number of organizations	10,8	7,6	8,3	10,0	18,2
unprofitable organizations	30,9	26,6	29,0	28,7	23,0
profitable organizations	69,0	73,4	71,0	71,3	76,9

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

	2017				
	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	81 663	77 229	215 571	199 780,4	17 174,0
Production of electronic components and boards	566	505	442 100	2 680,9	755,7
Manufacture of computers and peripheral equipment	398	404	204 725	993,1	x
Production of communication equipment	165	169	224 210	454,5	-
Consumer Electronics	33	30	53 823	19,6	-
Wholesale information and communication equipment	4 751	4 632	242 611	13 486,1	60,5
Software release	277	251	199 147	599,8	x
Connection	45 534	42 282	214 323	108 744,4	12 039,9

Continuation

	2017				
	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	15 984	15 626	232 960	43 683,4	1 631,5
Services for the placement and processing of data, web portals	11 112	10 757	199 536	25 757,5	2 626,3
Repair of computers and communication equipment	2 842	2 571	108 928	3 361,0	11,0

Continuation

	2018				
	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	89 075	83 319	224 177	224 087,0	23 664,9
Production of electronic components and boards	-	-	-	-	-
Manufacture of computers and peripheral equipment	151	149	237 690	425,0	x
Production of communication equipment	-	-	-	-	-
Consumer Electronics	192	174	777 000	1 622,4	x
Wholesale information and communication equipment	5 215	5 012	168 201	10 117,2	62,6
Software release	546	521	324 096	2 026,4	x
Connection	45 026	41 566	223 312	111 387,4	15 085,0
Computer programming, consulting and other related services	20 649	19 760	243 380	57 711,0	2 169,5
Services for the placement and processing of data, web portals	13 946	13 097	229 770	36 112,4	6 028,3
Repair of computers and communication equipment	3 350	3 040	128 448	4 685,2	74,1

\* 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, mln. tenge				
	2014	2015	2016	2017	2018
Total for ICT industry	30 168,6	17 492,8	22 804,0	21 244,5	22 509,3
Production of electronic components and boards	4 206,2	2 226,2	159,8	124,7	11,3
Manufacture of computers and peripheral equipment	3 706,1	4 327,6	3 210,9	2 807,3	3 638,3
Production of communication equipment	13 227,8	3 666,2	9 046,5	6 274,7	5 886,3
Manufacture of consumer electronics	9 028,5	7 272,8	10 386,8	12 037,8	12 973,4

### 2.4 ICT Services

	Volume of services provided, mln. tenge				
	2014	2015	2016	2017	2018
Total	830 486,3	882 915,0	944 397,7	1 034 848,9	1 115 819,7
Software release	1 136,1	995,2	1 175,8	2 864,1	2 410,9
services in the edition of computer games, in separate packing	5,4	1,5	0,4	85,3	16,6
services for downloading computer games, in a separate package	3,5	0,6	0,5	1,5	0,2
services for the publication of ready-made operating systems, in a separate package	150,4	235,2	122,4	312,1	123,5
services in the edition of the ready software network, in separate packing	40,2	19,6	345,8	477,2	476,7
services for the publication of ready-made database management software, in a separate package	724,5	440,9	521,4	593,9	12,2
services for the publication of finished software development tools and programming languages, in a separate package	14,8	50,2	16,1	79,1	425,1
services in the edition of ready programs of applied business of general purpose and for internal use, in separate packing	3,4	-	-	8,2	7,5
services in the edition of the ready software of applied other, in separate packing	110,8	138,4	97,3	1 032,3	1 168,9
services for downloading ready-made system software	19,4	17,7	11,8	199,6	92,1
services for downloading application software	35,4	86,3	13,4	73,6	1,0
services for the publication (placement) of software on the network	28,3	4,8	46,7	1,3	87,1

Continuation

	Volume of services provided, mln. tenge				
	2014	2015	2016	2017	2018
Connection	680 813,6	702 148,0	722 217,4	752 332,0	782 459,1
Computer programming, consulting and other related services	96 202,0	117 383,0	141 501,9	183 895,4	209 057,1
services in design and development of programs of applied network and system design and development services	51 137,2	58 275,6	69 390,6	87 356,9	94 327,6
originals of computer game software	4 324,7	3 247,4	8 088,0	6 276,3	8 407,5
originals of other software	8,7	821,3	1 092,5	1 766,2	503,5
consulting services for technical support	3 477,5	3 248,1	7 872,3	7 032,5	3 393,1
software consulting services	4 780,4	8 398,7	7 057,1	11 290,5	18 145,9
information technology technical support services	6 645,2	8 720,3	10 052,6	5 726,9	5 190,5
network management services	6 883,7	10 149,4	9 418,7	21 092,3	9 682,2
computer systems management services	10,3	419,1	156,1	76,0	555,9
computer and peripheral equipment installation services	491,5	1 058,2	531,3	2 302,5	1 269,7
information technology and computer system services, other, not elsewhere classified	4 804,9	1 793,7	3 964,7	3 039,4	3 080,1
Services for the placement and processing of data; web portals	13 637,9	21 251,2	23 878,0	37 935,9	64 501,1
data processing services	38 913,5	45 021,2	60 747,8	76 527,2	99 210,5
Services for processing sites in the «Internet»	17 402,3	25 563,8	30 387,1	34 986,7	46 851,6
services for software applications	1 267,3	1 299,0	1 726,4	555,1	893,7
infrastructure services for hosting data and information technology other services to provide space or time for advertising on the Internet	470,9	2 432,2	584,5	755,0	1 548,3
content of web portals	17 725,0	13 553,6	21 523,7	33 846,7	40 200,0
Repair of computers and communication equipment	479,0	481,8	703,1	2 475,1	2 441,2
computer and peripheral equipment repair services	1 569,0	1 690,8	5 823,0	3 908,6	7 275,7
repair services for communication equipment	13 421,1	17 367,6	18 754,8	19 230,2	22 682,1
	11 725,5	14 560,5	15 510,0	15 781,0	17 033,2
	1 695,6	2 807,1	3 244,8	3 449,2	5 648,9

## 2.5 Wholesale information and communication equipment

	Volume of wholesale trade, mln. tenge				
	2014	2015	2016	2017	2018
Total	323 299,5	297 607,8	363 908,1	414 707,8	512 453,2
including:					
computers and peripherals	286 131,5	277 726,2	325 323,2	388 824,7	477 337,7
electronic and other equipment, its parts	37 168,0	19 881,6	38 584,9	25 883,1	35 115,5

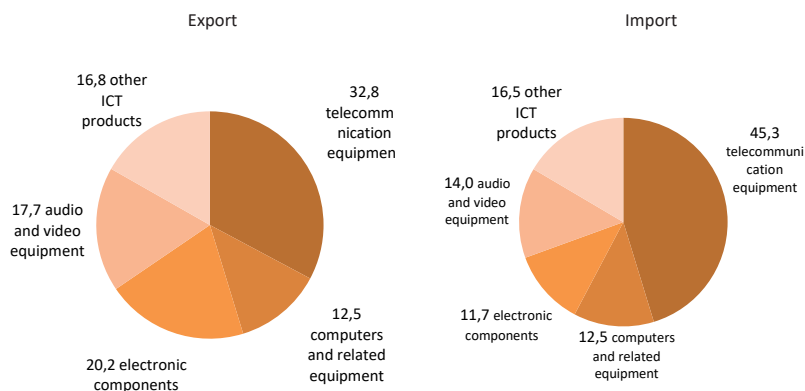
## 2.6 Exports and imports of ICT goods industry

million USD

	2014		2015		2016		2017		2018	
	export	import	export	import	export	import	export	import	export	import
Total	401,6	2 990,2	104,3	1 938,1	76,9	1 651,5	82,0	2 051,0	92,9	2 293,6
including:										
telecommunication equipment	255,7	1 127,8	45,3	755,3	28,7	647,0	23,5	915,2	30,5	1 038,3
computers and related equipment	45,9	627,2	8,5	403,0	7,4	224,4	9,6	249,5	11,6	285,9
electronic components	13,1	300,1	9,4	177,2	12,1	168,8	16,0	189,2	18,8	268,9
audio and video equipment	65,7	432,2	12,8	259,2	10,6	249,9	16,2	275,4	16,5	321,7
other ICT products	21,2	502,8	28,3	343,4	18,1	361,4	16,7	421,7	15,6	378,9

### Structure of exports and imports of goods in the ICT industry for 2018

in percentage



## 2.7 Main indicators of technical means of communication

	2014	2015	2016	2017	2018
The length of long-distance and international communication channels, million channel-km	3 743,9	5 011,9	5 095,0	2 761,5	2 882,7
Installed capacity of switching stations (points), thousand numbers	5 701,9	5 961,8	5 674,5	5 626,3	5 742,9
The involved capacity of switching stations (points), thousand numbers	4 229,6	4 007,3	3 488,9	3 443,2	3 237,8
Number of wireless base stations, thousand units	23,5	26,9	27,3	27,2	27,4

## ICT infrastructure

### 2.8 ICT Access Indicators

	2014	2015	2016	2017	2018
The density of fixed telephone lines per 100 people, units	25	24	22	20	17
Tariff index for Internet access services for individuals (to previous year),%	99,5	100,0	99,9	100,0	100,8
Tariff index for Internet access services for legal entities (December of the reporting year to December of the previous reporting year),%	95,7	96,9	95,3	99,8	98,5
broadband access	96,1	96,3	95,1	100,0	100,0
dial-up access	99,6	100,3	100,1	100,0	99,9

### 2.9 Indicators of the global index of competitiveness by the factor “The level of technological development”

	units				
	2014	2015	2016	2017	2018
Density of cellular subscribers per 100 people	165	150	143	148	143
The density of fixed Internet subscribers per 100 people	12	13	13	14	13
of them using high-speed broadband access per 100 people	12	13	13	14	13
Number of Internet users per 100 people	64	73	77	79	81

# 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

	2014	2015	2016	2017	2018
<b>Republic of Kazakhstan</b>	86,9	82,2	84,4	84,9	87,6
Akmola	70,2	72,0	73,2	73,7	75,7
Aktobe	78,4	79,5	82,4	86,0	90,8
Almaty	94,1	93,9	95,1	92,7	96,4
Atyrau	99,1	79,0	85,6	88,4	93,6
Batys Kazakhstan	100,0	92,1	87,4	81,3	88,6
Zhambyl	79,6	75,1	83,6	89,9	92,5
Karagandy	81,3	74,0	74,0	78,6	78,3
Kostanai	76,2	77,9	78,3	79,9	80,3
Kyzylorda	91,7	95,4	96,9	98,8	99,6
Mangystau	95,1	71,9	82,3	86,7	88,1
Pavlodar	89,0	87,6	88,4	79,0	83,8
Soltustik Kazakhstan	77,5	80,4	80,3	78,9	81,9
Turkistan	94,7	93,5	88,4	92,5	93,3
Shygyz Kazakhstan	75,0	81,0	73,3	73,3	79,7
Nur-Sultan city	96,6	97,6	99,0	93,3	95,6
Almaty city	100,0	70,3	88,0	87,4	89,4
Shymkent city	98,4	89,8	84,9	90,3	90,7

\* Including mobile internet users.

### 3.2 Distribution of households by type of Internet access in 2018

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, GRPS)
<b>Republic of Kazakhstan</b>	7,2	48,5	1,9	0,1	81,5	5,0
Akmola	1,0	60,8	1,6	0,1	75,8	5,5
Aktobe	4,8	46,3	3,4	0,1	88,0	1,3
Almaty	10,4	40,6	1,7	0,1	89,4	4,0
Atyrau	12,4	65,7	0,7	0,2	82,8	1,4
Batys Kazakhstan	1,5	41,1	4,4	0,1	95,0	0,6
Zhambyl	11,4	34,8	1,2	-	97,4	1,8
Karagandy	3,9	66,2	2,6	0,3	83,6	11,8
Kostanai	1,5	53,0	2,0	0,2	78,8	1,5



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)
Kyzylorda	6,0	27,3	1,3	0,2	75,1	35,7
Mangystau	-	59,1	0,9	-	97,1	-
Pavlodar	2,3	40,0	2,1	0,1	77,0	2,0
Soltustik Kazakhstan	2,9	59,1	2,2	-	74,8	1,5
Turkistan	0,6	9,7	2,6	-	98,9	0,9
Shygys Kazakhstan	11,3	44,8	2,2	0,1	63,0	8,7
Nur-Sultan city	8,6	71,4	0,6	0,2	75,6	0,4
Almaty city	18,9	70,6	1,2	0,1	63,6	4,1
Shymkent city	1,9	21,8	1,2	0,1	98,5	4,5

### 3.3 Share of households using ICT in the context of the regions for 2018

in percentage

	Fixed telephone line	Mobile phone	Cable television	Satellite television	Desktop computer	Laptop computer (laptop, netbook, ultrabook)	Tablet
<b>Republic of Kazakhstan</b>	59,5	98,3	28,6	44,2	54,2	51,1	33,8
Akmola	70,5	94,8	17,7	66,3	37,5	50,9	25,9
Aktobe	71,0	98,3	27,8	60,9	54,0	43,5	19,3
Almaty	57,2	99,8	19,6	66,5	79,0	55,4	40,2
Atyrau	81,0	99,2	49,6	36,7	36,4	59,4	37,9
Batys Kazakhstan	46,6	98,8	19,0	61,6	29,6	67,0	40,5
Zhambyl	28,5	99,3	7,6	71,8	58,4	39,0	30,8
Karagandy	59,6	96,6	23,5	32,4	45,9	43,5	26,8
Kostanai	72,7	99,7	31,9	41,5	36,7	38,0	15,6
Kyzylorda	36,9	99,9	3,4	61,7	75,7	52,4	43,3
Mangystau	48,5	99,2	29,3	58,0	35,0	55,8	20,6
Pavlodar	52,6	97,7	36,9	21,1	29,7	34,2	18,9
Soltustik Kazakhstan	72,4	96,6	17,9	57,2	41,4	40,5	17,8
Turkistan	29,9	100,0	11,3	69,3	55,0	55,8	26,5
Shygys Kazakhstan	55,4	97,2	31,1	42,1	69,0	50,7	27,8
Nur-Sultan city	85,0	100,0	54,9	5,3	74,8	45,5	76,1
Almaty city	86,8	97,9	46,9	16,8	66,0	70,6	57,5
Shymkent city	23,0	98,3	45,3	21,2	37,6	50,9	16,7

## Internet users and computer in households

### 3.4 Share of ICT users for 2018

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 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>	78,0	80,3	76,9	81,2	78,9	81,3	72,9	83,4
Akmola	66,6	69,3	70,4	69,0	70,9	73,8	70,7	74,5
Aktobe	75,9	78,0	79,5	77,6	78,9	81,1	69,7	83,8
Almaty	82,2	84,4	76,9	86,5	83,1	85,3	74,6	88,2
Atyrau	73,4	75,0	70,4	76,4	76,4	78,1	70,5	80,4
Batys Kazakhstan	83,6	84,4	74,0	86,7	74,0	76,9	68,5	78,8
Zhambyl	80,6	82,4	81,3	82,7	79,1	80,9	77,4	82,0
Karagandy	67,1	70,1	71,7	69,8	70,7	73,9	70,3	74,6
Kostanai	76,2	80,3	76,8	80,9	81,4	85,7	72,5	88,0
Kyzylorda	81,6	83,1	76,4	85,3	76,3	77,7	64,7	81,8
Mangystau	75,2	76,3	76,7	76,2	77,7	78,9	67,6	82,5
Pavlodar	79,4	82,6	70,9	84,9	80,1	83,3	77,4	84,4
Soltustik Kazakhstan	75,3	79,4	76,8	79,9	73,0	77,0	67,4	78,8
Turkistan	82,9	84,5	83,4	85,0	83,3	84,8	83,7	85,3
Shygyz Kazakhstan	75,3	79,0	74,5	79,9	75,5	79,2	70,5	80,9
Nur-Sultan city	86,5	87,5	78,3	89,5	87,0	88,1	78,6	90,1
Almaty city	78,9	81,6	79,2	82,0	82,0	84,3	65,4	87,7
Shymkent city	76,7	78,3	71,2	80,4	78,4	80,0	66,8	84,1

\* including mobile internet users.

### 3.5 Distribution of ICT users by gender

in percentage

	Total	Including	
		male	female
2014	100,0	47,0	53,0
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

### 3.6 Age structure of ICT users for 2018

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>	17,3	1,3	13,9	65,8	1,7
Akmola	14,5	0,9	13,3	69,3	1,9
Aktobe	16,9	1,0	13,3	67,5	1,3
Almaty	19,0	1,3	13,3	64,8	1,6

						Continuation
	6-14 years old	15 years old	16-24 years old	25-74 years old	75 years old and older	
Atyrau	19,2	1,5	15,6	63,4	0,3	
Batys Kazakhstan	14,1	1,0	13,2	68,4	3,3	
Zhambyl	21,8	1,6	15,1	60,2	1,3	
Karagandy	13,3	1,2	13,1	70,9	1,5	
Kostanai	12,2	0,9	11,6	72,1	3,2	
Kyzylorda	21,5	1,5	16,2	60,6	0,3	
Mangystau	19,4	1,5	15,6	62,9	0,5	
Pavlodar	13,4	1,0	11,8	71,1	2,7	
Soltustik Kazakhstan	13,2	0,6	12,0	72,1	2,2	
Turkistan	25,5	2,1	17,5	54,2	0,7	
Shygys Kazakhstan	14,3	0,9	10,9	70,5	3,3	
Nur-Sultan city	16,3	1,2	13,4	67,9	1,3	
Almaty city	13,1	1,0	13,3	70,6	1,9	
Shymkent city	20,8	1,8	16,7	59,9	0,8	

## Computer literacy rate and computer user share for 2018

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

	in percentage			
	No skills	Novice user	Regular user	Advanced user
<b>Republic of Kazakhstan</b>	87,4	23,5	57,1	6,8
Akmola	75,6	22,0	51,3	2,3
Aktobe	87,1	26,1	58,0	3,0
Almaty	90,0	26,6	60,9	2,5
Atyrau	81,3	18,8	54,4	8,1
Batys Kazakhstan	94,5	22,7	70,4	1,4
Zhambyl	86,5	26,2	55,9	4,4
Karagandy	85,2	20,9	60,5	3,8
Kostanai	82,1	22,2	58,5	1,4
Kyzylorda	91,9	21,8	62,7	7,4
Mangystau	93,2	14,9	72,3	6,0
Pavlodar	85,5	30,8	49,4	5,3
Soltustik Kazakhstan	80,9	18,0	58,6	4,3
Turkistan	88,4	21,9	48,7	17,8
Shygys Kazakhstan	81,9	31,3	46,9	3,7
Nur-Sultan city	94,8	11,9	62,3	20,6
Almaty city	92,9	24,1	59,2	9,6
Shymkent city	85,0	27,8	54,2	3,0

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

	in percentage		
	Total	Including	
		male	female
No skills	100,0	42,1	57,9
Novice user	100,0	48,7	51,3
Regular user	100,0	48,3	51,7
Advanced user	100,0	54,2	45,8

### 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	10,8	58,1	29,4	1,7
15 years old	1,4	29,3	65,9	3,4
16-24 years old	0,7	10,0	79,5	9,8
25-74 years old	11,1	17,4	63,4	8,1
75 years old and older	79,1	15,4	5,5	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>	19,1	16,3	22,7	18,1	13,8	7,6	2,3	0,4
Akmola	17,7	18,3	19,5	18,9	15,2	7,4	2,8	0,2
Aktobe	19,6	16,1	20,7	17,0	13,9	11,3	1,3	0,1
Almaty	19,5	15,3	19,1	18,4	16,9	7,8	2,6	0,4
Atyrau	21,7	18,4	26,1	17,8	11,5	4,5	0,0	0,0
Batys Kazakhstan	15,4	14,0	20,1	14,6	14,9	10,6	7,4	3,0
Zhambyl	24,1	16,5	18,8	14,1	14,4	9,9	1,7	0,4
Karagandy	17,5	16,3	23,2	20,7	15,0	5,9	1,4	0,1
Kostanai	14,3	14,2	20,6	21,0	15,1	11,1	3,4	0,2
Kyzylorda	22,1	18,2	16,3	18,1	14,1	8,2	2,9	0,1
Mangystau	23,9	18,0	25,8	15,6	10,8	5,4	0,3	-
Pavlodar	13,9	13,7	19,2	19,1	16,1	12,2	5,0	0,7
Soltustik Kazakhstan	15,2	14,4	18,9	17,8	15,8	13,0	4,4	0,3
Turkistan	27,6	20,0	17,2	18,5	14,2	2,5	-	-
Shygyz Kazakhstan	15,6	13,0	17,9	18,1	16,3	14,6	4,1	0,4
Nur-Sultan city	15,7	15,4	41,5	14,0	8,9	2,9	1,0	0,6
Almaty city	14,6	14,8	31,6	20,5	10,4	5,2	2,5	0,4
Shymkent city	21,2	20,5	26,8	18,8	8,7	3,8	0,3	-

### 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>	20,3	17,0	22,5	17,3	13,4	7,2	2,1	0,2
Akmola	19,3	19,2	20,4	18,6	13,8	6,3	2,1	0,3
Aktobe	20,4	16,8	21,5	16,6	13,3	10,0	1,4	-
Almaty	20,7	16,0	17,9	17,4	16,8	8,4	2,7	0,1
Atyrau	22,6	19,8	24,2	18,3	10,7	4,4	0,1	0,1
Batys Kazakhstan	17,7	14,9	19,3	13,7	15,0	10,5	7,4	1,6
Zhambyl	25,3	17,3	19,8	12,6	13,9	9,7	1,2	0,4
Karagandy	18,8	18,0	23,6	19,5	13,7	5,1	1,2	0,1
Kostanai	14,7	14,9	19,8	21,5	15,8	10,3	3,0	0,1

Continuation								
	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
Kyzylorda	23,6	18,7	16,1	16,2	13,9	8,5	2,9	0,2
Mangystau	24,6	18,8	26,0	15,4	10,1	4,8	0,3	-
Pavlodar	14,9	14,5	19,9	19,9	14,3	11,6	4,4	0,4
Soltustik Kazakhstan	15,8	16,3	19,4	17,9	15,1	11,7	3,8	0,0
Turkistan	28,0	20,7	18,1	16,5	14,4	2,5	-	-
Shygys Kazakhstan	17,0	13,8	19,0	17,5	14,9	13,6	4,0	0,2
Nur-Sultan city	16,4	15,2	41,3	14,2	9,1	2,8	0,9	0,2
Almaty city	16,6	15,3	30,1	19,7	10,9	4,7	2,4	0,2
Shymkent city	21,8	20,8	25,9	18,9	8,5	3,8	0,3	-

### 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>	70,0	21,6	8,4
Akmola	79,8	16,5	3,8
Aktobe	66,2	25,3	8,5
Almaty	71,9	21,3	6,8
Atyrau	78,5	16,9	4,6
Batys Kazakhstan	66,0	25,4	8,6
Zhambyl	64,0	25,0	11,1
Karagandy	77,5	16,3	6,3
Kostanai	79,6	15,1	5,3
Kyzylorda	59,7	32,5	7,7
Mangystau	73,3	19,0	7,7
Pavlodar	60,1	24,6	15,3
Soltustik Kazakhstan	66,2	22,0	11,9
Turkistan	50,1	34,4	15,5
Shygys Kazakhstan	66,5	26,3	7,2
Nur-Sultan city	82,8	7,9	9,3
Almaty city	79,4	16,0	4,6
Shymkent city	80,2	14,1	5,7

### 3.13 Computer actions of household members \*

in percentage	
	2014
Sending e-mail with attached files (document, photo, video)	75,8
Search, download, install and configure software	30,2
Work with database (DBMS)	26,0
Working with graphics software	32,8
Connection and installation of new devices (printer, modem, etc.)	23,1
Development of computer programs using a special software language	2,7
Creating an Internet resource	2,7
Copy or transfer a file or folder	29,3
Using the file (document) copy and paste tools to get copies or move information in a document	22,9
Transfer files between computers and other devices	19,8
Other	17,2

Continuation				
	2015	2016	2017	2018
Sending e-mail with attached files (document, photo, video)	58,4	59,3	62,6	61,3
Search, download and install software	14,6	15,8	20,5	21,7
Configuring the software, including changing the operating system or security software	7,9	10,9	12,2	12,5
Working in the Excel spreadsheet editor (using basic arithmetic formulas in tables)	42,5	44,5	45,4	49,9
Working in a graphical editor (including presentations, text, images, sound, video, or charts)	20,9	22,1	24,0	61,5
Working in a word text editor	63,8	63,0	58,3	24,2
Connecting and installing new devices (printer, modem, etc)	13,8	16,0	18,2	18,8
Development of computer programs using a special software language	3,7	5,9	6,4	7,6
Copy or transfer a file or folder	31,9	35,4	33,2	35,1
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
Transfer files between computers and other devices	22,5	23,7	23,2	24,7
Other	10,6	8,4	9,0	10,1

\* Since 2014, computer actions have been aligned with the questionnaire of the International Telecommunication Union

## Using the Internet for 2018

### 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>	84,5	30,3	9,9	4,5	9,5	23,9	98,7	20,6
Akmola	89,7	25,3	5,3	2,1	7,0	14,5	98,7	20,6
Aktobe	80,8	32,5	9,7	1,8	8,6	32,9	99,2	23,6
Almaty	79,9	25,2	8,5	0,8	4,7	12,5	99,5	24,8
Atyrau	92,4	43,6	12,5	2,7	8,3	42,0	100,0	15,5
Batys Kazakhstan	87,8	37,0	8,9	5,3	9,7	30,4	98,6	36,1
Zhambyl	70,0	19,8	8,3	1,6	3,0	13,7	99,8	31,0
Karagandy	92,5	45,3	12,9	8,1	24,8	59,9	99,6	36,8
Kostanai	91,7	31,9	12,3	9,4	19,4	21,7	97,3	26,2
Kyzylorda	85,5	41,6	17,8	4,7	6,4	36,1	99,7	9,3
Mangystau	74,6	24,2	7,9	1,0	0,7	6,9	99,2	5,2
Pavlodar	85,1	18,0	6,6	1,1	4,1	9,3	96,7	16,8
Soltustik Kazakhstan	93,9	22,9	8,6	0,3	7,9	24,8	95,1	21,3
Turkistan	69,5	26,8	18,0	2,6	4,7	35,2	99,3	14,6
Shygyz Kazakhstan	87,9	15,1	6,6	5,9	15,6	18,8	99,2	8,5
Nur-Sultan city	89,8	43,4	9,0	12,5	23,6	25,7	95,6	27,5
Almaty city	91,4	43,0	6,6	9,2	6,2	12,2	99,7	15,0
Shymkent city	89,2	16,7	4,3	1,1	4,6	13,3	96,4	15,7

### 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>	84,3	12,4	3,3
Akmola	85,5	14,1	0,5
Aktobe	79,2	13,1	7,6
Almaty	80,3	16,3	3,4
Atyrau	93,9	5,4	0,7
Batys Kazakhstan	88,4	8,9	2,7
Zhambyl	80,7	13,7	5,6
Karagandy	92,1	5,9	2,0
Kostanai	86,8	9,8	3,4
Kyzylorda	84,7	12,1	3,2
Mangystau	84,7	13,1	2,2
Pavlodar	90,2	8,1	1,7
Soltustik Kazakhstan	84,0	12,2	3,8
Turkistan	71,7	21,6	6,7
Shygyz Kazakhstan	79,0	17,1	3,8
Nur-Sultan city	92,2	6,1	1,7
Almaty city	89,4	9,5	1,1
Shymkent city	87,8	9,4	2,8

### 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>	32,6	19,6	25,9
Akmola	41,8	34,6	32,6
Aktobe	44,1	31,9	34,0
Almaty	34,1	13,1	24,1
Atyrau	38,8	12,2	27,8
Batys Kazakhstan	33,8	23,8	42,3
Zhambyl	24,0	16,3	25,9
Karagandy	53,7	36,3	33,4
Kostanai	32,5	26,1	17,9
Kyzylorda	19,6	14,1	18,1
Mangystau	24,1	22,5	37,4
Pavlodar	31,1	19,1	30,0
Soltustik Kazakhstan	36,2	26,9	31,3
Turkistan	25,2	13,0	25,5
Shygyz Kazakhstan	19,1	13,3	19,0
Nur-Sultan city	51,8	13,9	24,8
Almaty city	35,8	20,7	22,1
Shymkent city	9,2	14,1	16,4

### 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>	36,8	16,0	75,4	11,2	63,3	12,1
Akmola	36,1	17,5	83,6	18,1	70,3	25,4
Aktobe	43,3	15,8	80,6	7,4	80,4	12,7
Almaty	47,7	10,8	69,8	5,9	43,3	7,4
Atyrau	36,2	10,0	86,4	23,6	82,6	17,8
Batys Kazakhstan	39,7	16,1	86,6	17,3	76,1	14,9
Zhambyl	23,2	13,3	71,5	5,6	64,0	7,9
Karagandy	53,9	33,2	87,2	14,4	83,3	23,3
Kostanai	44,5	14,2	78,9	15,0	71,8	13,7
Kyzylorda	24,5	20,0	59,4	13,5	50,1	9,3
Mangystau	23,6	12,2	79,1	2,0	53,7	5,8
Pavlodar	47,4	22,1	77,9	13,1	69,3	11,3
Soltustik Kazakhstan	33,0	23,4	83,9	14,6	76,5	12,6
Turkistan	24,7	13,6	67,1	9,6	68,7	7,6
Shygys Kazakhstan	36,5	8,2	71,7	12,4	44,0	6,5
Nur-Sultan city	26,5	20,3	78,9	14,1	70,8	23,7
Almaty city	49,7	19,0	69,4	13,3	48,7	11,8
Shymkent city	15,0	6,5	81,6	1,7	70,2	6,0

### 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>	19,8	13,5
Akmola	8,4	7,2
Aktobe	23,5	16,8
Almaty	12,0	5,7
Atyrau	15,1	8,4
Batys Kazakhstan	25,2	16,3
Zhambyl	21,0	17,9
Karagandy	40,3	23,9
Kostanai	21,8	20,2
Kyzylorda	19,7	11,1
Mangystau	21,4	16,4
Pavlodar	12,0	6,3
Soltustik Kazakhstan	15,2	9,0
Turkistan	15,7	6,5
Shygys Kazakhstan	9,3	19,0
Nur-Sultan city	31,1	26,7
Almaty city	29,4	14,4
Shymkent city	7,2	4,1



### 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>	15,4	4,3
Akmola	24,5	2,6
Aktobe	16,4	5,4
Almaty	11,6	0,6
Atyrau	9,2	16,7
Batys Kazakhstan	16,8	4,2
Zhambyl	8,3	1,9
Karagandy	16,7	7,9
Kostanai	13,6	2,0
Kyzylorda	16,8	3,0
Mangystau	14,0	9,5
Pavlodar	11,5	2,5
Soltustik Kazakhstan	19,6	1,0
Turkistan	21,5	4,6
Shygys Kazakhstan	7,9	0,9
Nur-Sultan city	42,5	7,8
Almaty city	11,4	6,2
Shymkent city	2,2	1,5

### 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>	34,6	28,3	14,8	13,2
Akmola	32,7	29,8	13,2	11,0
Aktobe	19,8	9,1	6,4	13,3
Almaty	60,4	46,3	27,5	16,7
Atyrau	18,9	14,4	8,4	9,5
Batys Kazakhstan	66,7	62,5	54,2	56,3
Zhambyl	21,7	10,6	3,1	11,0
Karagandy	43,1	34,9	24,5	19,7
Kostanai	30,7	28,1	7,6	12,8
Kyzylorda	38,9	37,2	35,3	33,8
Mangystau	21,0	11,0	9,2	3,4
Pavlodar	42,9	29,1	20,0	7,5
Soltustik Kazakhstan	24,4	23,1	13,3	13,2
Turkistan	26,5	22,1	13,4	7,6
Shygys Kazakhstan	36,2	34,4	3,4	1,9
Nur-Sultan city	32,8	32,5	17,5	17,3
Almaty city	26,3	23,1	3,8	3,0
Shymkent city	25,2	17,1	5,5	13,3

## E-commerce for 2018

### 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 the countries of the Eurasian Economic Union	sellers from other countries
<b>Republic of Kazakhstan</b>	19,0	14,6	2,1	2,4
Akmola	10,2	3,2	2,8	3,0
Aktobe	16,1	11,1	2,6	1,8
Almaty	22,5	17,1	3,1	1,3
Atyrau	17,0	16,0	4,4	3,7
Batys Kazakhstan	24,5	22,9	0,2	1,0
Zhambyl	27,6	21,4	1,4	2,3
Karagandy	39,5	28,8	3,6	6,5
Kostanai	19,8	10,6	1,5	4,3
Kyzylorda	13,1	8,9	0,1	0,3
Mangystau	14,2	11,4	0,8	0,6
Pavlodar	12,5	6,9	3,0	5,2
Soltustik Kazakhstan	15,9	6,3	1,1	5,8
Turkistan	7,0	6,7	0,1	0,2
Shygyz Kazakhstan	9,8	6,9	1,4	1,1
Nur-Sultan city	26,8	26,3	8,5	6,4
Almaty city	19,9	18,5	0,3	0,8
Shymkent city	13,3	7,6	0,2	0,1

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

in percentage

	Foodstuffs of the population	Medications	Movies, music	Books, magazines, newspapers	Clothing, shoes, sporting goods	Electronic learning materials	Computer programs, video games	Computer goods
<b>Republic of Kazakhstan</b>	29,3	18,4	17,5	14,5	58,7	7,8	11,3	9,2
Akmola	10,6	4,8	4,9	3,9	54,1	2,3	4,4	11,0
Aktobe	12,3	12,5	7,6	8,2	58,6	7,2	6,9	3,6
Almaty	16,9	6,4	13,8	21,9	32,1	7,6	7,1	9,2
Atyrau	16,3	31,3	37,8	32,8	75,1	15,5	16,6	14,7
Batys Kazakhstan	37,6	15,0	8,7	4,3	54,2	3,6	6,0	5,0
Zhambyl	42,4	17,3	8,0	4,1	34,5	2,6	2,5	2,6
Karagandy	24,7	18,6	10,3	15,8	65,5	6,4	9,8	8,3
Kostanai	14,1	12,2	10,4	10,9	77,9	3,8	5,4	6,2
Kyzylorda	2,3	28,6	42,8	16,1	42,2	18,3	34,6	15,0
Mangystau	38,9	5,1	8,7	12,6	25,9	17,2	7,2	1,4
Pavlodar	10,4	9,8	4,6	1,9	68,0	3,2	5,1	5,7
Soltustik Kazakhstan	5,8	2,6	3,6	3,7	74,1	0,9	3,2	6,5
Turkistan	27,2	28,0	16,4	6,9	40,7	4,6	13,6	10,4
Shygyz Kazakhstan	3,9	5,5	3,8	6,5	80,9	3,2	5,0	2,8

Continuation

	Foodstuffs of the population	Medi- cations	Movies, music	Books, magazines, newspapers	Clothing, shoes, sporting goods	Electronic learning materials	Computer programs, video games	Computer goods
Nur-Sultan city	84,4	40,7	54,2	33,8	99,0	17,6	23,2	24,4
Almaty city	40,9	22,4	24,0	14,7	61,6	11,2	22,0	11,7
Shymkent city	-	32,4	10,8	5,1	53,4	0,5	6,1	4,2

### 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 25000 tenge	25000 - up to 50000 tenge	over 50000 tenge
<b>Republic of Kazakhstan</b>	17,4	48,7	22,8	11,1
Akmola	19,4	58,5	16,0	6,0
Aktobe	15,4	29,7	29,7	25,2
Almaty	37,2	48,8	12,2	1,7
Atyrau	11,1	52,3	26,9	9,6
Batys Kazakhstan	15,5	58,7	23,4	2,3
Zhambyl	25,6	50,2	16,4	7,8
Karagandy	11,0	48,6	20,3	20,1
Kostanai	7,6	67,1	21,5	3,9
Kyzylorda	18,7	56,4	18,2	6,8
Mangystau	26,6	51,9	14,6	6,9
Pavlodar	9,4	59,4	23,1	8,0
Soltustik Kazakhstan	12,2	49,0	26,3	12,5
Turkistan	12,1	48,8	35,8	3,3
Shygyz Kazakhstan	8,0	48,5	33,3	10,1
Nur-Sultan city	3,5	43,2	36,8	16,5
Almaty city	12,9	38,2	30,5	18,5
Shymkent city	36,4	53,4	6,8	3,4

### 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>	39,4	23,6	16,9	41,8	19,5
Akmola	34,8	14,0	5,6	40,1	19,6
Aktobe	39,4	22,8	3,7	35,3	8,3
Almaty	45,1	24,6	6,7	23,0	28,5
Atyrau	33,1	39,6	40,8	46,3	9,4
Batys Kazakhstan	28,5	23,1	14,2	30,5	18,1
Zhambyl	43,5	15,9	10,8	33,6	13,2
Karagandy	52,0	24,3	22,9	35,2	23,4

Continuation

	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
Kostanai	25,6	21,3	17,0	57,6	8,4
Kyzylorda	42,4	14,3	33,8	24,7	1,6
Mangystau	18,8	30,5	11,9	41,2	5,3
Pavlodar	43,4	21,8	6,8	37,4	15,0
Soltustik Kazakhstan	26,2	17,5	6,9	58,7	15,0
Turkistan	40,0	24,9	22,6	9,8	4,8
Shygys Kazakhstan	16,0	11,5	13,8	59,5	5,5
Nur-Sultan city	66,8	29,9	17,1	83,2	30,3
Almaty city	28,7	34,3	27,9	42,6	25,3
Shymkent city	7,0	1,7	17,8	54,3	30,2

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

### Level of ICT use by organizations

#### 4.1 Key ICT Utilization Indicators for 2018

	Organizations, total	units
		Of them government organizations
Number of own data centers	749	x
Number of server rooms	21 118	2 391
Number of servers	44 635	5 722
Number of storage systems	12 818	1 243
The number of organizations using th conductive Cloud IT Services	8 648	273
The number of organizations, using th conductive internal network (LAN)	38 109	4 666
The number of organizations, using th Suitable wireless connections within the network (WLAN)	20 329	1 360
Number of organizations w using conductive web portal	63 040	6 370
Number of organizations using the Internet to communicate with government agencies	84 389	7 212
Number of organizations ordering goods and services on the Internet	6 060	-
Number of organizations integrated into international Internet booking systems	1 381	-
Number of organizations with automated internal business processes	7 090	263

#### 4.2 Indicators of ICT use by organizations

	in percentage					
	2014		2015		2016	
	total	in government organizations	total	in government organizations	total	in government organizations
Share of organizations using computers	61,4	90,0	69,2	97,9	75,6	98,5
Share of organizations with access to the Internet	55,3	81,6	63,6	86,5	71,0	90,3
Share of organizations with Intranet	15,6	20,4	18,8	24,3	27,8	27,8
Share of organizations with Extranet	1,2	1,3	1,5	3,5	3,7	5,3
Share of organizations receiving orders for goods and Internet services	7,0	6,5	11,5	10,8	4,0	-
Share of organizations ordering goods and services on the Internet	9,2	22,4	16,3	25,7	6,1	-

Continuation

	2017		2018	
	total	in government organizations	total	in government organizations
Share of organizations using computers	72,6	98,3	78,9	98,6
Share of organizations with access to the Internet	69,3	90,3	76,1	91,7
Share of organizations with Intranet	31,6	50,1	33,8	53,3
Share of organizations with Extranet	3,2	6,9	3,4	6,1
Share of organizations receiving orders for goods and Internet services	1,4	-	1,6	-
Share of organizations ordering goods and services on the Internet	5,7	-	4,6	-

### 4.3 Number of organizations using ICT

units

	2014		2015		2016	
	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>	58 372	8 709	70 990	9 279	80 717	7 989
Akmola	3 125	844	3 108	887	3 055	748
Aktobe	3 421	574	3 994	572	3 798	517
Almaty	2 874	827	3 230	831	3 393	760
Atyrau	1 881	289	2 600	309	2 455	284
Batys Kazakhstan	1 828	420	2 001	564	2 524	492
Zhambyl	1 723	413	2 144	538	2 039	455
Karagandy	5 030	809	6 211	821	6 809	698
Kostanai	3 624	833	3 607	843	3 928	729
Kyzylorda	1 513	391	1 977	414	1 906	387
Mangystau	2 134	257	2 193	279	1 875	252
Pavlodar	3 120	558	3 386	589	3 973	488
Soltustik Kazakhstan	2 539	651	2 583	660	2 706	586
Turkistan	1 002	446	1 629	572	1 488	503
Shygys Kazakhstan	5 041	985	4 642	943	4 988	765
Nur-Sultan city	5 859	210	6 182	223	9 267	158
Almaty city	11 261	100	18 676	104	23 289	67
Shymkent city	2 397	102	2 827	130	3 224	100
<b>Using the Internet</b>						
<b>Republic of Kazakhstan</b>	52 630	7 891	65 186	8 195	75 779	7 320
Akmola	2 818	792	2 782	828	2 906	727
Aktobe	3 165	489	3 721	502	3 484	458
Almaty	2 551	787	2 911	789	3 121	727
Atyrau	1 741	275	2 455	292	2 303	276
Batys Kazakhstan	1 743	407	1 769	441	2 418	455
Zhambyl	1 543	391	1 947	496	1 838	418
Karagandy	4 639	700	5 732	707	6 321	602
Kostanai	3 339	783	3 238	758	3 601	643
Kyzylorda	1 385	374	1 719	402	1 695	353

Continuation						
	2014		2015		2016	
	total	of them	total	of them	total	of them
		in government organizations		in government organizations		in government organizations
Mangystau	1 979	237	2 079	252	1 744	236
Pavlodar	2 805	470	2 979	493	3 691	447
Soltustik Kazakhstan	2 266	542	2 294	555	2 500	511
Turkistan	913	437	1 306	468	1 274	453
Shygys Kazakhstan	4 135	823	4 148	792	4 452	692
Nur-Sultan city	4 862	196	5 855	213	9 000	156
Almaty city	10 710	89	17 688	94	22 384	67
Shymkent city	2 036	99	2 563	113	3 047	99

Continuation				
	2017		2018	
	total	of them	total	of them
		in government organizations		in government organizations

#### Using computers

<b>Republic of Kazakhstan</b>	83 478	8 061	104 435	8 145
Akmola	3 168	753	3 329	748
Aktobe	3 933	519	4 123	516
Almaty	3 643	791	4 129	810
Atyrau	2 459	294	2 737	290
Batys Kazakhstan	2 420	459	2 174	460
Zhambyl	2 110	453	2 052	455
Karagandy	7 261	699	7 971	706
Kostanai	4 199	747	4 374	744
Kyzylorda	1 788	394	2 041	400
Mangystau	2 733	256	3 108	259
Pavlodar	4 101	497	4 394	497
Soltustik Kazakhstan	3 026	583	3 153	586
Turkistan	1 502	511	3 055	601
Shygys Kazakhstan	5 201	760	5 729	754
Nur-Sultan city	10 456	172	21 951	164
Almaty city	22 209	72	24 767	71
Shymkent city	3 269	101	5 348	84

#### Using the Internet

<b>Republic of Kazakhstan</b>	79 658	7 408	100 702	7 571
Akmola	3 008	715	3 183	695
Aktobe	3 714	460	3 981	460
Almaty	3 434	746	3 982	774
Atyrau	2 346	269	2 656	268
Batys Kazakhstan	2 352	431	2 120	453
Zhambyl	1 930	424	1 925	442
Karagandy	6 896	616	7 673	618
Kostanai	3 939	678	4 162	681
Kyzylorda	1 635	367	1 894	380
Mangystau	2 667	240	2 956	241
Pavlodar	3 770	453	4 104	458

Continuation

	2017		2018	
	total	of them	total	of them
		in government organizations		in government organizations
Soltustik Kazakhstan	2 852	517	2 999	513
Turkistan	1 358	462	2 801	581
Shygys Kazakhstan	4 940	692	5 375	695
Nur-Sultan city	10 225	169	21 427	162
Almaty city	21 438	69	24 199	68
Shymkent city	3 154	100	5 265	82

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

units

	2014	2015	2016	2017	2018
<b>Republic of Kazakhstan</b>	19 187	25 250	21 007	25 950	30 628
Akmola	702	390	564	738	738
Aktobe	312	989	878	1 002	1 249
Almaty	478	331	795	1 022	1 086
Atyrau	449	1 062	636	755	900
Batys Kazakhstan	560	532	670	863	724
Zhambyl	582	893	598	618	573
Karagandy	2 023	2 514	1 597	2 088	2 381
Kostanai	1 158	1 237	869	1 008	1 307
Kyzylorda	340	551	518	580	441
Mangystau	660	237	563	1 054	818
Pavlodar	1 115	1 252	722	969	1 091
Soltustik Kazakhstan	790	738	638	652	609
Turkistan	259	369	529	620	759
Shygys Kazakhstan	1 888	1 749	998	1 403	1 626
Nur-Sultan city	2 024	3 208	2 184	2 926	4 682
Almaty city	5 370	8 299	7 451	8 721	10 165
Shymkent city	477	899	797	931	1 479

#### 4.5 Number of organizations using Intranet, Extranet

units

	Intranet					Extranet				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
<b>Republic of Kazakhstan</b>	14 792	19 267	29 698	36 356	44 737	1 137	1 557	3 938	3 711	4 547
Akmola	696	613	633	719	1 155	44	32	65	104	87
Aktobe	65	594	871	1 384	2 085	32	58	128	119	197
Almaty	886	626	873	1 425	1 365	37	18	218	304	263
Atyrau	618	997	1 016	1 228	1 234	25	42	69	127	134
Batys Kazakhstan	84	60	781	1 409	1 224	21	79	22	137	81
Zhambyl	241	232	626	920	829	14	11	69	80	70
Karagandy	1 240	1 917	1 931	2 928	3 274	92	82	182	232	124
Kostanai	1 329	1 089	1 476	1 910	2 016	99	33	103	157	99
Kyzylorda	280	418	650	775	1 659	8	9	37	69	44



Continuation

	Intranet					Extranet				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Mangystau	654	525	754	1 204	1 334	31	30	49	95	58
Pavlodar	662	501	1 214	1 563	1 761	71	86	94	139	108
Soltustik Kazakhstan	295	324	758	655	595	19	23	86	44	54
Turkistan	149	292	444	572	608	1	1	4	43	31
Shygys Kazakhstan	780	425	474	1 922	1 787	80	102	177	127	121
Nur-Sultan city	1 704	2 383	3 575	4 333	7 387	164	361	629	679	1 167
Almaty city	4 815	7 615	12 477	12 232	14 565	385	572	1 979	1 193	1 791
Shymkent city	294	656	1 145	1 177	1 859	14	18	27	62	118

## Internet access in organizations

### 4.6 Number of organizations using the Internet by access type for 2018

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>	25 780	51 359	8 912	4 067	10 584
Akmola	-	2 903	138	69	73
Aktobe	1 323	1 708	543	77	330
Almaty	365	2 213	937	295	172
Atyrau	1 585	620	121	101	229
Batys Kazakhstan	-	1 669	208	86	157
Zhambyl	783	772	146	74	150
Karagandy	1 284	4 320	909	500	660
Kostanai	23	3 732	284	82	41
Kyzylorda	31	1 456	210	52	145
Mangystau	-	2 102	304	103	447
Pavlodar	2 404	767	302	212	419
Soltustik Kazakhstan	50	2 537	228	116	68
Turkistan	573	1 562	300	20	346
Shygys Kazakhstan	934	3 024	437	283	697
Nur-Sultan city	89	16 708	788	1 272	2 570
Almaty city	14 180	4 635	1 336	573	3 475
Shymkent city	2 156	631	1 721	152	605

Note: Hereinafter, taking into account government organizations.

#### 4.7 Purpose of using the Internet in organizations

	units	
	2014	2015
Sending and receiving email	51 586	63 603
Telephone calls via the Internet / VoIP ( video conferencing )	9 459	11 778
Posting or instant messaging	24 786	30 580
Getting information about products and services	29 165	36 838
Getting information from government	28 597	39 944
Taken and the interacting with the government	22 988	33 158
Implementation of banking Internet operations	31 773	41 658
Accessing other financial services	7 942	10 420
Provision of customer services	5 680	7 463
Online product delivery	1 524	2 150
Receive orders via the Internet	6 654	11 758
Placing orders on the Internet	8 768	16 670
Staff recruitment	2 856	4 211
Staff training	2 957	3 524
Other	6 620	9 442

#### 4.8 Main indicators of e-commerce by region\*

	Total	Of them
		private employer
The number of organizations receiving orders for goods and services on the Internet, other global information networks using methods specifically designed for receiving or placing units	2 085	48
Using automated messaging system between organizations (EDI-systems)	451	1
Total sales of goods and services received in the amount of all orders via the Internet (excluding VAT), million tenge	465 428,3	1 320,9
sales of goods and services to the population	337 102,7	1 220,2
The volume (excluding VAT) received for all orders through EDI-systems of the total sales of goods and services received in the amount of all orders via the Internet, million tenge	192 707,6	173,8
The amount received through payment of electronic payment systems, the total sales of goods and services received in the amount of all orders via the Internet, million tenge	144 242,8	721,6

\*Taking into account individual entrepreneurs.

#### 4.9 ICT organization costs

	million tenge	
	2014	2015
Total ICT costs	237 079,4	375 600,5
of them:		
the cost of the acquisition (including installation and commissioning) computing equipment	74 944,2	122 603,2
the cost of purchasing software used on the basis of the license agreement	32 920,6	69 208,5
independent software development costs within the organization	3 322,8	8 726,6

	Continuation	
	2014	2015
expenses for Internet communication services	47 579,8	74 197,3
staff training costs associated with the development and use of ICT	1 831,4	1 491,0
the cost of the services of third-party organizations and professionals associated with information technology (except communication services and training)	46 557,9	36 676,1
ICT rental	-	-
other ICT costs	29 922,7	62 697,8

	continuation		
	2016	2017	2018
Total ICT costs	269 526,7	349 943,6	305 217,4
of them:			
the cost of purchasing software used on the basis of the license agreement	37 131,4	75 042,4	52 257,5
independent software development costs within the organization	11 603,0	10 931,0	5 177,8
staff training costs associated with the development and use of ICT	1 276,0	11 816,0	2 134,0
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

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

	million tenge				
	2014	2015	2016	2017	2018
<b>Republic of Kazakhstan</b>	237 079,4	375 600,4	269 526,7	349 943,6	305 217,4
Akmola	2 008,7	2 805,1	2 102,6	3 365,9	19 674,3
Aktobe	4 258,2	5 195,0	5 529,1	5 683,7	10 365,0
Almaty	5 346,6	4 120,4	3 640,7	4 244,8	5 295,2
Atyrau	32 959,0	42 449,9	8 514,1	13 464,1	38 711,7
Batys Kazakhstan	3 530,2	6 525,5	10 705,3	15 164,3	14 739,2
Zhambyl	1 736,6	2 491,8	2 390,0	2 191,8	2 044,9
Karagandy	4 917,8	7 771,5	6 939,5	7 730,9	10 163,8
Kostanai	2 024,0	2 392,8	2 779,8	3 200,3	3 709,8
Kyzylorda	7 314,3	12 399,5	2 167,8	3 290,5	2 761,0
Mangystau	6 252,9	6 769,4	8 825,5	11 639,9	11 655,4
Pavlodar	6 242,6	5 427,2	6 673,4	13 687,6	9 423,0
Soltustik Kazakhstan	1 320,5	1 401,8	1 355,7	2 447,2	2 113,5
Turkistan	1 917,1	2 006,3	2 302,4	2 166,9	2 827,4
Shygys Kazakhstan	5 025,8	5 840,5	12 898,6	13 376,9	12 752,5
Nur-Sultan city	114 644,3	160 794,1	83 603,8	71 930,2	103 365,2
Almaty city	35 221,2	103 840,7	106 103,3	172 271,6	53 088,3
Shymkent city	2 359,4	3 368,9	2 995,0	4 087,0	2 527,3

## 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 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 deli-

very 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.

Local area network (LAN) - group Compute e moat and peripheral equipment, combined with one or more high-speed channels autonomous lane e cottages digital data within one or more nearby buildings.

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.

E-commerce - business activities to implement commercial e op tions using electronic means of data exchange. Provides the ability to make purchases, sales, service, marketing measures of enterprises through the use of computer networks.

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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Responsible for release:

Ministry of National Economy

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Department of Service and Energy Statistics

Tel. +7 7172 749328, 749329

Head of the Department

Karaulova G.S.

Tel. +7 7172 749060

Computer layout and design:

«TNG» LLP

Nur-Sultan, Pobeda avenue, 35 a

Tel. +7 7172 577896

