



UNITER



Telecommunication sector



## TELECOMMUNICATION SECTOR

|                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mobile penetration rate - 121%</b>                                                                             | The mobile penetration rate in Belarus stands at 121%, while the number of subscribers is 11,4 million. Cellular mobile telecommunication covers 98,4% of the country, where 99,9% of population live.                                                                                                                                           |
| <b>3 acting mobile operators</b>                                                                                  | There are three mobile operators in Belarus: Velcom, MTS and life:). Together, the two largest operators Velcom and MTS control up to 88% of the market. The controlling interest of MTS belongs to the state, the other two companies are private.                                                                                              |
| <b>4.4 mln subscribers of fixed telephone network</b>                                                             | The number of subscribers to fixed telephone network has remained largely unchanged over the past decade and comes to about 4.4 million. The level of penetration is at 46%. The only provider of the fixed service facilities is Republican unitary enterprise "Beltelecom", a state-owned monopoly that controls around 99% of the market.     |
| <b>1,8 mln subscribers of cable television, 1,5 mln subscribers of IPTV</b>                                       | The number of subscribers of cable and terrestrial-cable television is about 1,8 million. Almost 50% of the subscribers resides in Minsk and Minsk region. 80% of the market in the region is controlled by "MTIS" company. At the beginning of 2016 the number of subscribers of IPTV interactive television amounted to more than 1,5 million. |
| <b>level of Internet penetration – 108,4%, 10,3 mln users</b>                                                     | The number of Internet subscribers per thousand people in Belarus has been growing steadily. This indicator increased in 3,7 times, from 293 subscribers (individuals and entities) in 2007 to 1084 subscribers in 2015.                                                                                                                         |
| <b>2,9 mln subscribers of fixed broadband access</b>                                                              | At the beginning of 2016 the total number of subscribers and users who have Internet access with the use of fixed broadband access technologies amounted to 2.9 million.                                                                                                                                                                         |
| <b>803,1 Gb/s external web gateway of Belarus</b>                                                                 | At the beginning of 2016 the carrying capacity of external Internet access channels was 803,1 Gb/s (2,7% increase in comparison with 2015).                                                                                                                                                                                                      |
| <b>Information and communication technologies Development Index – Belarus ranked in the 36<sup>th</sup> place</b> | According to the "Measuring the Information Society, 2013" Report, released by the International Telecommunication Union, Belarus ranked in the 36 <sup>th</sup> place in the global Information and communication technologies Development Index, leaving behind all CIS countries (including Russia), Brazil, India and China.                 |

# TELECOMMUNICATION SECTOR

## Mobile communication

### MARKET PERFORMANCE

The current level of mobile penetration in Belarus shows the saturation of the market. Year after year this figure increased steadily, and it reached a peak in 2011. In 2012 the level declined for the first time due the fact, that a part of life:) sim-cards were declared inactive. At the end of 2015 the mobile penetration level in Belarus amounted to 121%, reaching its highest since 2009 (1 pct-increase compared to 2014).

In 2015 the number of mobile users in Belarus increased by 46,4 thousand and amounted to 11,448 mln, of which 5.4 million being MTS users, 4.9 million being Velcom users and about 800 thousand were the users of life:). Cellular mobile telecommunication covers 98,4% of the country (+0,5 pct compared to 2014), where 99,9% of population live (+0,1 pct compared to 2014).

The number of subscribers to fixed telephone network has remained largely unchanged over the past decade and is unlikely to change in the future. The number of fixed service subscribers is 4,426 mln people, of which 3,442 mln are connected to the city networks and 984.1 thousand people are connected to rural telephone lines. The provision of apartment telephones in urban networks is 387 devices per 1 000 people, and 411 devices per 1 000 - in rural networks.

At the end of 2015 the total earnings before interest, taxes, depreciation and amortization (EBITDA) of three mobile operators increased by 1% to 425.7 mln EUR. MTS improved its EBITDA by 4.86%, making 261 mln EUR in 2015. EBITDA of Velcom decreased by 5.1% and amounted to 164 mln. EUR. Life:) company improved its performance from year to year, and had a positive EBITDA of 150 thousand EUR for the first time in 2014. In 2015, this figure rose in more than 6.5 times and exceeded 1 mln EUR. The indicator of ARPU, that shows the average monthly expenses on communication services is accounted for 4,645 EUR for MTS; 4,2 EUR for Velcom and approximately 3,3 EUR for life:).

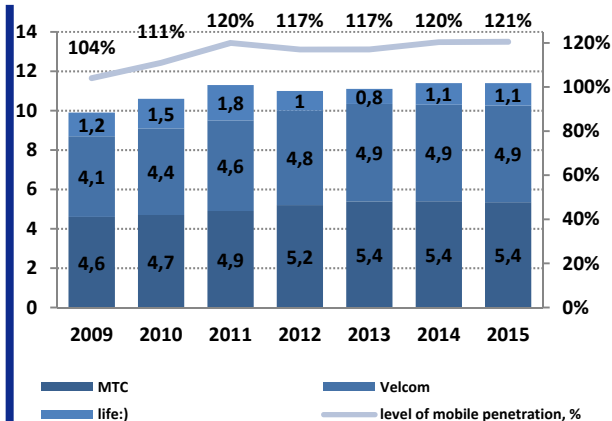
Velcom investments amounted to 66,1 mln EUR, MTS – to 72 mln EUR, life :) - to 3,3 mln EUR.

### Average revenue per one user

|           | MTS   | Velcom | life |
|-----------|-------|--------|------|
| ARPU, EUR | 4,645 | 4,2    | 3,3  |

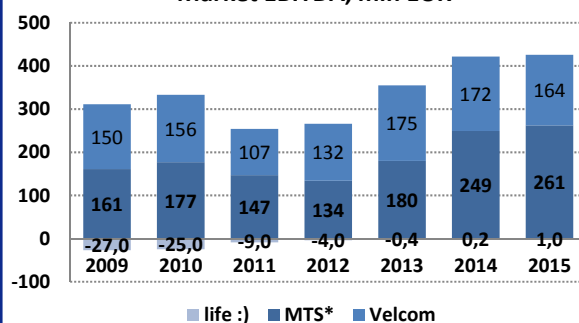
Source: MTS, Velcom, life:)

Number of subscribers (mln), level of mobile penetration



Source: MTS, Velcom, life:), Belstat

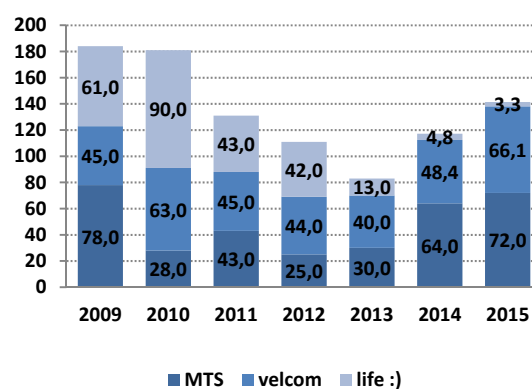
Market EBITDA, mln EUR



MTS shows OIBDA instead of EBITDA

Source: MTS, Velcom, life:)

Capital costs of mobile providers, mln EUR



Source: MTS, Velcom, life:)





# TELECOMMUNICATION SECTOR

## Mobile communication

### Key stakeholders

There are 3 mobile providers in Belarus. Leading position in the marketplace takes JLLC "Mobile TeleSystems" (MTS) with a market share of 45,5%. Velcom controls 45% of the market, 7% is accounted for JSC "BeST» (life).



The subscriber base has remained almost unchanged and amounted to 5,351 million users in 2015. The main priorities of MTS were a further development of the network, 3G coverage improvement, the launch of new services. The most significant event for both MTS and the entire mobile market in Belarus was a new LTE technology launch. Today, 4G services are available to subscribers of MTS in Minsk only.

Capital expenditures of the company in 2015 grew by 46% and composed 1,268 trln. rubles, including more than 175 bln. rubles for the frequency assignment for the development of a network according to UMTS-900 technology (one of the 3G standards).

MTS operator has continued the construction of new base stations in 2015, their number enlarged by 495 stations, of which 308 stations were 3G. The company also expanded the coverage of the fixed network in Minsk and regional centers, providing the possibility of using high-speed wired Internet via Ethernet technology for mass market and business.



The company's revenues went up by 20,2% and was estimated at 6,0 trln rubles., EBITDA (earnings before interest, taxes, depreciation and amortization) increased by 21,4% to \$ 3 trln rub.

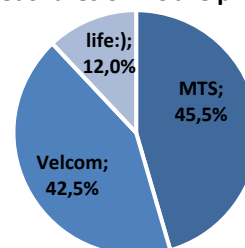
Velcom market share constitutes 42.5% and shows no particular change. Seven thousand new subscribers were added to the operator's subscriber base, which now include 4,95 million users. Subscribers. ARPU indicator lowered from 4,5 EUR in 2014 to 4,2 EUR in 2015.

The volume of investments from Velcom has grown over the past three years. The company has invested 66,1 mln EUR in the modernization of the network and implementation of new projects in Belarus in 2015, and has planned to spend more than 80 mln EUR on the same purposes.



The number of active users of life:) mobile operator went up by 10,4% and reached 1138 thousand. The company's revenues increased by 13% to \$ 825,8 bln rubles. EBITDA (operating profit before depreciation, interest and taxes) has shown a significant growth: in 2015 this figure skyrocketed by 682,1% to 18,1 bln (more than 1 mln USD). rubles in 2015, compared to the previous year.

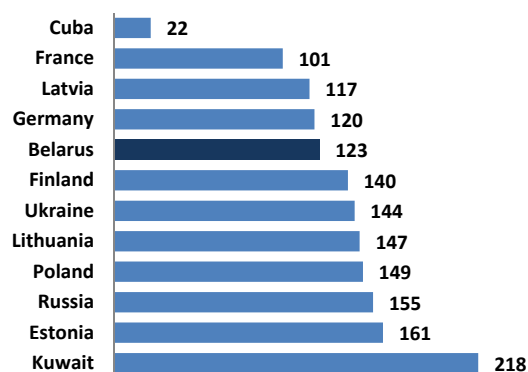
### Market shares of mobile providers



Source: MTS, Velcom, life:)

In Belarus mobile penetration is at the level of the most developed countries of the world. The number of mobile subscribers per 100 people is equal to 123. In the richest countries mobile subscribers per 100 people reach 122 on average, in the developing countries the figure is 92, EU – 123, USA – 110, the global average - 96.

### Number of mobile users per 100 people, 2014



Source: World Bank

## TELECOMMUNICATION SECTOR

### Cable television

#### MARKET PERFORMANCE

As of March 31, 2016 digital television broadcasting covers the territory of the Republic of Belarus, where 99.45% of the population reside. About 355 radio transmitters very-high frequencies band (VHF) operate across the Republic of Belarus, including:

- 102 transmitters in the radio-frequency band of 65.9 - 74 MHz;
- 253 transmitters in the radio-frequency band of 87.5 - 108 MHz.

A generally available package includes 8 television programs and 1 sound program. National TV programs are broadcasted across near-border countries. The main goals of the broadcasting organizations include the increase of the scope of broadcasting of TV and sound programs, the expansion of coverage of transmission equipment, the improvement of the quality of services provided.

The number of cable television subscribers in Belarus is about 1,8 mln, and around 147 service providers operate at the market. Cable TV is available in the 261 villages.

The equipment for the provision of TV services via IP-protocol were put into operation in data-communication network sin 2008. This technology is a direct competitor to cable, terrestrial and satellite TV. According to the data of the state statistical reporting, the total number of subscribers of IP-TV services has exceeded 1,5 mln people in 2015.

#### KEY STAKEHOLDERS

There are 147 operators providing cable service and terrestrial-cable television in Belarus . Number of subscribers to cable system and terrestrial-cable system is around 1,5 million, cable TV covers 266 villages. The "First National Channel" is broadcasted from the Intelsat 904 satellite, the coordinates 60 degrees eastern longitude, frequency 11483.7 MHz, flow rate 4000 Mbit / s, FEC - 3/4. Broadcasting volume is 19,5 hours per day.

Terrestrial digital broadcasting is performed at the DVB-T standard on 48 channels of four television broadcasting programs and one radio program with the parameters 8K, 64QAM, FEC -7/8, guard interval 1/8, the flow rate of 29 Mbit/s, broadcast area within a radius of 45 - 60 km from Kolodishchi.

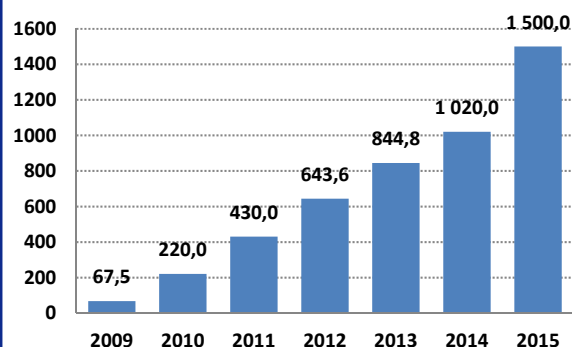
The largest cable provider in Belarus is JSC "Minsk Television Information Network." Today it serves about 550 thousand subscribers (including subscribers to "antenna on the staircase" systems that pick up only 3-5 channels), representing more than 1,6 million people. Among them about 300 thousand subscribers receive services from One central studio using a fiberoptic communication lines, allowing to provide a higher quality of TV services through the use of a number of TV signals directly from broadcasters studio complexes, bypassing the channels of on-air broadcasting.

#### Cable television in Belarus, 2015

| Region                                   | Number of providers | Number of subscribers |
|------------------------------------------|---------------------|-----------------------|
| Brest                                    | 11                  | 95 799                |
| Districts of Brest region                | 19                  | 62 552                |
| Total in Brest region                    | 30                  | 158 351               |
| Vitebsk                                  | 4                   | 129 261               |
| Districts of Vitebsk region              | 11                  | 136 395               |
| Total in Vitebsk region                  | 15                  | 265 656               |
| Gomel                                    | 5                   | 128 916               |
| Districts of Gomel region                | 13                  | 80 126                |
| Total in Gomel region                    | 18                  | 209 042               |
| Grodno                                   | 5                   | 118 804               |
| Districts of Grodno region               | 24                  | 68 420                |
| Total in Grodno region                   | 29                  | 187 224               |
| Minsk                                    | 16                  | 702 439               |
| Districts of Minsk region                | 21                  | 147 953               |
| Total in Minsk region                    | 37                  | 850 392               |
| Mogilev                                  | 10                  | 65 619                |
| Districts in Mogilev region              | 8                   | 62 220                |
| Total in Mogilev region                  | 18                  | 127 839               |
| Overall total in the Republic of Belarus | 147                 | 1 798 504             |

Source: Ministry of Communication

#### Number of subscribers to IPTV in Belarus, thsd



Source: Ministry of Communication

# TELECOMMUNICATION SECTOR

## Internet

The number of Internet subscribers per thousand people in Belarus has been growing steadily. This indicator increased in 3,7 times, from 293 subscribers (individuals and entities) in 2007 to 1084 subscribers in 2015.

Fixed broadband access (BBA) to Internet is one of the fastest growing services. At the beginning of 2016 the total number of subscribers and users with access to the Internet using stationary technologies (BBA) amounted to 2,9 million.

Increase in the number of broadband connections affects the width of the external Internet access channel. At the beginning of 2016 the carrying capacity of external Internet access channels was 803,1 Gb/s (2,7% increase in comparison with 2015). Overall, the total carrying capacity of the international Internet access channel increased in almost 260 times from 3,1 Gb/s in 2007 to 803,1 Gbit/s in 2015.

The attraction of subscribers to "severe" (multimedia) content is observed all over Belarus. It requires the development of appropriate infrastructure to meet the growing consumer demand for higher information transmission rate, as well as the requirements for the quality of data transmission services.

According to the household sample survey for living standards conducted by the National Statistical Committee of the Republic of Belarus at the beginning of 2016:

- The proportion of households with a personal computer – 63,1%;
- The proportion of households with access to the Internet from a home computer – 59,1%;
- The proportion of the population aged 6 years and older, having access to the Internet services – 62,2%.

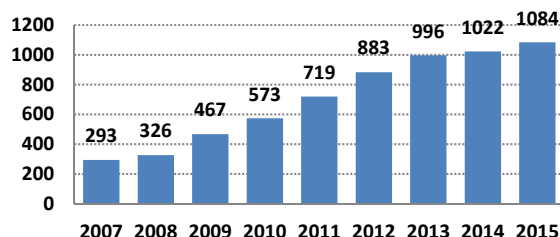
### KEY STAKEHOLDERS

There are 66 Internet service providers in Belarus, including mobile and cable TV operators. The leader in the market of broadband Internet in Belarus is "Beltelecom» (ByFly). The number of broadband subscribers "Beltelecom" has exceeded 2,2 million people in 2015 (about 81% of all broadband subscribers in Belarus).

The share of all other operators accounts for 19% of the market. The largest of them comprise LLC "Belinfony" ("ADSL.BY"), FLLC "Alternative Digital Network" ("Atlant Telecom") and JLLC "Cosmos TV» («Cosmos TV»).

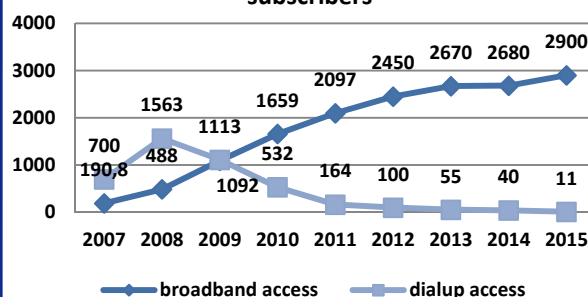
The vast majority of access points to the Internet via Wi-Fi technology is organized by the national operator "Beltelecom", providing online access to time-based billing. At the beginning of 2016 the Wi-fi hotspot network contained 50 thousand units.

Number of Internet users per 1000 inhabitants



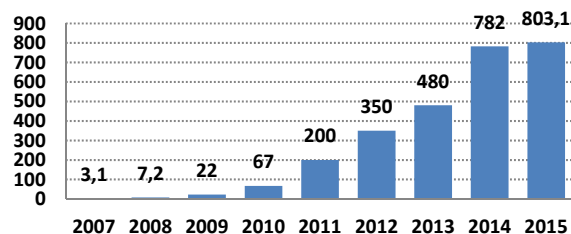
Source: Ministry of Communication

Number of BBA and dialup access, thousand of subscribers



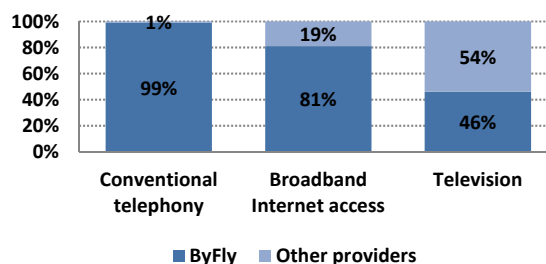
Source: Ministry of Communication

Carrying capacity of the international Internet access channel, Gb/s



Source: Ministry of Communication

RUE "Beltelecom" market share



Source: Ministry of Communication

## TELECOMMUNICATION SECTOR

### International comparisons

According to **The State of Broadband Report 2015** of the UN Commission on broadband communication, prepared under the auspices of UNESCO and the International Telecommunication Union, Belarus ranked in the 23<sup>rd</sup> place among 128 developing countries participated in the survey (-4 positions) in terms of “Percentage of households with access to the Internet,” with a number of 57,1% (48,3% in 2013).

In terms of “Fixed-Broadband Subscriptions per 100 inhabitants” Belarus ranked in the 25<sup>th</sup> place (-1 position) among more than countries with a number of 28,8.

In terms of “Active Mobile-Broadband Subscriptions per 100 inhabitants” Belarus ranked in the 55<sup>th</sup> place (-4 positions) among 170 countries with a number of 55.

In the UN E-government survey 2014 “E-government for the future we want”, the value of the index of readiness for e-government in Belarus corresponds to the 55<sup>th</sup> place in the relevant ranking of 1963 countries. In a similar UN report in 2012, the Republic of Belarus ranked 61.

**The average speed of the Internet** in Belarus is 7,5 Mbit/s. These figures are much smaller than the same indicators in other countries, including neighboring ones. Expenditures on Internet advertising in Belarus amounted to 25 million EUR in 2015 (in comparison, in Russia - 1.541 billion EUR, Poland - 724 million EUR, the Czech Republic - 338 million EUR, Slovakia - 99 million EUR).

In terms of value, the Internet in Belarus is cheaper than in Norway, Sweden, Latvia, however, more expensive than in neighboring countries - Russia and Ukraine. However, for the last 5 years, the Internet tariffs decreased in several times.

| Country       | Average Internet speed, Mbit/s | Average cost per month, USD |
|---------------|--------------------------------|-----------------------------|
| South Korea   | 29                             | 28,49                       |
| Norway        | 21,3                           | 52,21                       |
| Sweden        | 20,6                           | 43,58                       |
| Hong Kong     | 19,9                           | 21,67                       |
| Latvia        | 18,3                           | 14,46                       |
| Lithuania     | 15,1                           | 15,34                       |
| Ukraine       | 12,3                           | 3,79                        |
| Russia        | 12,1                           | 7,82                        |
| Belarus       | 7,5                            | 8,79                        |
| World average | 6,3                            | -                           |

Source: Akamai Technologies

The International Telecommunication Union published its Statistical Yearbook “Measuring the Information Society” in 2015. In terms of the index of information and communication technologies, the Republic of Belarus ranked 36 out of 167. The average value of IDI in the CIS region grew by 1,43 in 2010, well above the global average of 0.89. Belarus, which is a leader in the region, has improved its score by 1.88, climbing in the ranking by 14 positions. Belarus once again entered the top 10 world economies with ICT access indicators of the greatest changes, reflecting the technical level of modern infrastructure in the country.

This indicator measures the price affordability of the fixed and mobile telephony, fixed broadband Internet access to the public (the country with the most affordable ICT services are at the top of the rankings). Fixed broadband communication services basket accounted for 1,57% of GNI per capita. It proves the high level of development of the ICT sector in the Republic of Belarus and its high share of the GNI of the country.

#### Cumulative IDI ranking, 2015

|            | Место, 2015 | IDI, 2015 | Место, 2010 | IDI, 2010 |
|------------|-------------|-----------|-------------|-----------|
| Korea      | 1           | 8,93      | 1           | 8,64      |
| Denmark    | 2           | 8,88      | 4           | 8,18      |
| Germany    | 14          | 8,22      | 17          | 7,28      |
| Estonia    | 20          | 8,05      | 25          | 6,7       |
| Belarus    | 36          | 7,18      | 50          | 5,3       |
| Latvia     | 37          | 7,16      | 34          | 6,22      |
| Lithuania  | 40          | 7,08      | 39          | 6,02      |
| Poland     | 44          | 6,91      | 32          | 6,38      |
| Russia     | 45          | 6,91      | 46          | 5,57      |
| Kazakhstan | 58          | 6,2       | 62          | 4,81      |
| Moldova    | 66          | 5,81      | 74          | 4,28      |
| Ukraine    | 79          | 5,23      | 69          | 4,41      |

Source: International Telecommunication Union

# TELECOMMUNICATION SECTOR

## Legal framework

Activities in the field of communication in Belarus are carried out only with a special permit (license). In certain cases, the issuance of a license may be based on the results of the tender for the license (in particular, a tender for the use of radio spectrum). In 2011 the Ministry of Communications and Informatization held a tender for the use of LTE-frequency bands (2500-2535 MHz and 2620-2655 MHz). Since it was declared void because only one company tendered an offer, the tender for the 4G-frequency was conducted again. As a result, the tender for LTE-network construction was won by Huawei, the service itself was launched in the 4th quarter of 2015.

Art. 44 of the Law "On Telecommunications" adopted in 2005 stipulates a monopoly of "Beltelecom" with the functions of the mandatory provision of telecommunication services on the territory of the Republic of Belarus, and the exclusive right of the organization to international traffic transmission and connection to telecommunication networks of foreign countries. Abolition of the "Beltelekom" monopoly is the main condition of Belarus' accession to the World Trade Organization (WTO), to which the country has prepared since 1993. In fact, in 2010 a direct competitor to "Beltelecom" named State NCET (RUE "National Center for traffic Exchange" was founded in 2010", and it is on a par with "Beltelecom" has the right to the international Internet traffic transmission and connection to telecommunication networks of foreign countries. NCET defines the arrangements for the use of the infrastructure created by a single Republican data network (ERSPD), that unites all civil information exchange network in the country and, consequently, almost all providers of the country since January 1, 2012.

According to the Presidential Decree of the Republic of Belarus of March 15, 2016 № 98 "On Improving the transmission of telecommunication messages" a system to counter violations of the procedure of the traffic transmission on telecommunication networks was created. The document specifies that the users of telecommunication services (including Internet) are prohibited "to use software and hardware, which together are used to convert the communication protocol that carry voice and other telecommunication messages from a subscriber who makes a call, and the transfer of these messages to a subscriber who receives a call, using the subscriber numbers that do not belong to the subscriber who makes a call." The software and hardware imply IP-telephony - a communication method that allows to make calls from a computer or a smartphone to conventional mobile and landline phone numbers. Skype and Viber, that allow to make calls to conventional mobile and landline phone numbers (and also free calls between two or more program users), fall under the definition stated in the Decree. In identifying violations, the provision of services to the subscriber will be ceased, and the traffic transmission through IP-protocol will be blocked. The law comes into force in 6 month after the publication.

### National program to accelerate the development of services in the field of information and communication technologies

In 2010 the Strategy for Information Society Development in the Republic of Belarus for the period till 2015 was approved. It defines the purpose, objectives, conditions and priorities of the development of the information society in the Republic of Belarus. **The National Program of the accelerated development of ICT services for the period 2011 – 2015** was implemented in order to organize the work on the priority areas of the Strategy for five years.

The results of the implementation of the National Program of the accelerated development of ICT services for the period 2011 - 2015:

- Functioning state public-key management system was established;
- National Centre of e-services was founded;
- System of interdepartmental electronic document flow was created;
- National automated information system, designed for the integration of state information resources, was developed and implemented;
- All competitive kinds of public procurement procedures are conducted by ordering customers (organizers) on electronic trading platform only;
- Republican system of information support of the certification of teachers, System of electronic enrolment at universities, remote career development system of executives and specialists in the field of prevention and liquidation of emergency situations were developed;
- Automated information system of the Social Protection Fund was generated.

For further development of the industry, the **State program of development of the digital economy and information society in the 2016 - 2020** № 235 was approved by the Resolution of the Council of Ministers of the Republic of Belarus of March 23, 2016 № 235. The expected results of the program are the following:

- The proportion of administrative procedures and public services, provided in electronic form - at least **75%**;
- The proportion of electronic documents between government agencies in the total document flow - **95%**;
- The proportion of medical documentation provided in electronic form - **100%**;
- The proportion of open educational resources - **80%**;
- The proportion of media available via Internet - **100%**;
- An increase of research and development costs in the field of ICT - at least **30%** of the total R&D costs;
- The proportion of the gross value added of the ICT sector in the GDP - **3,8%**.



## TELECOMMUNICATION SECTOR

### Market trends

#### Belarus launched 4G mobile network

Mobile telephony and Internet in the country are moving to a new level: 4G network was launched in Minsk on December 17, 2015. Data exchange will be held on the LTE standard (Long Term Evolution), on its most modern version LTE-Advance, to be more precise.

4G network equipment was supplied by a globally recognized leader in the telecommunication sector – Chinese company Huawei, that firmly occupies the largest segment of the global market of base stations and switches for mobile communication. The company won the tender for construction of LTE-networks in Belarus, conducted by BeCloud. It is expected that the data transfer speed in 4G network will reach 600 Mbps.

The LTE network base stations do not belong to MTS - the infrastructure operator BeCloud builds and develops it in Belarus. The other two operators - life :) and Velcom will be able to use it on absolutely equal rights. At the same time, all three mobile service providers will set their own tariffs for its subscribers, and BeCloud will not be able to intervene in the pricing policy. MTS was the first to integrate its system with the LTE-infrastructure BeCloud, launching a new data transfer standard before its competitors. However, it is expected that life :) and Velcom will also offer 4G service to its customers in a few months.

#### Velcom operator will increase investments to 80.0 million EUR in Belarus in 2016

One of the major projects that Velcom plans to implement in 2016 is the construction of the largest data center in Belarus. The project cost is estimated at 35.0 million EUR. The data center will enter into an international network of TAG, owned by América Móvil, and will be the first data center of Mexican corporation in Eastern Europe, and the company's international network comprises about 30 similar facilities in different countries. There are only 2 data centers in Belarus for now. In contrast, there are 7 data centers in Lithuania, 28 – in Ukraine, 32 – in Poland, 46 – in Russia.

It is expected that a significant part of the data center space will be used by third parties. Customers will be able to get both a physical access to the servers, and the ability to work remotely in the "open space" zone. After building the data center Velcom plans to develop cloud-based business solutions.

During this year Velcom will invest more than 23.0 million EUR in another large-scale project - the construction of a solar power plant in the Bragin region with 22.3 MW/h capacity. In addition to the solar park, the company is also investing resources in the construction of high voltage transmission line with 23 supporting structures and a 110 kW transformer.

Moreover, Velcom continues to develop other infrastructure and high-tech projects. In particular, the operator keeps developing 3G-network standard UMTS-900. The operator has already fully updated 3G-network in Minsk. The 3G coverage will double to the end of the year - from 46.3% to 97%, and this corresponds to GSM-communication coverage.

#### 5G technology in ten years

According to the Ministry of Communication, the international communications standards of the fifth generation will be conclusively approved only in 2018, and it will take another 1-2 years to implement and launch the necessary equipment. The mobile Internet speed of 5G-generation will be nearly 4 Gb/s.

#### The possibility of roaming abolishment in the Custom Union countries

The Eurasian Economic Commission is working with the antitrust authorities on the roaming abolishment for calls within Belarus, Russia and Kazakhstan. On this issue, a meeting of the representative of the Board for Competition and Antitrust regulation of the EEC with the leaders of the main mass media in Belarus, Kazakhstan and Russia was held in 2015. In 2016 the negotiations between all Belarusian operators with their colleagues in the CIS countries on the reduction of roaming charges are expected to continue.

#### Belarusians prefer a national hosting

According to the study conducted by hosting.by, the majority of Belarusians prefer to use the services of the national hosting providers. Thus, 67% of individuals, 83% of individual entrepreneurs and 91% of organizations prefer the Belarusian hosting. It is important to note that according to the Decree №60 companies and entrepreneurs are obliged to use the Belarusian hosting. At 8 month-end the domain zone .by is recognized as the fastest growing in Europe, according to estimates of CENTR, the European association of top-level domain administrators. In 2016 APTLD Board (Association of National top-level domain of the Asia-Pacific region) approved the application of hoster.by to join the organization. The entry of hoster.by into APTLD will ensure more active participation of Belarus in the settlement of international issues related to domain names, and that, in turn, will help to expand the opportunities for Belarusian domain owners.

## TELECOMMUNICATION SECTOR

## Statistical annex

## Core economic indicators

| Indicator                                            | measurement unit       | 2007   | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    |
|------------------------------------------------------|------------------------|--------|---------|---------|---------|---------|---------|---------|
| Nominal GDP                                          | BYR trln               | 97.165 | 129.791 | 137.442 | 164.476 | 297.158 | 530.356 | 636.784 |
| Nominal GDP*                                         | USD bln                | 45.2   | 60.6    | 49.1    | 54.9    | 50.9    | 63.4    | 71.5    |
| Real GDP growth                                      | % y/y                  | 8.6    | 10.2    | 0.2     | 7.7     | 5.5     | 1.7     | 0.9     |
| Industrial production                                | % y/y                  | 8.6    | 11.3    | -3.1    | 11.7    | 9.1     | 5.8     | -4.8    |
| Agricultural production                              | % y/y                  | 4.1    | 8.9     | 1.0     | 2.5     | 6.6     | 6.6     | -4.0    |
| CPI                                                  | % y/y period average   | 8.4    | 14.8    | 13.0    | 7.7     | 52.3    | 67.5    | 18.5    |
| CPI                                                  | % y/y eop              | 12.1   | 13.3    | 10.1    | 9.9     | 108.7   | 21.8    | 16.5    |
| Index of producer prices of industrial products      | % y/y period average   | 16.3   | 14.8    | 15.0    | 13.5    | 69.2    | 90.5    | 14.0    |
| Index of producer prices of industrial products      | % y/y eop              | 22.2   | 15.4    | 11.3    | 18.9    | 149.6   | 20.6    | 10.7    |
| Export (USD)                                         | % y/y                  | 24.5   | 34.9    | -32.9   | 20.5    | 58.8    | 11.4    | -15.5   |
| Import (USD)                                         | % y/y                  | 28.7   | 37.8    | -26.8   | 23.0    | 29.7    | 2.3     | -6.7    |
| Current account                                      | USD mln                | -3013  | -4959   | -6133   | -8280   | -5053   | -1688   | --      |
| Current account*                                     | % GDP                  | -6.7   | -8.2    | -12.5   | -15.1   | -9.9    | -2.7    | --      |
| FDI (net)                                            | USD mln                | 1792   | 2157    | 1774    | 1343    | 3877    | 1308    | --      |
| International reserves                               | USD mln eop            | 4182   | 3061    | 5653    | 5031    | 7916    | 8095    | 6651    |
| Balance of the consolidated budget                   | % GDP                  | 0.4    | 1.4     | -0.7    | -2.6    | 2.1     | 0.5     | 0.2     |
| Domestic public debt                                 | % GDP eop              | 6.3    | 6.6     | 5.7     | 5.6     | 10.9    | 9.3     | 10.7    |
| Gross external debt*                                 | % GDP eop              | 27.6   | 25.0    | 45.0    | 51.7    | 66.8    | 53.5    | --      |
| Monetary base                                        | % y/y eop              | 38.4   | 11.7    | -11.5   | 49.5    | 84.1    | 61.6    | 13.4    |
| Exchange rate (National Bank of Belarus, official)** | BYR/USD period average | 2146   | 2136    | 2793    | 2978    | 4623    | 8336    | 8876    |
| Exchange rate (National Bank of Belarus, official)** | BYR/USD eop            | 2150   | 2200    | 2863    | 3000    | 8350    | 8570    | 9510    |
| Exchange rate (National Bank of Belarus, official)** | BYR/EUR period average | 2937   | 3135    | 3885    | 3950    | 6432    | 10713   | 11782   |
| Exchange rate (National Bank of Belarus, official)** | BYR/EUR eop            | 3167   | 3077    | 4106    | 3973    | 10800   | 11340   | 13080   |

Source: IPM Research Center

## Key indicators of the telecommunication sector

| Indicator                                                                                                                   | 2007    | 2008    | 2009    | 2010     | 2011     | 2012     | 2013     | 2014     | 2015     |
|-----------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|----------|----------|----------|----------|----------|----------|
| Number of provided long-distance and international telephone calls, mln                                                     | 983     | 920,6   | 894,4   | 882,4    | 806,3    | 731,1    | н/д      | н/д      | н/д      |
| Number of telephones connected to the public telecommunication network (at the year-end) – in total, thsd pcs               | 3 718,2 | 3 894,1 | 4 121,7 | 4 245,3  | 4 203,0  | 4 283,1  | 4 359,9  | 4 417,2  | 4 426,8  |
| Provision of the population with telephone devices connected to the public telecommunications network per 1000 people, pcs. | 311     | 326     | 349     | 362      | 372      | 379      | 385      | 390      | 393      |
| Length of the long-distance telephone circuits, thsd km                                                                     | 51,9    | 511,7   | 537,8   | 558,3    | 3 126,6  | 7и487,8  | н/д      | н/д      | н/д      |
| Number of subscribers connected to the cellular mobile telecommunication networks, thsd                                     | 6 959,8 | 8 127,9 | 9 686,3 | 10 332,9 | 10 694,9 | 10 676,5 | 11 114,4 | 11 401,9 | 11 448,3 |
| Cellular mobile telecommunication services coverage, % of the population of the Republic of Belarus                         | 96,6    | 98,6    | 99,4    | 99,7     | 99,7     | 99,7     | 99,9     | 99,8     | 99,9     |
| Cellular mobile telecommunication services coverage, % of the territory of the Republic of Belarus                          | 88,9    | 93,5    | 97,2    | 97,8     | 98,1     | 98,2     | 98,4     | 97,6     | 98,1     |
| Number of subscribers and users of the data communication network (at the year-end, thsd)                                   | 3 825,9 | 3 403,7 | 4 790,9 | 6 012,7  | 7 528,3  | 9 218,3  | 10 320,3 | 10 526,8 | 11 149,3 |
| Number of subscribers and the users of the data communication network with Internet access                                  | 2 795,1 | 3 100,7 | 4 436,8 | 5 432,2  | 6 804,9  | 8 360,5  | 9 433,1  | 9 690,8  | 10 300,1 |
| Carrying capacity of external Internet access channels                                                                      | 3,1     | 7,2     | 22,0    | 67,0     | 200,0    | 350,0    | 480,0    | 782,0    | 803,1    |
| Number of public Internet access points, units                                                                              | 948     | 1 262   | 1 468   | 1 339    | 1 332    | 1 305    | 1 150    | 923      | 699      |

Source: Belstat



## TELECOMMUNICATION SECTOR

### Statistical annex

#### **Key indicators of the Internet infrastructure in Belarus, 2015**

|                                                        |                 |
|--------------------------------------------------------|-----------------|
| External web gateway of Belarus                        | 803,1 Gb/s      |
| Number of Internet subscribers (including individuals) | 11,1 (10,3) mln |
| Number of Internet users                               | More than 5 mln |
| Number of Internet subscribers per 1000 people         | 1084            |
| Number of fixed broadband subscribers                  | 2,9 mln         |
| Number of subscribers to wireless network              | 7,4 mln         |
| Number of users of high-speed mobile Internet(3G)      | 2,5 mln         |
| Number of WI-Fi network hotspots                       | 380 thsd        |
| Number of subscribers connected to the GPON technology | 700 thsd        |
| Number of subscribers connected via IMS-platform       | 1,25 mln        |

Source: National Statistical Committee, Belstat, Ministry of Communication, Gemious

#### **Key indicators of cable television in Belarus, 2015**

|                                                                                          |                |
|------------------------------------------------------------------------------------------|----------------|
| Digital television broadcasting (DVB-T standard) coverage of the population of Belarus   | 99,45%         |
| Number of IPTV subscribers in Belarus                                                    | 1,5 mln        |
| Number of cable television systems (including broadcast information to a digital format) | 427 (252)      |
| Number of cable TV subscribers (including subscribers to a digital format)               | 1,8 (0,47) mln |
| Number of radio and television transmitting stations                                     | 355            |
| Number of transmitting stations conducting digital television transmission               | 285            |
| Percentage of area covered by the radio and television broadcasting                      | 98,6%          |

Source: Ministry of Communication, Beltelecom

#### **Key indicators of the mobile communication in Belarus, 2015**

|                                                                                    |           |
|------------------------------------------------------------------------------------|-----------|
| Total number of subscribers to cellular mobile telecommunication                   | 11,4 mln  |
| Cellular coverage in Belarus                                                       | 98,4%     |
| Percentage of population living on the territory covered with mobile communication | 99,9%     |
| Mobile penetration level                                                           | 120,5 %   |
| Number of base stations of cellular networks of UMTS                               | 5,5 thsd  |
| Количество базовых станций сетей сотовой подвижной электросвязи                    | 16,8 thsd |
| Number of base stations LTE Advanced                                               | 150       |

Source: Ministry of Communication, MTS, Velcom, life:)

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