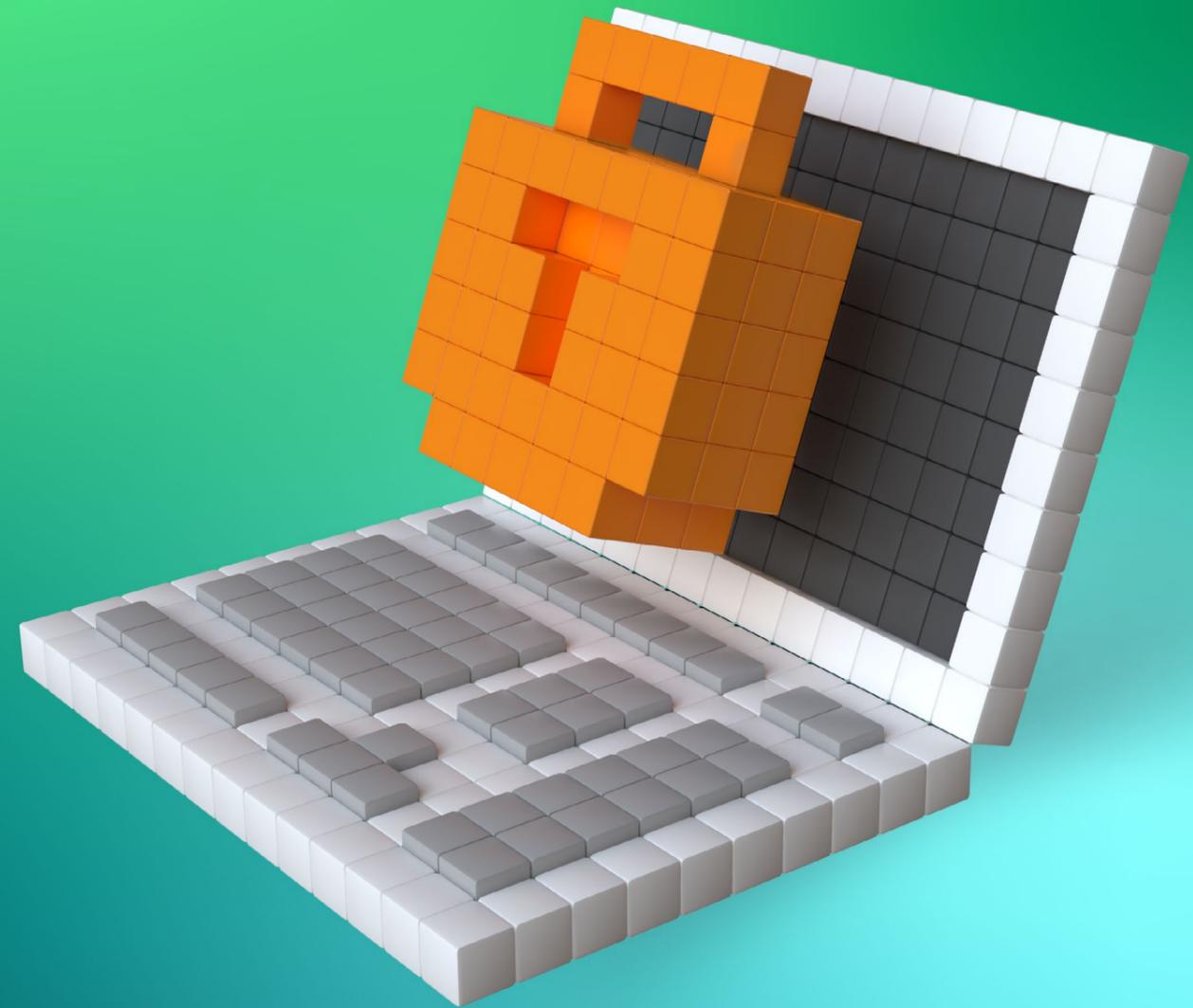


Rostelecom's performance

The criticality of cyber security across all industries is growing as digital technologies are deeply integrated into business processes. Rostelecom's SOC promptly identifies and responds to emerging threats.

50

SOC specialists monitoring the network 24/7 for cyber threats



Rostelecom's prudent balance between capital investments and dividend payments ensures strong financial performance and comfortable leverage. The Company's focus on sustainable growth enables quick adaptation to the changing environment and consistent development of new products. We set ambitious goals and take pride in our leading position in key markets

Vladimir Kirienko,
First Vice President:



"When setting ambitious goals for ourselves, we treat business like sports. And just like in sports, Rostelecom's team has invested a lot of effort to maximise the final score at the end of the game. We are pleased with our score for 2017 – a significant growth in the digital segment, with our revenue exceeding an important landmark of RUB 300 billion for the first time in the past 3 to 4 years. This achievement was made possible through focused work across all our customer segments."

Operational Highlights

Key Product and Segment Highlights

Key achievements in 2017

Revenue growth in VAS and cloud services

+26%

Share of revenue from content and digital services

47%

Y-o-y improvement in blended ARPU

7%

MVNO subscribers as at the year-end 2017

830,000

Data centre racks

5,268

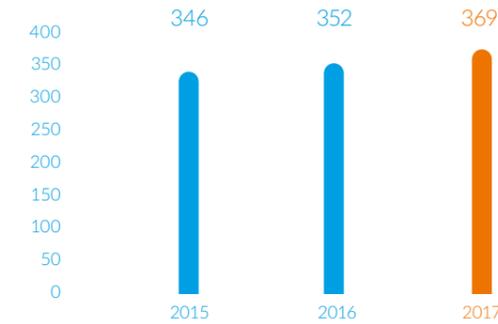
Rostelecom is the operator of the national Unified Biometric System



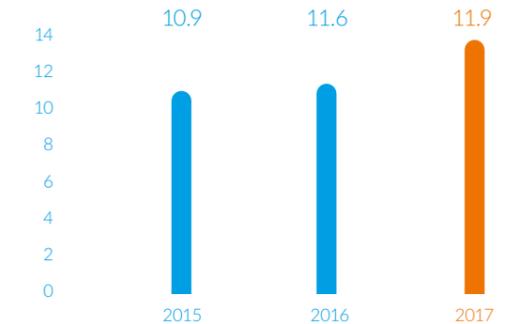
Rostelecom is a leading contributor to the national Digital Economy programme



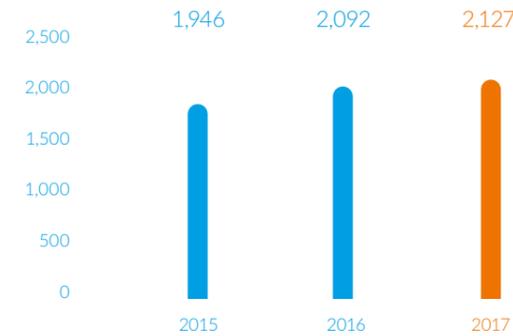
B2C broadband ARPU, RUB



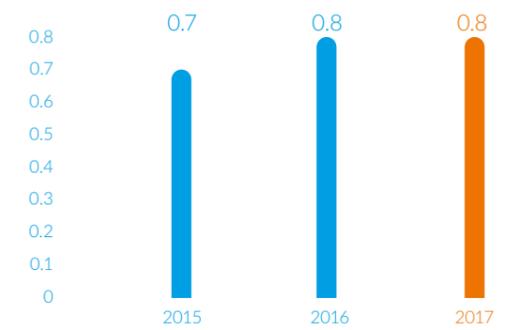
B2C broadband base, million subscribers



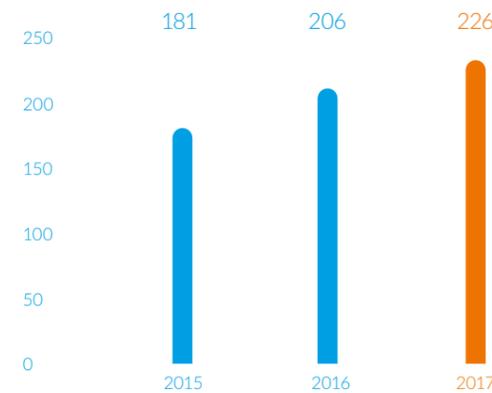
B2B/G broadband ARPU, RUB



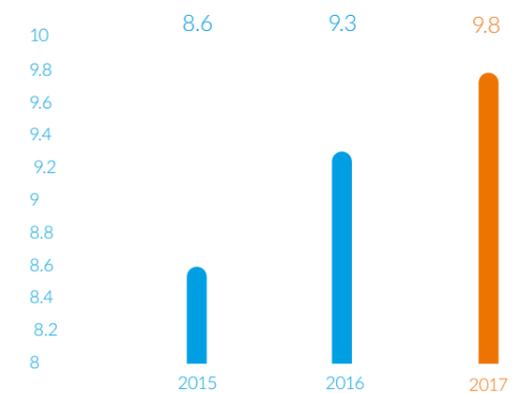
B2B/G broadband base, million subscribers



Pay TV ARPU, RUB



Pay TV base, million



B2C

Rostelecom – an undisputed leader across key markets

Households



Approximately half of Rostelecom's revenue is generated by the retail segment, thus being a major driver of the Company's overall performance. In 2017, the segment grew in terms of both subscriber base and ARPU.



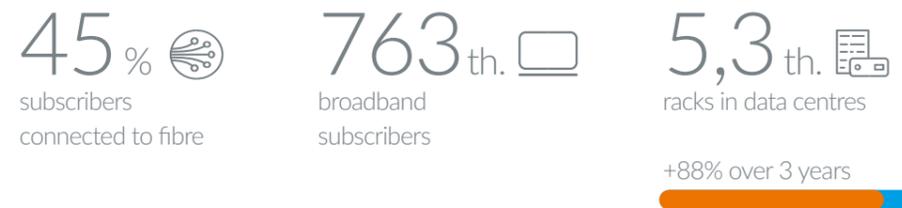
Vladimir Kirienko, First Vice President:

The year 2017 has revolutionised the mass market. Before 2017, new services such as broadband and IPTV did not generate enough revenue to offset the declines in revenue from fixed-line. Last year we succeeded in fully offsetting this fall for the first time, achieving an overall growth for the mass-market segment.

B2B/G

Rostelecom – an undisputed leader across key markets

Business



Rostelecom – a reliable partner to the state

State



Growth in fibre broadband base

26%

Growth in revenue from Smart City projects

27%

Growth in revenue from Virtual Data Centre service

x3

In 2017, we sustained positive momentum in B2B/G, securing a growth in revenue, with 93% of this growth coming from such products as New Telephony (cloud PBX), the 8-800 service, information security services, managed communications services, Wi-Fi access, Virtual Data Centre, video surveillance, the Call Centres service, and mobile MVNO services.



Vladimir Kirienko, First Vice President:

In 2017 we gave more focus to our corporate customer needs. Top 100 customers with the highest potential revenue opportunity were identified in every region in which we operate. These customers were assigned dedicated managers who offer comprehensive turnkey solutions to match their specific needs.

We are evolving towards a product bundling model in the SME segment. E.g. in Q4 2017, we launched "Byt v plyuse" ("Stay in Positive Territory") bundle which is rapidly gaining popularity and is already in high demand. Customers pay one price for broadband access bundled with another service – Virtual PBX with no answer call forwarding for mobile devices, video surveillance, Wi-Fi Hotspot, or IPTV with HD channels and content for SMEs.

B2O

During its first year, the Operator for Operators project launched by Rostelecom in 2017 generated over RUB 360 million in revenue.

In 2017, Tele2 Russia migrated 100% of its traffic to Rostelecom's communications channels.

Rostelecom – an Operator for Operators

Operators

56% 
market share in traffic
transmission

>1 Tbps
capacity contracted in the
Transit Europe – Asia project

020 
network maintenance services
for telecoms operators



Vladimir Kirienko, First Vice President:

Rostelecom made an important strategic decision in the B2O segment when faced with a choice between optimisation and developing in-house capabilities. In 2017, we launched the Operator for Operators project to enter the market for third-party network maintenance services. The project posted good results in the very first year, with the Volga Macroregional Branch winning all tenders for network maintenance services floated for the “big four” Russian operators’ networks in the Volga Federal District.

Infrastructure and Telecoms Networks

Rostelecom – a technology leader

The Kamchatka – Magadan – Sakhalin cable put into operation

+46% 
increase in the backbone
network capacity over
3 years

100% 
back-up of
backbone lines

1798 km 
total length

400 Gbps 
capacity

Rostelecom provides transmission services for any data format via cable, radio relay, or satellite links. The Company's digital network is based on dense wavelength division multiplexing (DWDM) technology and covers virtually all of Russia.



Boris Glazkov, Vice President:

The government-sponsored Digital Economy programme requires strong underlying infrastructure: telecoms networks, data centres, digital platforms, and cyber security systems. In many of these areas, Rostelecom is the leader or co-leader in the Russian market. We act as a digital transformation agent in the public administration, healthcare, education, city management, energy, transport, and industry sectors.

Building a 5G infrastructure requires significant investment in installing base stations and laying fibre to them. Rostelecom has the most extensive FOCL network in Russia, and advocates a 5G consortium to bring together operators who seek to be early adopters of the technology.

Backhaul network

The Company's backbone network is based on FOCLs between Moscow and Novorossiysk, Moscow and Saint Petersburg, and Moscow and Khabarovsk. These FOCLs have a design capacity of 80 fibre-optic lines, 100 Gbps each.

Our regional backhaul network comprises communications lines connecting large communities and is linked to the backbone network. Customers can lease Nx64 Kbps digital lines using flexible access multiplexers.

The Company's international FOCLs provide connections to Azerbaijan, Belarus, Georgia, Kazakhstan, China, Latvia, Lithuania, Mongolia, Poland, Ukraine, Finland, Sweden, Estonia, and Japan. International points of presence (POPs) are located in Stockholm, Frankfurt, and Hong Kong. A high-speed transit route is maintained to provide connectivity between Europe and Asia through Russia.

Reliability and quality of services are achieved by:

- » redundancy of communications equipment and lines
- » route separation
- » setting up cross-border passages and gateways for several independent foreign operators in each relevant international market.

245,744 km of lines
upgraded since 2001

This approach helps minimise traffic loss risk and consequences of outages.

In 2017, Rostelecom launched a unified backhaul resource management system to plan, build, and manage backbone and regional backhaul networks.

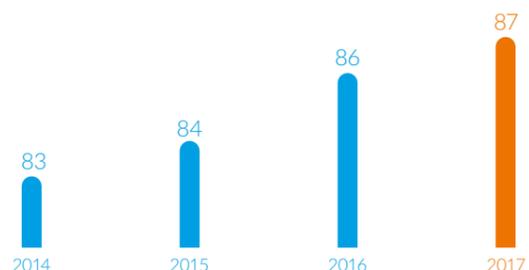
Voice/infocommunications (ICT) network

A voice infocommunications network supports telephony and traffic transmission at the local, intra-zone, domestic, and international levels.

Voice/ICT network segments

Segment	Capacity	Digitalisation, %
International telephone network	212,100 lines	100
Domestic long-distance telephone network	951,000 lines	100
Intra-zone telephone network	1,418,200 lines	100
Local telephone network	32,877,700 subscriber lines	87

Local telephone network digitalisation, %

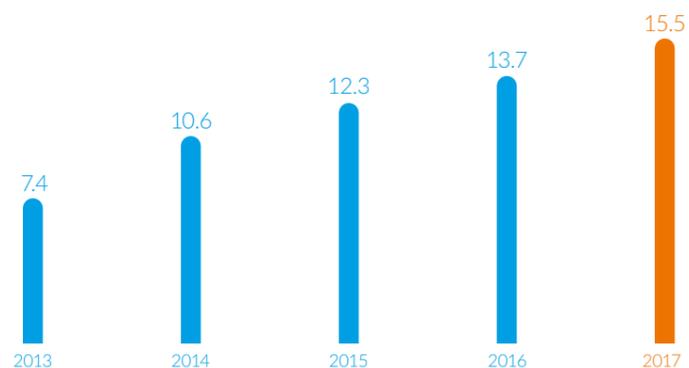


Data network

Rostelecom's IP/MPLS data network comprises backbone and regional data networks, and provides a range of services including:

- » broadband access, IPTV, TV content management
- » interconnection and internet traffic transit
- » virtual private networks (VPN), including L2 VPN, L3 VPN, VPLS, and interconnection VPN
- » data centre services.

IP/MPLS backbone network capacity, Tbps



Submarine cables

Submarine cables provide additional connectivity between Russia and other markets to expand and upgrade Rostelecom's international telecommunications capacity.

Rostelecom holds stakes or indefeasible rights of use (IRUs) in the following global projects: Fibre-Optic Link Around the Globe (UK – Middle East – Japan), and South-East Asia – Middle East – Western Europe cable systems.

Rostelecom owns core capacity and holds stakes in international submarine fibre-optic cable systems:

- » Georgia – Russia (67%)
- » Russia – Japan (50%).

In 2017, the Company launched design activities for the Yuzhno-Sakhalinsk – Kurilsk – Yuzhno-Kurilsk – Krabozavodskoye SFOCL with a total length of ca. 780 km and capacity of 100 Gbps. The project construction will commence in 2018 across the main islands of the Kuril archipelago.

Satellite communications

Rostelecom's backbone satellite network complements its land digital network by connecting hard-to-reach locations or serving as a backup for land FOCLs.

Rostelecom's united Satellite Communications Network (SCN) relies on 157 satellite earth stations with four core stations located in Khabarovsk, Yuzhno-Sakhalinsk, Yakutsk, and Petropavlovsk-Kamchatsky.

Mobile networks

Rostelecom partners with Russian operators of terrestrial mobile networks to expand the range of its high-quality network services. As at the end of 2017, the Company was routing international calls for 754 mobile networks in 203 countries.

Last-mile connectivity

In 2017, Rostelecom completed a project to upgrade its last-mile infrastructure, bringing fibre connectivity and advanced digital services to 33 million households across Russia.

National programmes

Bridging the Digital Divide initiative

Being Russia's only designated universal service provider, Rostelecom is involved in the Bridging the Digital Divide (BDD) nationwide programme. The BDD initiative aims to bring high-speed internet access to consumers in Russia's rural areas by connecting local communities to fibre.

Under a 10-year agreement for the BDD programme between Rostelecom and the Federal Communications Agency (Rossvyaz), Rostelecom will connect to fibre communities with a population of between 250 and 500, which will take ca. 160,000 km of new fibre-optic communications lines to be installed. Customers will get access to the Internet at a speed of 10 Mbps.

In 2017, federal authorities provided RUB 11.5 billion of funding towards the BDD programme implementation.

Through the BDD projects, Rostelecom will:

- » contribute to government plans to expand infrastructure, and provide internet connections to public administration, education, and healthcare institutions listed in the Digital Economy national programme
- » facilitate the implementation of public administration and social infrastructure informatisation projects pursued by regional governments across Russia
- » have an opportunity to cross-sell home internet and TV services in rural communities
- » streamline network operating expenses in rural areas through infrastructure upgrades.

As at the end of 2017, 6,100 new access points (44% of the total) were made available and ca. 47 thousand km of FOCLs built within the BDD programme, as scheduled under the agreement with Rossvyaz.

To make universal service more affordable, we cancelled Wi-Fi access charges at access points in August 2017, and scrapped charges for local calls from public payphones in early 2018.

All fibre cabling, materials, and access point equipment used by the Company in its BDD projects are of Russian origin. About 80% of subcontractors we involve under the programme are small and medium-sized businesses.

Hospitals

By the Russian Government's Decree⁵¹ Rostelecom has been designated as the only provider of services to connect government and municipal healthcare systems to the Internet. A total 3,134 healthcare facilities were provided with a high-speed internet connection in 2017. All facilities were connected to fibre at speeds of at least 10 Mbps.

A powerful infrastructure has been built to support roll-outs of telemedicine solutions, and enhance the use of computerised medical equipment and quality of healthcare services, including in remote and hard-to-access areas.

The total cost of the project was RUB 1.93 bn.

⁽⁵¹⁾ Decree of the Russian Government No. 2094 dated 29 September 2017.

Digital Services

Broadband

2017 saw a continued growth in our retail broadband base, which totalled 12 million subscribers as at the year-end. We also delivered strong performance in fibre connections, growing our subscriber base by 8% over the year to 7.7 million households. In 2017, our B2C business posted continued steady increases in ARPU and the number of subscribers to the Gaming tariff plan which offers high-speed internet access, as well as exclusive options and premium content in seven popular online multiplayer games at no extra charge.

The introduction of the special Gaming tariff plan has sparked much interest from fans of popular online games such as World of Tanks, Warface, and a number of others, since, in addition to a reliable, high-speed data service, gamers get access to exclusive military hardware and other bonuses that are not available to other players in the game.

Rostelecom has been continuously bundling more content with its tariff plans. Since December 2017, the Gaming tariff plan offers access to a new option in Warface, a popular online shooter: players receive powerful weapons to perform combat missions of any complexity, as well as in-game currency.



Vladimir Kirienko, First Vice President:

Bringing connectivity to new-build properties is becoming a priority market for us in 2018. We have designed a comprehensive approach to offer our customers an ecosystem of services from video surveillance and the smart home bundle to insurance services. Our target is to capture at least 50% of the new-build market.

In B2B/G, Rostelecom has further strengthened its leadership through increasing its customer base by 1.1% to 763 thousand subscribers.

Over the year, the number of subscribers connected to fibre rose by 30% to 340 thousand while total revenue from broadband and VPN services was up by 3% year-on-year to RUB 37.1 billion.

Pay TV

Most of our retail customers taking up Rostelecom's basic broadband service also buy the interactive TV service as a bundled package. We have leveraged this trend to formulate a new business model for offering bundled services. Moreover, the Interactive TV product is often a driver that prompts Rostelecom's customers to switch to premium broadband plans, as streaming films or TV series requires higher connection speeds for best viewing experience.

The Company is strengthening its market position by attracting up to 80% of gross adds in the IPTV market. As a result, our Pay TV subscriber base grew in Q4 2017 by 5% year-on-year to 9.8 million households. The growth was primarily driven by a 14% increase in the IPTV subscriber base to 4.8 million subscribers. In 2018, Rostelecom is planning to start offering Android-based TV set-top boxes, which will form the core of our ecosystem of home services.

As at the end of 2017, Pay TV ARPU was RUB 230, up by 8% year-on-year, with IPTV ARPU at RUB 300.

In 2017, our total B2B/G Pay TV subscriber base rose by 20%, with a 27% increase in IPTV subscribers and IPTV ARPU up 20%. Our Corporate TV product was re-launched on a new platform, leading to sales of over 3,500 new service packages to HoReCa customers.



Vladimir Kirienko, First Vice President:

We control a considerable share of the interactive TV market – up to 80% of gross adds in the market are attributable to Rostelecom. Approximately 60% of our existing customers take up the Interactive TV service, which leads to a considerable increase in ARPU. Consumption of video VAS services such as VoD has been on the rise, and we are consistently improving our VAS offering. In 2018, we will start offering Android-based TV set-top boxes, which will form the core of our ecosystem of home services.

Innovative Products

Data centres

Rostelecom continues expanding its disaster-proof network of data centres and advanced cloud-based services. A new data centre, Moscow III, was commissioned in December 2017. Measuring 3,500 square metres, this facility, built in partnership with NRC Kurchatov Institute, is second only to M9 by floor space, ahead of all other Rostelecom's data centres. The total capacity of Rostelecom's data centres operated by RTC-DC LLC has reached 5,268 racks. This makes Rostelecom the largest player in the Russian market among commercial data centre operators.

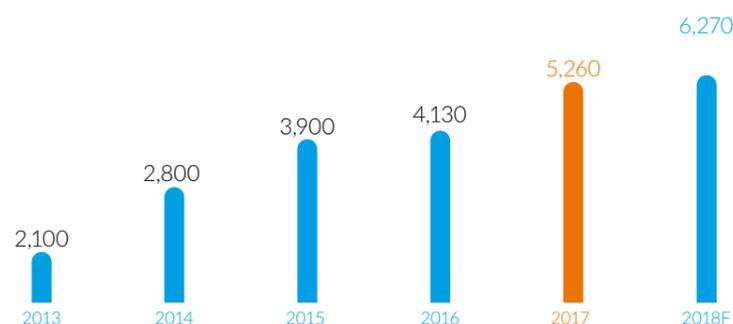


Vladimir Kirienko, First Vice President:

Our data centre services have been consistently evolving: we have started with colocation services and are moving up the value chain. Today, we are offering IaaS solutions, virtualisation, and an import-independent VDI service. All services are backed by enhanced SLAs, support and backup services. Our data centres are certified to Tier 2 or Tier 3 standards. All relevant expertise has been concentrated within RTC-DC LLC, our subsidiary.

Rostelecom and iKS-Consulting estimate the total size of the Russian data centre market in 2017 at 38 thousand racks. Accordingly, the Company's market share is approximately 14%.

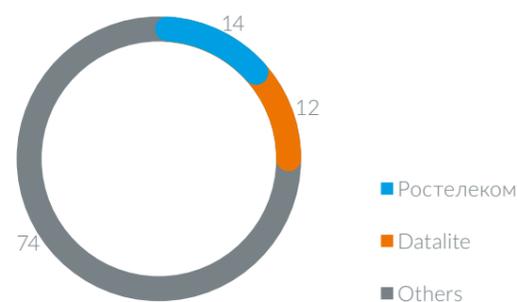
Number of racks at Rostelecom's data centres



Source: CNews, iKS-Consulting, Company estimates.

In 2017, the Company began designing data centres for Yekaterinburg, Novosibirsk, and St Petersburg.

Markets shares by number of racks in the data centre market, %



Source: Company estimates, iKS-Consulting

In 2018, we are planning to commission Russia's largest and one of Europe's biggest data centres, the 4,800-rack Mendeleev Data Centre at Udomlya in the Tver Region. The Mendeleev Data Centre will become a key component of the nationwide e-government technological infrastructure.

By the end of 2017, the total capacity utilisation of data centres operated by RTC-DC LLC exceeded 80%, the best performance among major operators in the market. The rack space of Moscow III, our new data centre, was booked long before it went online.

As a key participant in the Digital Economy of the Russian Federation programme, Rostelecom is responsible for building and expanding relevant IT infrastructure, including for creating a distributed network of data centres.

Cloud services



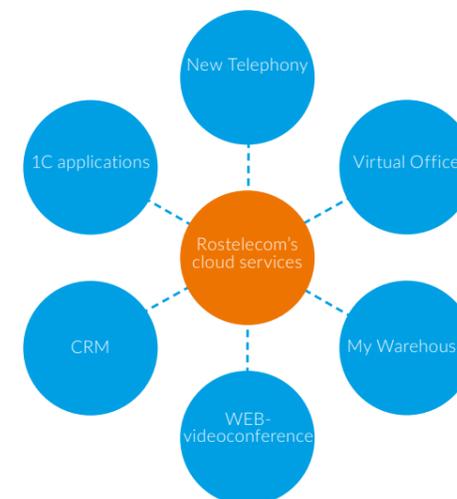
Boris Glazkov, Vice President:

Rostelecom will build up its in-house skills at the interfaces between IT and real economy sectors and expand its network of partnerships to source such skills in the market. One of Rostelecom's strategic objectives for the coming years is to leverage these skills to get an understanding of how exactly information technologies and Rostelecom's infrastructure capabilities can create value for our customers' businesses. And this challenge should be addressed not at the level of a customer's IT infrastructure, but by delivering a real positive impact for its business.

Rostelecom rents out computing capacity of its National Cloud Platform (NCP) to customers who need to have their information systems hosted remotely. NCP's capacity is certified to data security standards, including to Class 1, and are compliant with ISO/IEC 27001:2013. Also, the NCP offers cloud-based backup services and disaster recovery solutions (DRS) on existing virtualisation platforms.

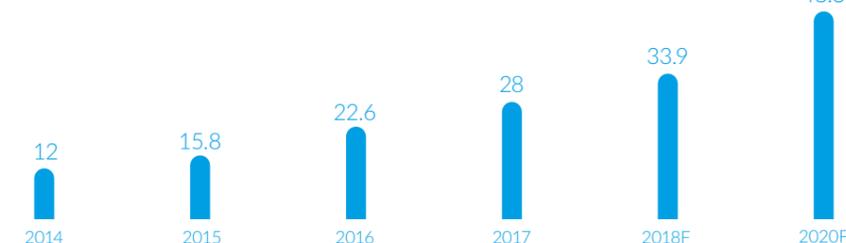
Services provided by Rostelecom through TIONIX Cloud Platform solutions include:

- » cloud-based infrastructure and hardware control
- » design and deployment of operator-hosted virtual data centres (VDC)
- » Virtual Desktop Infrastructure (VDI) services.



Rostelecom's Performance

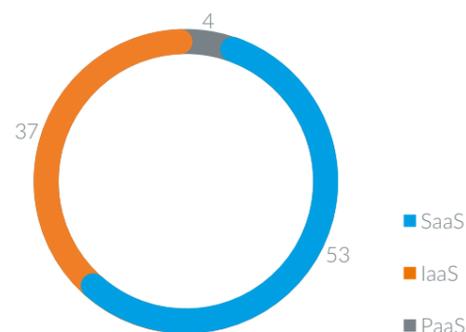
Size of the Russian cloud service market, RUB bn



Source: SAP, Forrester Research, February 2017.

Rostelecom provides Content Delivery Network (CDN) services through solutions designed by NGENIX (part of RTC-DC LLC, Rostelecom's centre of competence). In 2017, the volume of traffic carried in NGENIX's content delivery network grew by 30%, with Rostelecom's Interactive TV traffic up by 80%. To take advantage of this high-growth opportunity, Rostelecom has made capital investment in channel expansion, upgrade of existing and installation of new hardware, as well as software development, increasing the network's capacity by over 50%. The Company has also designed a solution to insert targeted ads into interactive TV video streams.

Structure of the cloud service market, %



Source: SAP, Forrester Research, February 2017.

Rostelecom has rolled out a service to safeguard customer resources not connected to the operator's network against DDoS attacks. Customers are also offered cloud-based protection against a wide range of cyber threats (Web Application Firewall) using solutions of leading Russian vendors.

Significant progress has also been made by MSK-IX, which operates the largest internet exchange network in Russia and CIS countries and is part of RTC-DC LLC centre of competence. In 2017, MSK-IX launched an access node in Latvia. Over 500 members are connected to MSK-IX's network, including operators based in Russia, CIS states, and Baltic countries, content providers, research and educational networks, financial institutions, and government organisations.

In 2017, customers of MSK-IX were offered an opportunity to have a DNS hosting service built into external applications and services. The DNS network was expanded to 21 nodes, with a new node launched in Oakland (USA), and nodes upgraded in Moscow, St Petersburg, Amsterdam, Prague, and Hong Kong.

MSK-IX is the only Russian company to have been accredited, in 2017, by ICANN to provide backup data storage services to domain name registrars and Data Escrow (Registrar Data Escrow Third Party Provider) services, for Russian top-level domain name registrars to comply with the law on personal data.

In 2017, Rostelecom actively enhanced its Medialogistics project to deliver TV signal from TV channels to telecoms operators and OTT providers.

The Virtual PBX service was launched in 110 cities to cover every macroregional branch. 13,287 new customers were connected to the service over the year.

The Company piloted a Call Centres product, with Sberbank and SME Bank currently among its users, and Virtual Services for Small Businesses.

Cyber security

In 2017, Rostelecom started a promotion campaign to market its offering of information security as a service (ISaaS) solutions. The Company finalised a tariff line for services of a specialised Security Operations Centre (SOC), and brought together a 50-strong team to provide 24/7 security monitoring. With Rostelecom operating Russia's largest network, our SOC team can detect abnormal activity pointing to e. g. an emerging DDoS attack before it even hits customers' servers. The SOC team collects, records, and tracks all information security events on a 24/7 basis, and responds to all incidents or attacks.



Vladimir Kirienco, First Vice President:

We have gone a long way in providing information security services, and we see a growing market demand for VPN services and secure communications channels. Rostelecom operates Russia's largest SOC with a 50-strong team monitoring the network 24/7. We offer a host of cyber security services, including an advanced penetration testing service. With Rostelecom operating Russia's largest backbone network, we can actually see how threats are emerging at the backbone level, and offer better protection against DDoS and other attacks than many other operators or integrators.

Rostelecom's offering of information security services

SOC	UTM	WAF
Monitoring, detecting, and responding to information security incidents	Preventing network threats, providing URL filtration services, and detecting botnets	Protecting web applications against complex web-based security threats
AntiDDoS	EMM	Email Security
Detecting and preventing web-based DDoS attacks	Monitoring and protecting company and personal mobile devices used by employees	Protecting corporate email through Rostelecom's specialist solution that checks messages for viruses and other known threats

Workflow of Rostelecom's SOC



Rostelecom first started providing its cyber security services to customers in the public sector, and following its successful handling of the widely-publicised WannaCry virus attack, the Company has proceeded to promoting the service offering across Russian regions. We are running pilots for large businesses, primarily in the banking sector, with solutions for small and medium-sized businesses currently under development. Our ISaaS solutions allow customers to avoid significant capital expenditures by offering the opportunity to replace capex with opex, which makes cyber security arrangements more affordable and generates more leads for the Company.

Operating highlights in this segment include:

- » establishment of RT SOC, within which teams were subsequently set up to monitor, analyse, respond to, and investigate information security incidents, and detect emerging information security threats. Its target for 2018 is to challenge the top one Russian commercial SOCs
- » agreements signed with key players in the Russian information security market such as AO Positive Technologies, OOO Digital Security, ANO TsRKI, BI.ZONE, Kaspersky Lab, and Group-IB
- » the RedTeam unit established to provide information security audit and penetration testing services
- » a compliance unit set up to provide certification services for the Russian standards to IT facilities
- » a new Penetration Testing service launched, with 9 projects completed for internal customers, and 2 projects for commercial customers
- » five new services prepared for launch scheduled for Q1 2018: Certification to Information Security Standards, Cyber Security Culture Platform, Information Security Audit, Enterprise Mobility Management, and Compliance Platform
- » PCI DSS (Payment Card Industry Data Security Standard) certificate obtained
- » involvement in the drafting of information security regulations by federal executive authorities
- » execution of external assignments from the Russian Government.

An eight-fold year-on-year increase in sales revenue from information security services was a logical financial outcome of our efforts in this segment.

Biometric platform

In February 2018, Rostelecom presented the first working version of the Unified Biometric System, a digital platform developed by the Company at request by the Russian Ministry of Telecom and Mass Communications and the Bank of Russia. The system features all the core elements required to implement the basic human recognition functionality and is ready for integration with bank information systems.

Two parameters are used simultaneously to improve identification accuracy: the voice profile and a photo image. The platform has an open architecture for easy integration of vendor solutions and use of optimal recognition algorithms.

The digital platform is hosted on Rostelecom's secure infrastructure accessed through dedicated communications channels of the Unified System of Interdepartmental Electronic Cooperation (USIEC) protected with cryptographic algorithms designed in Russia. The Company is designing a special mobile application with built-in cryptographic data protection.

The Unified Biometric System is slated for commercial launch on 1 July 2018.

The system can be applied across a wide range of sectors, including finance, healthcare, education, retail, and e-commerce, for access to public and municipal services. The use of the Unified Biometric System will bring accessibility to a range of services and products, which will improve the quality of life for people in remote areas and mobility impaired people, as well as for residents of large cities, who will benefit from any time access to these services which were previously only available during office hours of relevant institutions.

Geodata

In 2017, Rostelecom continued expanding its expertise in geoinformatics and spatial data, promoting RusGIS, its own proprietary geoanalytical platform.

Rostelecom developed a concept for two public information systems: the Federal Portal of Spatial Data and a GIS for the Uniform Electronic Cartography Base management commissioned by the Federal Service for State Registration, Cadastre, and Cartography, carrying out initial design for both systems.

Rostelecom contributed significantly to the Development of National Digital Geospatial Intelligence Systems section and is involved in a number of activities as a competencies centre responsible for Information Infrastructure as part of the Digital Economy of the Russian Federation programme development.

In 2017, Rostelecom developed a section of infrastructure for the National Navigation Service Provider under a government contract. The project was aimed at creating an environment for small unmanned aerial vehicles (UAV) operators with monitoring and control options, as well as establishing a technological and legal framework for the development of UAV-based commercial services. The spatial data storage and management subsystem of the National Navigation Service Provider is based on Rostelecom's RusGIS platform.

Seven applied projects were developed on the RusGIS platform in 2017, three of which were deployed on Rostelecom's National Cloud Platform. The implemented projects include:

- » Zemlya regional GIS (Geodata Information System) to support state and municipal property management
- » a geoportal for the Ministry of Land and Property Relations of the Republic of Kalmykia
- » an interactive traffic accident map for the Transport Prosecutor's Office of the Volga Transport District
- » a geoportal of the Vladimir Region.

Rostelecom launched the first project integrating its RusGIS platform with a partner's agricultural solution in the Altai Territory, which demonstrated the platform's effectiveness as an instrument to ensure intradepartmental cooperation and establish a unified information environment within the region. Rostelecom pioneered the launch of services based on the analysis of data obtained by its own UAVs: the mapping of farmlands, roads, and utilities, and detecting land use violations.

Key projects completed in 2017 as part of promoting the RusGIS platform:

- » Over ten new functions were developed: API, geocoding, import/export functions, object versioning, analysis layers, heat maps, accessibility zone modelling, routing, working with temporary layers, monitoring moving objects, and video surveillance
- » The system was integrated with external information systems and services including Integrated Identification and Authentication System, 2GIS, Planet Labs, and Roscosmos services
- » The RusGIS mobile app was developed

Industrial Internet of Things (IIoT)

Rostelecom promotes the IIoT at the institutional level through forming roadmaps, participating in international industry organisations, and launching pilot projects in various industries.

Priorities for the Industrial Internet project office:

- » Providing IIoT services in the power industry
- » Launching pilot products together with partners
- » Engaging with regulators and participating in IIoT organisations and consortiums

Rostelecom's pilot projects in power engineering, oil production, and public utilities are implemented in line with the approach applied by the Industrial Internet Consortium (IIC). In particular, the Company is developing a cloud data storage and transmission solution with PJSC ROSSETI as part of rolling out Rosseti Group's unified computing system for automated accounting of power consumption.

Video surveillance

Rostelecom's expertise and know-how in implementing online and offline video streaming projects of any complexity is unique for Russia. In 2017, the Company organised video surveillance at locations where the Unified State Exam (USE) was held, which involved connecting 62,200 classrooms. The footage totalled 3.6 million hours, 208 thousand text messages were sent out, and the number of portal visitors exceeded 358 thousand people.

Rostelecom also provided video surveillance at the Russian Presidential Elections in March 2018. The Company's staff installed cameras in 46 thousand district polling stations and at the premises of precinct election commissions. The surveillance system recorded over 2.5 petabytes of video data to its databases.

For the B2C market, Rostelecom launched the first phase of Smart Home. Video Surveillance in autumn 2017. The service enables subscribers to monitor their home from anywhere in the world. The market responded favourably to the new service, and the Company believes smart home technology has strong outlooks in Russia and considers it a potential driver of business growth over the next three to five years.

Healthcare

The RT.Medicine project comprises the Regional System of Medical Information (RMIS) and the Central Archive of Medical Images (CAMI). Teleradiology.

The Regional System of Medical Information (RMIS) has been in development since 2011 and includes over 40 modules to automate key medical business processes, from basic modules (electronic health records, registration office, out-patient clinic) to specifically targeted ones. The service is successfully operating in 18 Russian regions as a regional segment of the Unified State Healthcare Information System. RMIS is utilised in over 1,500 medical institutions, over 60 thousand active users are registered in the system, and over 50 million medical cases were processed via the system.

RMIS ensures information exchange between regional and nationwide data sources and is one of the key elements in the IT development of healthcare in Russian regions.

The Central Archive of Medical Images (CAMI. Teleradiology) automates radiology and diagnostic imaging departments in medical institutions. It enables specialists to store, share diagnostic materials, and consult patients locally or remotely within a unified data and diagnostic environment. CAMI is used in nine Russian regions, and is currently in the trial stage in five other regions.

In several Russian regions, CAMI. Teleradiology serves as a basis for both regional medical imaging archives and remote interpretation services for CT, MRI, and other radiological scans.

The Unified Radiologist project was launched in the Republic of Tatarstan. All X-ray scans for life-threatening conditions are examined by a qualified radiologist as necessary, regardless of when and where the scanning took place.

Voice recognition technology for vocal reporting of head, abdominal, and thoracic CT scans was tested in the Murmansk Region. This technology reduces time spent on reporting by over 30%, cuts the number of errors, and recognises up to 95% of professional medical speech.

E-Government



Vladimir Kirienko, First Vice President:

As strong believers in the service model, we request IT project plans from government institutions and authorities to jointly develop them and identify their demands for the next three to four years. Rostelecom invests in the timely establishment of infrastructure and offers its clients transparent pricing and a practical, scalable solution.



Boris Glazkov, Vice President:

Close cooperation with the government is Rostelecom's strong point. We have been engaged in automating public administration for nine years, and we have launched numerous successful projects – E-Government is one of the most significant. We are the largest IT player in this field and we leverage our expertise in, and deep understanding of, public administration processes to develop our skills in adjacent areas, such as city management, healthcare, and others. Rostelecom aptly manages large-scale IT system construction projects, has experience in selecting appropriate partners and counterparties, and is ready to take a project's responsibilities to the state.

In order to increase the efficiency of public authorities under the Electronic Russia programme and the Information Society state programme, Rostelecom completed a number of nationwide projects:

- » Development of the Unified Public Services Portal and the Integrated Identification and Authentication System public information systems:
 - » The number of citizens registered in the Integrated Identification and Authentication System grew from 3.5 million in January 2013 to 64 million in late 2017
 - » The number of daily visits increased from 5.5 million in 2013 to 48 million in 2017
- » Development of mechanisms enabling mobile access to e-Government services
- » Development of the Interdepartmental Electronic Interaction System. The number of transactions within the system grew from 1.8 billion in 2013 to 16 billion in 2017
- » Twelve e-Government information systems are in operation
- » Information support of users and development of the Unified Public Services Portal and the sales portal.

Education

Rostelecom developed software solutions to automate education processes:

- » School library and information centres
- » Educational content players for main platforms
- » E-learning authoring tools
- » Distance training platform

Each solution focused on general education programmes. The library catalogue includes over 2,000 fiction books, 800 digital textbooks, and 319 e-learning materials.

As at the end of 2017, Rostelecom's systems were rolled out in nine regions of the Russian Federation:

- » the Novosibirsk Region
- » the Trans-Baikal Territory
- » the Altai Territory
- » the Arkhangelsk Region
- » the Samara Region
- » the Vladimir Region
- » the Khabarovsk Territory
- » the Krasnodar Territory
- » the Moscow Region.

A total of 2,705 schools and over 1 million students and academic professionals have access to the educational content hosted by Rostelecom.

Traditional Services

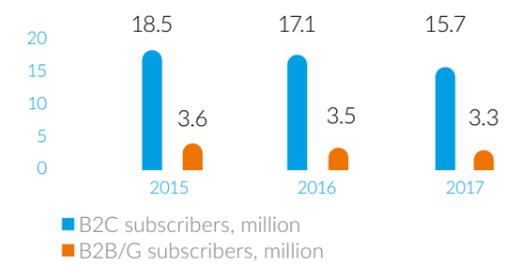
Fixed-line telephony

Despite the ongoing decline in revenue from fixed-line services, Rostelecom mitigated the negative impact through promoting IP telephony and New Telephony (cloud PBX) services as well as various bundled offers.

The gradual decline in fixed-line revenue gives way to digital service revenue, marking Rostelecom's transformation into a digital services and platforms provider. The telephony base shrunk in 2017 amid a modest ARPU growth, with New Telephony revenue growth totalling 143% year-on-year.

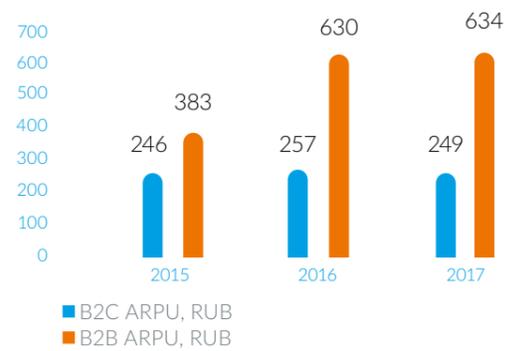
In order to maintain the appeal of its fixed-line services, Rostelecom offers various options and plans. For example, over 0.25 million subscribers have taken up the Unlimited Russia plan and the Unlimited Kazakhstan option. My Favourite DLD, Call International, and a number of other options are also in high demand.

Fixed-line base, million subscribers, million



Source: CNews, iKS-Consulting, Company estimates.

Fixed-line ARPU, RUB



Source: CNews, iKS-Consulting, Company estimates.

Mobile services

MVNO

Rostelecom retained leadership among MVNO providers by subscriber base growth rate as at late December 2017. In 2017, the Company launched a corporate mobile network, where all company telephone accounts of all employees were transferred. The Company also launched a number of new plans and specialised programmes and products, created a unified billing system and an integrated interface for customer service and service management.

Customers
as at the end of 2017

830,000

customers using
mobile Internet

58%

The share of Rostelecom's subscribers using mobile data services reached 58% of the total subscriber base as at the end of 2017.

The high quality of fixed-line based services enabled the Company to provide to its customers premium call quality for calls to CIS countries and international calls. Customers were also offered traditional value-added services:

- » Direct dial-in
- » Static IP address
- » Mobile VPN
- » A2P aggregation
- » SMS marketing

A geographically distributed Project Office and a Centre of Competence and MVNO Support were established within the Company, which enabled the development of mobile service competencies. The proprietary customer and internal user support system was created with high availability as per the Service Level Agreement (SLA). MVNO voice call channels are backed up through Rostelecom's and Tele2 Russia's networks.

A project installing base stations for corporate clients who use mobile services was initiated in 2017, through which seven stations have been installed.

Rostelecom intends to continue developing its fixed-mobile converged services through expanding remote service management and self-service options, streamlining procedures, and reducing incident resolution times.

Key MVNO development priorities

B2B

M2M, IoT services. Development of telemetry, surveillance, and products for smart devices

Customer NPS: Improving support quality for LTE and 3G customers

Smart SIM for Business Integrating FMC, SIP, and cloud PBX functionality into ordinary SIMs

B2C

Marketing to fixed-line subscribers

Development of own retail chain

Maintaining bundled plan sales at a minimum 80%

Developing various converged multi-play offers

Value-Added Services Mobile commerce services, bill to account, content services, televoting

The network optimisation will involve fine-tuning Rostelecom's network monitoring and management processes to provide for MVNO customer traffic transmission.

Tele2 Russia

As at the end of 2017, Tele2 Russia retained its leadership in the mobile market by efficiency:

- » The Company's headcount totalled 6,736 employees, down by 8.3% year-on-year
- » Revenue per employee increased by 21.4% while subscribers per employee grew by 13.7%
- » Tele2 Russia's employee engagement index (measured by the Hay Group method) was 80% in 2017, up 7 percentage points from 2015. Measurements are taken every two years.

Tele2 subscriber base

40.6 million
subscribers

revenue per employee
growth year-on-year

26.8 %

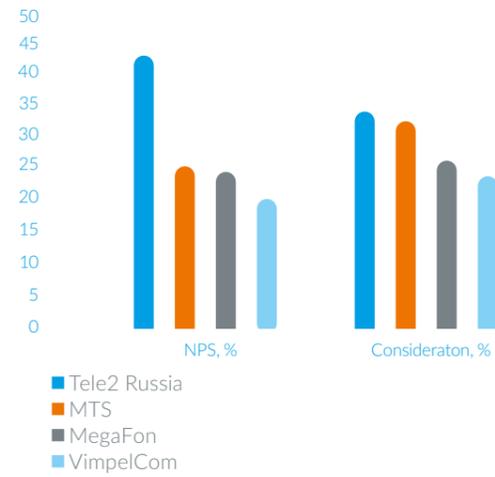
customers per employee
growth year-on-year

13.7 %

Tele2's subscriber base was 40.6 million subscribers as at the end of 2017⁽⁵²⁾. Tele2 Russia maintains its perceived uniqueness, demonstrating the highest NPS (Net Promoter Score) and Consideration levels on the market.

(52) Excluding MVNO subscribers.

Customer perceptions of operators, %



Source: Tele2 Russia, 2017.



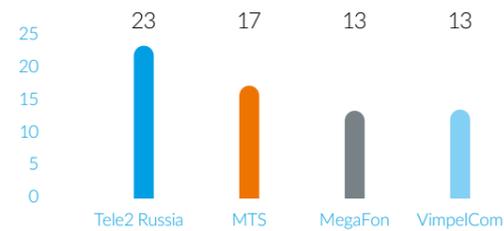
Percentage of customers who gave positive scores for the performance of the remote customer support centre

95%

Percentage of customers using mobile Internet

44%

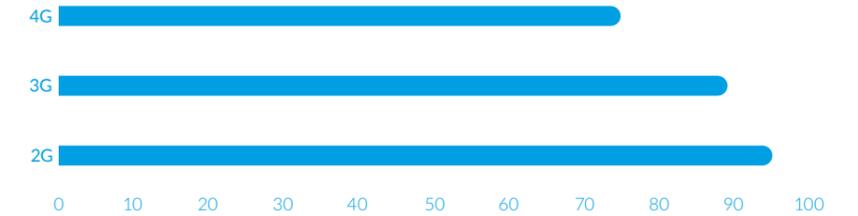
Value for money, %



Source: Tele2 Russia, 2017.

The number of Tele2 Russia's monobrand stores and kiosks was approximately 3,300 in 2017, and Tele2 SIMs are sold in 114 thousand partner-operated points of sale.

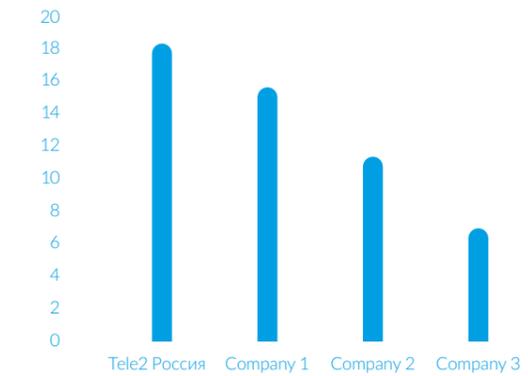
Tele2 Russia mobile network penetration, % of the population



Source: Tele2 Russia, 2017.

The number of Tele2 Russia's base stations exceeded 122 thousand in December 2017, increasing the gap in base stations between Tele2 Russia and VimpelCom to 9,000. Tele2 Russia leads the industry by new base station installations.

New base station installations, %



Source: Tele2 Russia, 2017.

The Company holds second place by the total number of 4G base stations commissioned in 2017, increasing the total by 103.3% over the year. As at the beginning of 2018, high-speed mobile internet service was available in 61 Tele2 Russia's regions of operation, with the 4G network available in 50 Russian regions.

As at the end of 2017, Tele2 Russia's portfolio included 15 MVNO projects, with the MVNO base totalling about 1 million. Apart from Rostelecom, Tele2 Russia implements major projects with Sberbank, Rostelecom, and MTT.

Optimising Performance

Market segmentation and customer service

Customer service excellence is a major priority within Rostelecom's updated strategy. Service commoditisation and market saturation are putting to the forefront non-material aspects of the Company's perception such as customer satisfaction, net promoter score, and the Company's reputation.

Net Promoter Score (NPS) has been included in the Company's employee motivation scheme in 2018. In 2017, Rostelecom's NPS grew twofold.

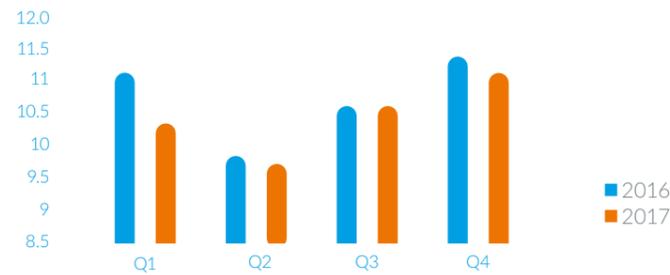
The number of payments made by the Company's customers using a bank card on the Rostelecom website increased throughout 2017, both through online customer accounts and Interactive TV interfaces. 23 million customers paid for services on Rostelecom's web displays.

A year-on-year decrease in contact rate⁵³ was also recorded at the Company's call centre in 2017.

The Company adopted the OmniChat proprietary customer service platform in 2017. Eighty five percent of the customers who assessed chat service quality gave it high scores: from 4 to 5 on a five-point scale. The number of inquiries via the chat increased by 25% year-on-year. Over 100 thousand customer inquiries were processed through social media in 2017.

The number of services registered in the Bonus loyalty programme increased by 31% in 2017, with the participant activity growing by 20% over the year.

Contact rate 2016–2017, %



Transformation and production system (RPS)

Rostelecom keeps improving its production system (RPS). In 2017, the RPS scope was significantly widened; the number of lean laboratories increased to 22 in 17 regions.

The Company continues its efforts to improve Orion⁵⁴ and RPS in RRS projects. The RPS in Call Centre project was launched in February 2017 and three more centralised RPS projects were launched in H1 2017: RPS in IT, RPS in B2B, and RPS in Single Settlement and Service Centres. Apart from the six centralised projects, over 20 local projects are underway in macroregions as at the end of 2017.

Eight lean laboratories continued operation in 2017 and developed over 200 local solutions. The benefits achieved through the implemented solutions totalled RUB 250 million (including soft benefits). In October 2017, 15 solutions were rolled out nationwide.

⁽⁵³⁾ Contact rate is the ratio of calls received by the call centre operator to the total subscriber base (for in-bound service enquiries, excluding sales).
⁽⁵⁴⁾ The Orion project, launched in July 2016, aims to reduce customer technical support costs and improve customer service quality.

Examples of completed RPS tasks

Task	Issue	Solution	Impact
Introduction of a dispatch system for Layer 3 Technical Support (TS) technicians (Vladivostok)	Inefficient logistics in route planning for Layer 3 TS technicians	Online management of Layer 3 TS technicians' routes and troubleshooting sequences. A Layer 3 TS technician accepts and closes tickets online through a smartphone and sees the optimal route on its display	Number of Layer 3 TS technician dispatches reduced by 25%, generating total soft benefits of ca. RUB 40 million
	Increased FTE idle time due to unbalanced work loads	No time tracking or result visualisation to enable on-site live monitoring	
	No option for online communication of new ticket related details to a technician		
Systemic approach to group/global tickets (Nizhny Novgorod, Novosibirsk)	Lack of systemic approach to group/global tickets (GT); lack of online updates on GT resolution, misleading information fed to a customer	Uniform requirements and business unit cooperation criteria developed for GT opening, description, and closing	Savings generated through reduced repeat calls and calls to Layer 2 Tech Support from customers within the GT area totalled RUB 20 million
		A uniform approach developed to GT views in different systems	
		Arrangements were put in place for continuous monitoring of GT opening and closing procedures	

RPS in RRS

The RPS in RRS project was launched in August 2016 and aims to:

- » improve service quality and customer satisfaction
- » reduce the average service time on maintenance services by 20%
- » increase sales.

Two new lean laboratories were involved in the project to run diagnostics on the current service and sales processes. In October 2017, a package of five standards was developed for subsequent rollout.

The total soft benefits were RUB 70.7 million.

Examples of completed RPS in RSS tasks

Task	Issue	Solution	Impact
Rollout of a solution to abandon paper-based applications	Customers have to fill in numerous paper-based applications (to change the plan, block services, etc.), which increases the service time and results in high expenses for paper, printouts, and archiving	Roll out a lean laboratory piloted solution to abandon paper-based applications in nationwide operations, expand the list of operation types to 16	Cost savings on paper, print cartridges, and service centre FTE time totalled RUB 60.3 million on an annualised basis

RPS in Call Centres

The RPS in Call Centres project was launched in February 2017 to improve first call resolution rate to 80%.

Lean laboratories focused on streamlining business processes related to customer calls to technical support, customer helpdesks, and settlement and service centres.

In October 2017, the first package comprising three standards was developed and approved for rollout, service processes and customer focus were improved, with the soft financial benefits totalling RUB 51 million.

Examples of completed RPS in Call Centres tasks

Task	Issue	Solution	Impact
Simplification of the customer identification procedure	Identification was done based on one mandatory parameter and two or three additional parameters depending on the inquiry type. Moreover, the customer had to go through a repeat identification procedure in case of a call transfer	The identification procedure streamlined through a shift from a multi-level system to identification by any two parameters from the customer profile displayed in the CRM	Customer identification time reduced by over 20% The soft financial benefits totalled RUB 15.3 million over five months
Reduced revenue losses in remote customer service channels at the call centre level	Existing customers make calls to have their plans changed or existing options cancelled or services blocked. Such calls lead to reduced revenue and ARPU for the Company	A targeted retention scenario was developed with a range of improved product offers to be used by call centre operators in particular situations. Basic principles were formulated for sustaining ARPU levels without compromising customer loyalty levels, and included in checklists and training materials	Loss reduction totalled RUB 28 million over six months

In 2018, the Company's lean laboratories will continue identification and selection of best practices in the following areas

- » improving the first call resolution rates
- » enhancing the self-service system (IVR)
- » increasing automation of self-service processes
- » reducing operator workload (CR) and call centre costs.



Vladimir Kirienko, First Vice President:

With 5,000 employees, Rostelecom's call centre is among the largest in Russia. In addition to using it for our own internal needs and servicing our long-term contracts, we also offer the call centre's capabilities as a service, thus monetising this asset.

RPS in IT

The RPS in IT project was launched in July 2017. The project aims to standardise the OSS systems incremental development process, reduce improvement times for inventory management systems, and introduce continuous IT process improvements with maximised focus on performance.

RPS in B2B

The RPS in B2B project was launched in September 2017. The project aims to improve the quality of technical support and reduce connection times without compromising on the quality of services provided to a customer or inflating the staff. The first wave of the technical support part of the project covered Siberia, Volga, North-West macroregional branches, while the connections part of the project was implemented in the Far East and South macroregional branches.

RPS in Single Settlement and Service Centres

The RPS in Single Settlement and Service Centres project was launched in December 2017. The project aims to increase the volume of operations handled by Single Settlement and Service Centres in 2018 without inflating the staff or compromising on the quality of services provided to a customer. The increased volume of operations was due to the partial transfer of service operations load from Level 1 RRS to Rostelecom's back office. The project focuses on the processes of pending operations and settlements. The first wave of the RPS in Single Settlement and Service Centres project covered the Siberia and North-West macroregional branches; the project's scope is expected to be widened in Q1 2018.

RPS development

Over 1,000 Rostelecom's specialists and managers were trained to use RPS tools. A new educational project, RPS Academy, was launched in the Company in September 2017. Its strategic goal is to foster continuous improvement culture, while its tactical goal is to train RPS teams at all management levels.

Ideas Portal

As part of the RPS, the Company has been running for two years now the Ideas Portal project providing a platform where any employee may publish an idea or undertake the implementation of an idea proposed by other employees. A total 1,444 ideas were submitted during 2017, of which 146 were implemented. The total economic benefit of the project was RUB 60 million.

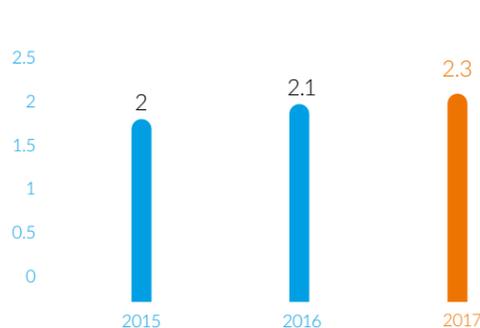
Operational excellence

Rostelecom places a particular emphasis on operational excellence, continuously growing its revenue per employee, reaching RUB 2.3 million in 2017.

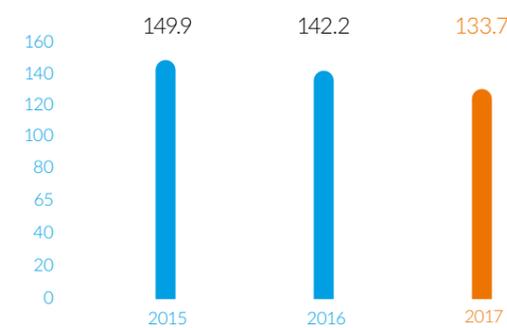
As the Company proceeds on its transformation journey, its personnel structure gets improved and the headcount optimised – in 2017, the total headcount was cut by 16% to 133,700 employees.

The Company continues the optimisation of its non-core asset portfolio and corporate real estate disposals. The total benefits of operational excellence programmes exceeded RUB 17 billion over the past few years.

Revenue per employee, RUB million



Headcount, thousand employees



Capital Investment

In December 2017, the Board of Directors approved the Company's budget for 2018,⁵⁵ including the capital investment programme for 2018⁵⁶.

Capital investment areas	2017	2018F	Major projects
Expansion of the existing business, %	72	65	Network construction for residential and business customers, installations and CPE, last mile and IP/MPLS network projects
Efficiency improvement projects, %	17	20	IT development and deployments, IT hardware replacements, transition from copper to fibre, real estate portfolio optimisation
New products, %	10	15	Data centres and cloud services, industry-specific services, e-services for state agencies, cyber security solutions
Actual/planned capital investment (CAPEX) excluding government-sponsored programmes, RUB million (according to the cash flow statement)	57,322	60,000 – 65,000	

M&A Activities

Rostelecom takes advantage of market opportunities to acquire expertise and high-quality assets, which will enhance the Company's market positions.

Major transactions in 2017:⁵⁷

- » consolidated a 100% stake in LLC Data Storage Centre, one of Russia's largest commercial data centre, Internet exchange point, and content delivery services provider
- » acquired⁵⁸ a 100% stake in Tvingo Telecom LLC, a leading provider of broadband services with ca. 30 thousand retail customers and ca. 1,000 corporate customers in Vladikavkaz
- » acquired⁵⁹ a 100% stake in OOO SET, which holds a licence for 3.5 GHz–3.6 GHz band in St Petersburg
- » acquired a 75% stake in Open Mobile Platform LLC and a 75% stake in Votron Ltd., securing control over the developer of Sailfish OS and Sailfish Mobile OS RUS mobile operating systems.

(55) Approved by the Board of Directors on 8 December 2017. Minutes No. 9 dated 9 October 2015.

(56) Information on the most significant projects within the capital investment programme for 2017–2018 is available in Appendix 11 Additional Information on PJSC Rostelecom to this Annual Report.

(57) The full list of completed transactions is available in Appendix 9 Acquisition and Disposal of Interests in Other Companies to this Annual Report.

(58) Through PJSC Bashinformsvyaz, Rostelecom's subsidiary.

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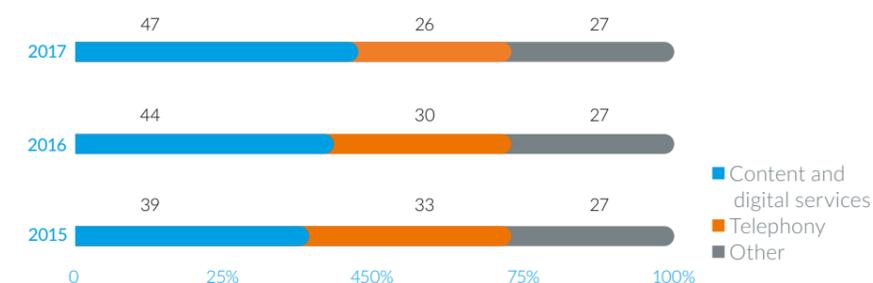
Financial Performance

Key Financial Highlights

In 2017, Rostelecom's revenue grew by 3%, or RUB 7.9 billion, to RUB 305.3 billion.

Digital services accounted for 47% of the Company's revenue for 2017.

Revenue breakdown in 2015–2017, %



Item	2015	2016	2017	2017 vs 2016, %
Revenue, RUB m	297,355	297,446	305,329	+ 3
OIBDA, RUB m	100,839	96,772	96,857	+ 0.1
% of revenue	33.9	32.5	31.7	
Operating profit, RUB m	38,586	39,836	37,885	- 5
% of revenue	13.0	13.4	12.4	
Net profit, RUB m	14,391	12,249	14,050	+ 15
% of revenue	4.8	4.1	4.6	
CAPEX, RUB m	62,726	61,857	60,752	- 2
% of revenue	21.1	20.8	19.9	
Net debt	173,670	177,481	181,594	+ 2
Net debt / OIBDA	1.7	1.8	1.9	
FCF, RUB m	21,962	13,298	20,385	+ 53

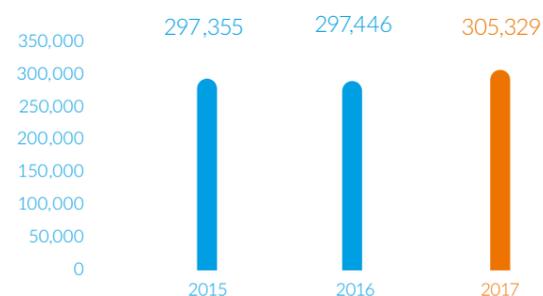
Mikhail Oseevskiy,
President PJSC SROstelecom



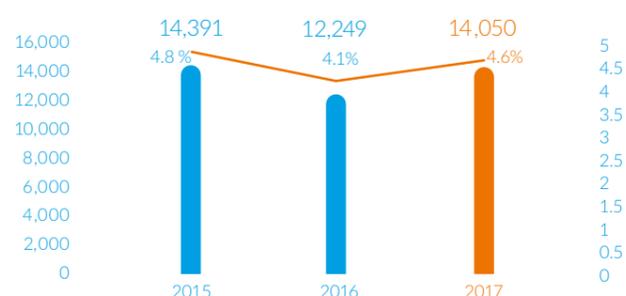
"Our 2017 achievements ensured robust financial performance. Along with higher revenue, operating profit prior to depreciation, and net profit, we achieved a 1.5 times increase in free cash flow which is the main source for dividend payout to our shareholders.

For the third quarter in a row, the Company demonstrates high revenue growth rates and a positive OIBDA trend. We continue to grow through digital transformation and the migration to a new business model based on the digital and content services segment. This segment has been demonstrating stable two-digit revenue growth rates and driving strategic transformation of Rostelecom."

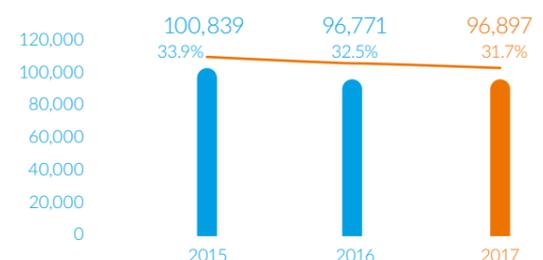
Revenue in 2015–2017, RUB million



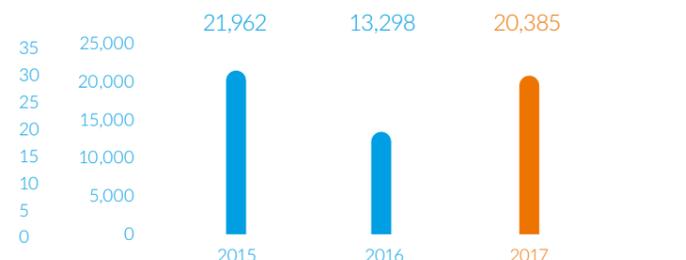
Net income and net income margin in 2015–2017



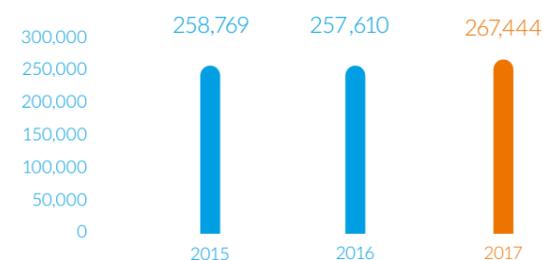
OIBDA and OIBDA margin in 2015–2017



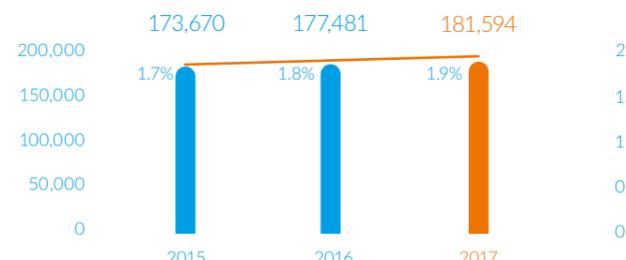
Free cash flow (FCF) in 2015–2017, RUB million



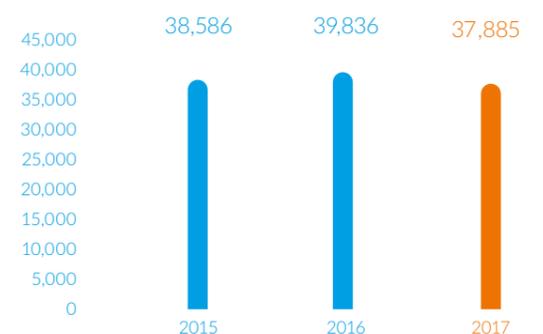
Operating expenses in 2015–2017, RUB million



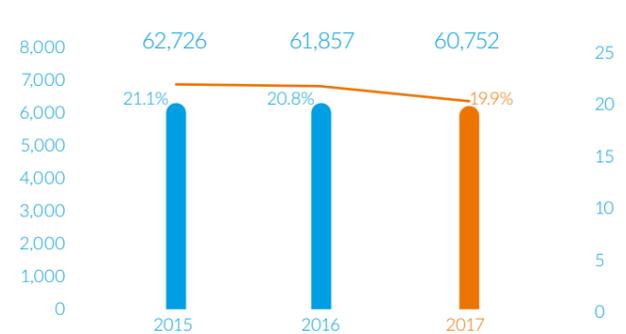
Net debt and net debt / OIBDA in 2015–2017



Operating profit in 2015–2017, RUB million



CAPEX in 2015–2017, RUB m and % of revenue



Revenue Breakdown

Revenue by segment in 2015–2017, RUB million

Segment	2015	2016	2017	2017 vs 2016, %
B2C	136,764	133,917	136,304	+ 2
B2B/G	98,319	102,195	108,739	+ 6
B2O	57,143	56,851	55,060	- 3
Other revenue	5,129	4,483	5,226	+ 17

Revenue by type of service in 2015–2017, RUB million

Type of service	2015	2016	2017	2017 vs 2016, %
Broadband	63,880	66,771	70,869	- 6
TV services	19,368	23,599	27,348	+ 16
Fixed-line telephony	99,105	87,813	78,445	- 11
Wholesale services, including:	78,266	79,010	77,800	- 2
lease of channels	11,714	10,538	9,437	+ 10
interconnection and traffic transfer	34,717	35,102	33,253	+ 5
VPN	19,711	20,823	22,243	+ 7
lease and maintenance of telecommunications infrastructure	12,124	12,546	12,867	+ 3
VAS and cloud services	14,224	18,245	23,041	+ 26
Other telecommunications services	14,499	14,242	18,658	+ 31
Other non-telecommunications services	8,014	7,767	9,167	+ 18

Revenue from VAS and cloud services, such as the Smart City project, cloud services, and data centre services was up 26% year-on-year.

A 31% increase in revenue from other telecommunications services was due to higher revenue from sales of equipment and MVNO services.

An increase in revenue from broadband and Pay TV was driven by the growing subscriber base and higher ARPU.

Operating Expenses

Breakdown of operating expenses in 2015–2017, RUB million

Operating expenses	2015	2016	2017	2017 vs 2016, %
Personnel costs	(91,081)	(90,340)	(93,381)	+ 3
Depreciation, amortisation, and impairment losses	(60,599)	(55,589)	(56,628)	+ 2
Interconnection charges	(49,825)	(52,161)	(52,762)	+ 1
Materials, repairs and maintenance, utilities	(25,125)	(24,917)	(25,926)	+ 4
Gain on disposals of PPE and intangible assets	2,133	4,556	5,344	+ 17
Bad debt expense	(882)	(2,775)	(2,776)	0
Other operating income	14,630	12,948	13,444	+ 4
Other operating expenses	(48,020)	(49,332)	(54,759)	+ 11
Total	(258,769)	(257,610)	(267,444)	+ 4

Rostelecom's operating expenses increased by 4% to RUB 267.4 billion in 2017. An 11% increase in other operating expenses resulted from higher expenses on user equipment and participation in the Smart City project. A 3% increase in personnel costs was mainly due to the long-term incentive programme, migration to a new pension scheme, and payroll increase following changes in the personnel structure.

OIBDA

OIBDA breakdown in 2015–2017, RUB billion

Item	2015	2016	2017	2017 vs 2016, %
Operating profit	38,586	39,836	37,885	- 5
Add: depreciation	60,599	55,589	56,628	+ 2
Add: non-cash expense under the long-term incentive programme	1,654	1,347	2,344	+ 74
OIBDA⁽⁶⁰⁾	100,839	96,772	96,857	+ 0.1
OIBDA/Revenue, %	33.9	32.5	31.7	

(60) OIBDA is not an indicator calculated under US GAAP or IFRS. The Company calculates OIBDA as operating profit before depreciation and non-cash expenses.

Debt

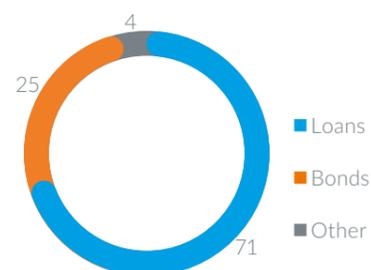
As at the end of 2017, total debt of Rostelecom increased by 2.3% to RUB 191.4 billion. Rouble-denominated payables account for 100% of the Company's debt.

As at 31 December 2017, consolidated net debt of Rostelecom totalled RUB 181.6 billion, while the consolidated net debt to OIBDA ratio stood at 1.9.

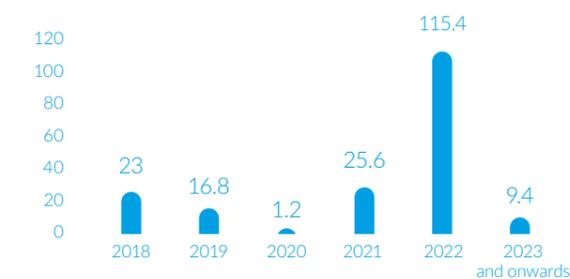
Key metrics in 2015–2017

Metric	2015	2016	2017	2017 vs 2016, %
Total debt, RUB m	186,554	187,105	191,372	+ 2.3
Net debt, RUB m	173,670	177,481	181,594	+ 2.3
Net debt / OIBDA LTM, %	1.7	1.8	1.9	

Debt breakdown by instrument, excluding interest, %



Debt maturity, excluding interest, RUB billion



Sustainability

Rostelecom's contribution to society⁶¹

Stakeholders	Engagement	2014	2015	2016	2017
Shareholders	Dividends, RUB million	9,452	16,472	15,000	14,050 ⁶²
	Total headcount, thousand people	158.9	149.9	142.5	133.7
Employees	Payroll expenses, RUB million	65,862	67,184	66,018	67,238
	Investment in training, RUB million	347.2	353.6	452.6	463.57
	Contributions to Telecom-Soyuz and Alliance private pension funds, RUB million	1,096	959	703.6	163.54
	H&S costs, RUB million	773.5	623.2	550.6	640.8
	Income tax, RUB bn	7,211	2,436	4,692	4,856
Government	Other taxes, RUB million	6,107	5,560	5,079	4,661
	Membership dues, payments to trade unions, charitable programmes, RUB million	791	854	660	697,
Environmental groups	Environmental expenditure, RUB million	130.6	129.7	128.8	104.6

Sustainability Strategy

A long standing strategic priority of Rostelecom, Russia's largest provider of digital services and solutions, is to contribute to the sustainable development of Russian society. The Company is committed to make its high performance a strong foundation for the success of society as a whole by improving the life quality for millions of Russian people through its products, services, and sustainability strategy.

In addition to providing its customers with quality digital services and adding value for all stakeholders, Rostelecom contributes to the well-being of society by creating conditions and new opportunities for development, as well as helping in dealing with vital issues.

Russian digital economy development is one of Rostelecom's focus areas.

Rostelecom is focused on promoting sophisticated digital technology, a driving force behind societal development, which is made accessible, understandable, and safe for all Russian people, wherever they live.

Rostelecom believes that Russia-wide digitalisation is crucial for improving the quality of life across all areas – the economy, social initiatives, public administration, etc., in particular, by:

- » creating new opportunities
- » providing access to knowledge
- » raising awareness and digital literacy
- » ensuring information security
- » improving accessibility and quality of public services
- » facilitating the development of small and medium-sized enterprises.

Rostelecom has what it takes to succeed in shaping digital Russia: strong infrastructure, up-to-date digital platforms, and many years of professional expertise.

⁽⁶¹⁾ The data in the table are presented in accordance with the 2017 IFRS consolidated financial statements. For more details see Rostelecom's Sustainability Report 2017.

⁽⁶²⁾ Recommendations of PJSC Rostelecom's Board of Directors for the AGM (Annual General Shareholders' Meeting).

In 2017, Rostelecom became the centre of capability for the Information Infrastructure.

Consistent and regular engagement are essential for high performance and effectiveness of sustainability involving all stakeholders. To support this format, Rostelecom defined its strategic sustainability objectives in 2017.

Rostelecom has become one of the first digital service companies to define its strategic sustainability objectives, thereby setting the ground for its consistent sustainability efforts.

Sustainability Focus

Rostelecom's sustainability priorities:

- » Business ethics and anti-corruption efforts. Openness and transparency in relations with customers, partners, and shareholders
- » Services. Developing and adopting innovations which boost the quality of Rostelecom's services and enhance the customer experience. Improving accessibility to the Company's services for small population centres
- » Society. Social, volunteer, and charitable programmes improving the quality of life for Russian citizens and contributing to sustainable development of society.
- » Employees. Providing attractive working conditions. Professional development of employees, care for their health and safety
- » Environment. Minimising the Company's environmental footprint, improving energy efficiency, and fostering the environmental culture in society.

Rostelecom believes that its focus on excellent services and better life quality for millions of Russian people is pivotal for its mission

Rostelecom provides universal service⁶³, creating opportunities for small and medium-sized businesses and ensuring access to knowledge, information, services, and quality products for all citizens irrespective of their place of residence.

Business ethics

Transparency, customer and partner confidence, reputation of an open and reliable company rendering high quality and accessible services are key elements of Rostelecom's Code of Ethics⁶⁴ underpinned by its corporate values such as expertise, responsibility, innovation, openness, and continuity.

Rostelecom's Code of Ethics is based on:

- » legality
- » integrity
- » transparency
- » privacy
- » engagement.

Rostelecom's Code of Ethics defines the framework for decision-making by the Company's employees.

Any employee can report violations of the Code of Ethics to a dedicated e-mail address: ethics@rostelecom.ru.

In 2014, the Company introduced its Anti-Corruption Policy⁶⁵ which sets forth the basic principles and rules to be complied with by employees of any grade or authority.

The Anti-Corruption Policy and the Regulations on the Conflict of Interest Management were updated in 2017. The Company also developed a set of standard anti-corruption documents for subsidiaries and affiliates, and commenced the adoption of anti-corruption programmes and business ethics improvements at its subsidiaries. The Compliance Day attended by the President of Rostelecom was held for the Company's employees, including those from regional offices, in June 2017.

⁽⁶³⁾ The universal service concept was introduced by the Federal Law On Communications adopted in 2003.

⁽⁶⁴⁾ For more details on Rostelecom's Code of Ethics see the Company's website at www.rostelecom.ru.

⁽⁶⁵⁾ For more details on Rostelecom's Anti-Corruption Policy see the Company's website at www.rostelecom.ru.

Society

Rostelecom's track record and expertise help the Company improve people's lives in the remotest parts of Russia and prepare young talent for realisation of their potential.

Rostelecom contributes to the societal development through using various programmes and tools, including:

- » Rostelecom's social programmes developed and rolled out either independently or in collaboration with partners, with the Digital Equality being one example
- » partnership-based programmes rolled out jointly with non-profit and non-governmental organisations, state-owned and private companies
- » volunteer activities involving the Company's employees in social projects
- » charity – financial assistance for acute problem solving
- » sponsorships – financial support for causes and initiatives in culture, sports, and preservation of cultural heritage.

Digital Equality

A nationwide programme helping the Company bring positive changes to people's lives by covering a growing number of Russian regions, eliminating barriers, and providing millions of Russians with access to the latest telecommunications technologies. Digital Equality comprises seven social projects:⁶⁶

- » ABC of the Internet
- » IT Growth
- » Learn the Internet – Manage It!
- » Social Impact Award
- » Internet for Libraries
- » Computerisation of Orphanages
- » Distance Learning for Disabled Children

The Digital Equality programme won the Ethical Dimensions of the Information Society category and became a winner of WSIS Prizes 2018⁶⁷.

senior citizens have been trained under the ABC of the Internet programme since it was launched

160 thousand

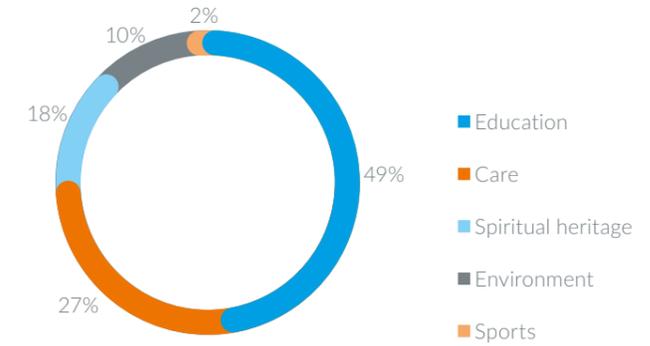
school students competed in a championship organised as part of the Learn the Internet – Manage It! project in 2017

14 thousand

⁽⁶⁶⁾ For more details on the Digital Equality programme initiatives see Rostelecom's Sustainability Report 2017 or go to the Company's website at www.rostelecom.ru.
⁽⁶⁷⁾ WSIS is a forum of the World Summit on the Information Society. For more details see <https://www.rostelecom.ru/press/news/d443248/>.

Charity

Rostelecom continues to support charity projects in education, spiritual heritage, sports, environment, etc. The company joined efforts of charitable organisations to support, inter alia, additional training of school children under long-term hospital treatment; targeted aid for children and fulfilment of their creative and intellectual potential.



Volunteer activities

Rostelecom's commitment to volunteering projects is increasing with every year, aiming to improve the lives of those most in need and those involved in such improvements, the Company's employees. Volunteering is a critical component of the Company's sustainability, which constitutes an important activity we need to learn and improve year after year.

A dedicated section, Social Projects, was developed for Rostelecom's portal in 2017 to help the employees involved in volunteer activities share their experiences and invite their colleagues to charity projects.

over 300 volunteering projects

ca. 4,000 Rostelecom's employees involved in volunteering projects on a regular basis

Employees

PJSC Rostelecom is one of Russia's largest employers with a headcount of 133,685 staff in 2017. The Company continues to create a fully enabling environment for upgrading professional skills, development, and self-fulfilment of its employees. One of its key sustainability priorities is the development of a professional team capable of both achieving personal targets and ensuring successful teamwork in the long run.

Rostelecom maintains its focus on the Long-Term Personnel Transformation Programme spanning the period until 2019. The purpose of the Programme is to attract and retain best talent, create career opportunities, provide decent remuneration, recognise achievements, foster dialogue with management, and develop leadership skills in people. All these initiatives boost Rostelecom's profile as the employer of choice, supporting its longer-term development goals.

A priority of Rostelecom's HR policy is the cooperation with educational institutions to shape the training of its future talent.

A new pension scheme of the subsidiary pension fund Alliance, launched in December 2016, is gaining more popularity among the Company's employees, with 43% of staff joining the scheme in 2017.

Corporate University

Employee training and upgrading professional skills are an important task for Rostelecom, involving external experts, the Corporate University (CU), and the corporate distance training platform.

The Corporate University is a framework combining a set of resources and consisting of skill centres, corporate training divisions, classrooms, premises, and equipment. The CU develops and implements a uniform approach to training standards and programmes, employee testing and certification, determines and follows personnel training and development strategies, and is a single communication channel for personnel training and development.

Corporate employee pension scheme

The pension scheme is designed for all employee categories: both long-time employees thinking about their retirement options, and Rostelecom newcomers.

43% of Rostelecom employees
joined the corporate pension scheme in 2017

Environmental protection and energy efficiency

Rostelecom's sustainability priority is the sustainable use of natural resources and mitigation of its environmental impact. The Company fosters the environmentally friendly culture in society, supports programmes and initiatives to adopt technology know-hows and energy efficient technologies which lead to creating a healthier environment.

Rostelecom promotes the environmental culture in society, actively supports local community initiatives aimed at increasing environmental responsibility.

Environmental Policy

In defining the framework of, and approaches to, managing and implementing its environmental activities, the Rostelecom follows the Environmental Policy adopted in 2015⁶⁸, which also forms the planning and implementation framework for Rostelecom's environmental initiatives. The key environmental initiatives in 2017:

- » improving the environmental management and recertification for ISO 14001
- » continuing long-term projects having a positive environmental effect:
 - » boiler upgrades (conversion from coal and diesel fuel to gas)
 - » standby diesel generator upgrades (replacements with higher performance equipment)
 - » replacing water cooling with air cooling
 - » replacing fluorescent lamps with LEDs
 - » optimising the use of artesian water supply wells
 - » optimising the fuel and energy management (energy saving and heat loss reduction).

Environmental safety

When planning such large-scale projects as capital construction, equipment installation and upgrades, and building fibre-optic communications networks, Rostelecom assesses its environmental risks and verifies the compliance of these projects with environmental legislation. Environmental risks are a part of the Company's general Risk Matrix. Rostelecom has been conducting annual environmental risk assessments since 2016 as part of its risk management framework. In addition, the Company arranges public consultations involving the locals residing in project implementation areas, public organisations, and local authorities. Proposals and comments made during such consultations are at all times taken into account for project finalisation.

Energy efficiency

Rostelecom has in place an energy efficiency programme which replaces energy-intensive equipment and rolls out automated lighting and heating control systems in the Company's offices. Rostelecom also uses green energy (solar panels, wind plants, hybrid wind and solar power systems, and microturbines).

As part of its advanced technology implementation, the Company prepared its second report on greenhouse gas emissions and climatic impact. PJSC Rostelecom also introduced its Energy Policy in 2017.

Green Office

A segregated waste collection initiative was launched at the Company's offices in 2017 as part of implementation of the Green Office concept. During the year, paper waste sorting was arranged at 43 branches and 171 offices. A total of 346 tonnes of paper waste were collected and transferred to recycling facilities, potentially saving ca. 3,400 trees.

As part of Green Offices of Russia 2017, a contest conducted by Ecobureau GREENS, two Rostelecom's offices in Moscow received a four-star rating (out of five).

Plans for 2018

Rostelecom's strategic priority is to facilitate social, environmental, and economic sustainability. While providing high quality and affordable telecommunications services, the Company continues to contribute to resolving pressing social issues, improving Russia's environmental conditions, and developing its employees. Rostelecom's contribution to the sustainable development of society is a strong foundation for both business and country growth.

In 2018, Rostelecom will consistently work on its social projects for the benefit of the people residing in the Company's regions of operation.