

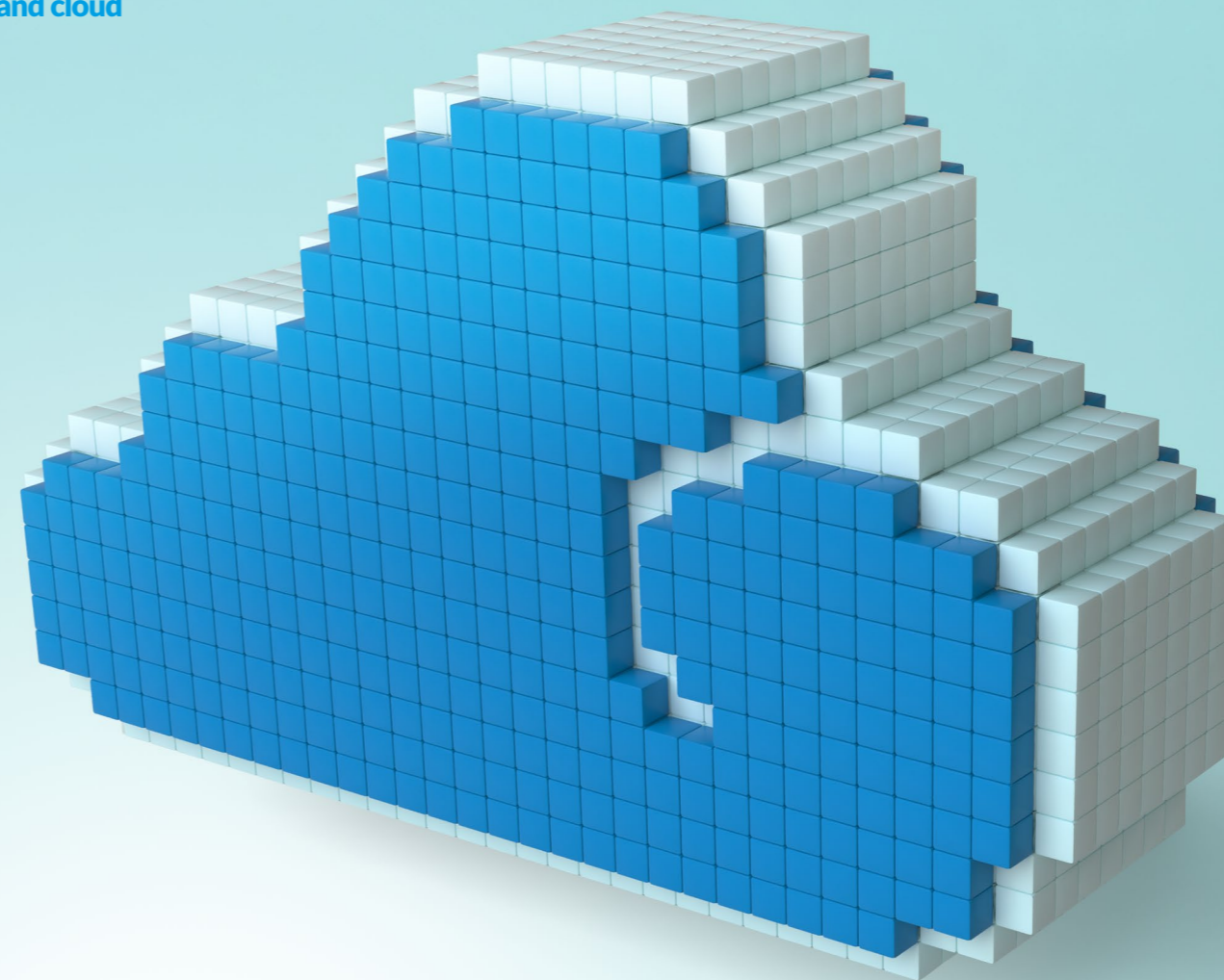
# Strategic Report

Rostelecom owns the largest data centre network in Russia.

Rostelecom's data centre network enables the Company to offer advanced cloud-based solutions and high value-added services.

## +26.3%

Revenue growth from VAS and cloud services compared to 2016



Rostelecom's updated strategy meets the challenges of the modern age and is aimed at developing ecosystems, technological modernisation, human capital development, and operational excellence. We are transforming into a digital partner for retail, business, and government customers.

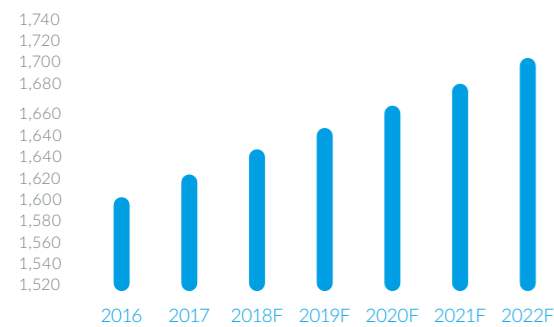


# Industry Overview and Competitive Analysis

## Russian Telecommunications Market

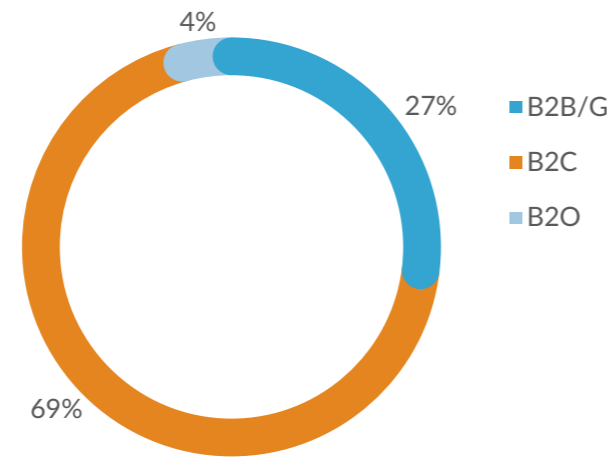
The Russian telecoms market grew by 1.3% in 2017 to RUB 1.62 trillion, as major players ceased to compete on price.

Revenue in the Russian telecoms market, RUB bn



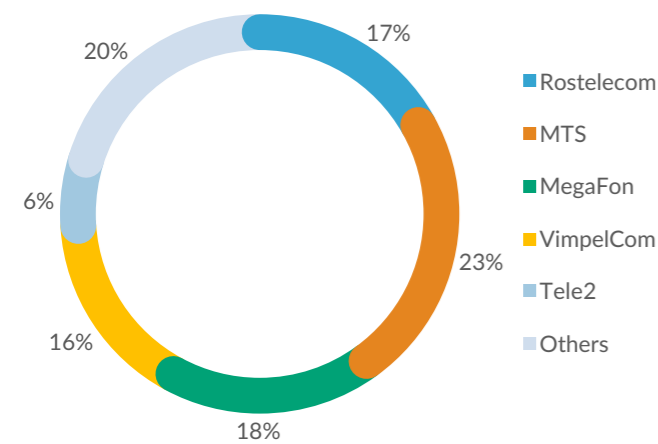
Source: TMT Consulting, 2017.

Russian telecoms market breakdown by segment, %



Source: TMT Consulting, 2017.

Russian telecoms market breakdown by operator, 2017E, %



Source: TMT Consulting, 2017.

The retail segment continues to dominate the Russian telecommunications market. The size of the B2C market was virtually flat year-on-year, while the corporate sector recovered from stagnation, growing by 6%, and the wholesale telecoms market was down 7%.

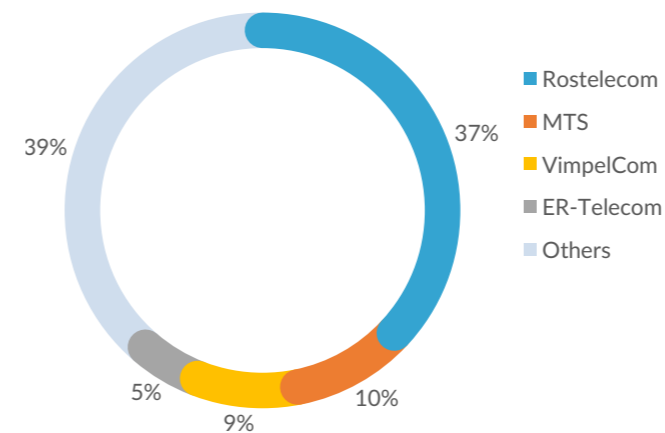
## Broadband Services

The Russian broadband market was RUB 187.3 billion in 2017, of which 71% were attributable to the B2C segment.

The aggregate number of broadband users totalled 34 million, of which 1.5 million were legal entities and 32.5 million households.

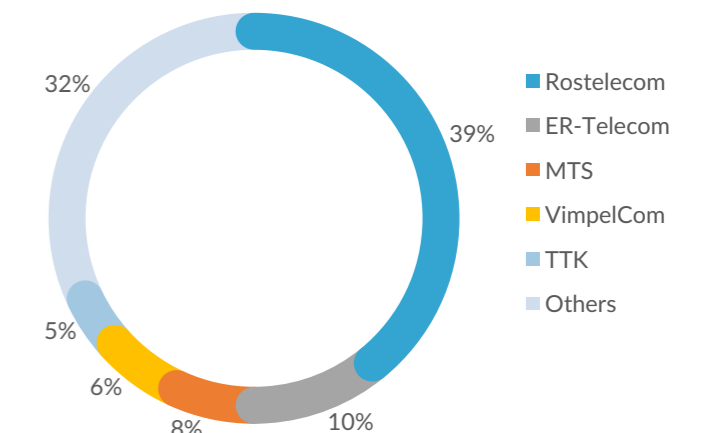
In 2017, ARPU in the B2C segment was RUB 346, while in the B2B segment ARPU varies significantly between regions, averaging at RUB 2,998.

Breakdown of the broadband market's B2B segment by operator revenue, 2017E, %



Source: TMT Consulting, 2017.

Breakdown of the broadband market's B2C segment by operator revenue, 2017E, %



Source: TMT Consulting, 2017.

The steady 4% growth in the broadband market was driven mostly by new build and small town connections. ARPU increased by 0.7% over the year due to subscribers trading up to higher data speeds.

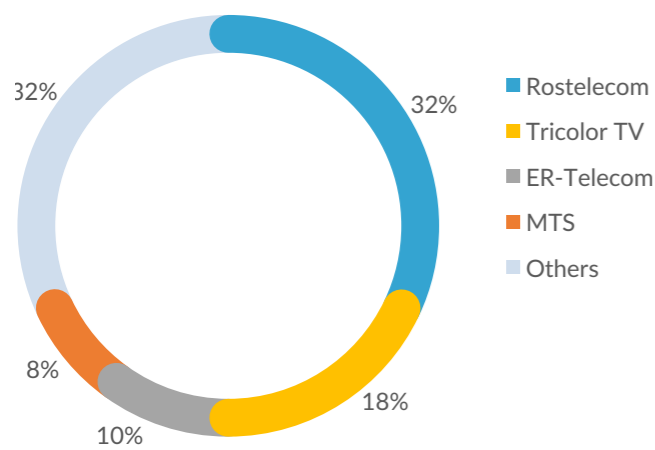
Consumption of fixed-line traffic in Russia was up by over 20% year-on-year.

### Pay TV Services

The pay TV market was up 10.5% year-on-year with the subscriber base reaching 42.6 million. The service penetration rate exceeded 75% for the year.

ARPU in B2C was up 7% year-on-year to RUB 167 driven mostly by value-added services. The B2B segment showed strong performance, growing by 32% year-on-year. ARPU for the segment was RUB 1,550.

Breakdown of the pay-TV market by operator revenue, 2017, %

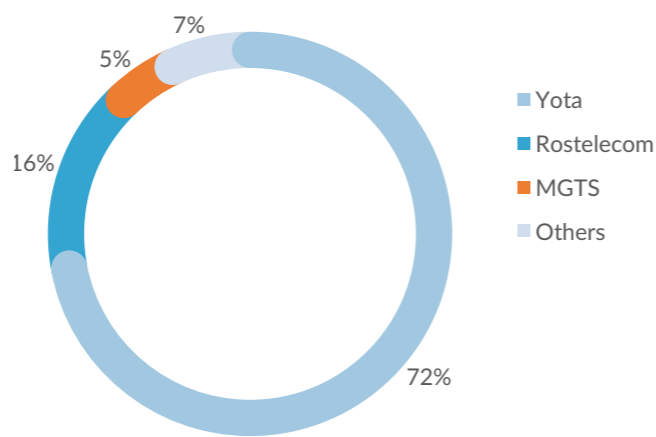


Source: TMT Consulting, 2017.

### MVNO Services

The share of MVNO customers in the total mobile base reached 2% in 2017, with the MVNO base growing by 58% year-on-year. Mobile ARPU was RUB 290 for 2017.

Russian MVNO market breakdown by revenue, 2017E, %



Source: TMT Consulting, 2017.

### Fixed-Line Services

The fixed-line telephony market continued its downward trend, falling by 9% year-on-year. Rostelecom retains its leadership in all segments of the fixed-line market.

**The fixed-line telephony ARPU was RUB 257 in the B2C segment and RUB 685 in the B2B segment.**

## Updated Development Strategy

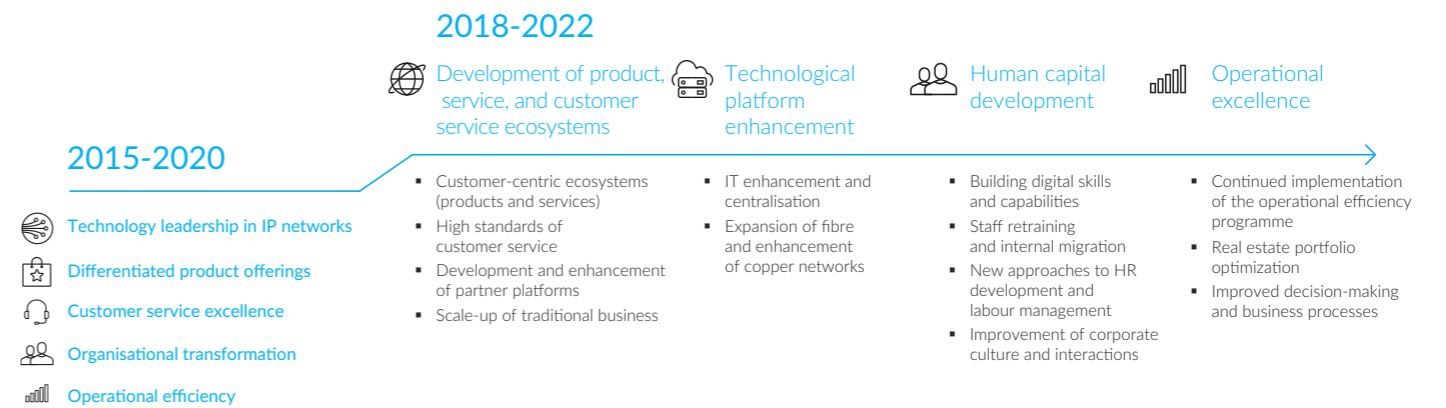
### Strategic Foundation

**Our mission: Rostelecom is a digital partner for retail, business, and government customers.**

Rostelecom's strategy approved in 2015 needed an update to reflect the current operating environment and the Company's expansion into high-growth digital markets.

The new strategy<sup>7</sup> spans a period until 2022, and seamlessly continues and builds upon the previous strategy.

#### Evolution of strategic vision and priorities



### New Strategy Drivers

#### Consumer trends

As consumer behaviours evolve, the Company has to change the way it develops communications services and tools.

Changes in consumer trends indicated:

- » higher engagement
- » higher importance of emotional intelligence
- » changes in communication patterns.

Consumers prefer seamless mobile integration solutions and are willing to use self-service functionality.

(7) Approved by the Board of Directors on 29 December 2017. Minutes No. 13 dated 29 December 2017.

## Updated Development Strategy

**Sergei Anokhin,**  
Senior Vice President and CFO



"Rostelecom had a great strategic planning achievement in 2017: we designed integrated strategic end-to-end processes to ensure that the Company's high-level objectives are cascaded down to individual business segments and functions and translated into function or segment-level objectives. We have built effective interfaces with business and support functions to maximise their involvement in the strategic planning process and a higher degree of shared ownership in achieving strategic goals.

A major achievement of 2017 is our bolstered confidence that we can drive stronger performance in both HQ and regional offices."

New consumer behaviour trends

Choice

**Personalisation and co-development of services**  
Involvement at the design phase and creation of unique features

**New experiences**  
Search for novelty in routine emotions. "I am what I experience rather than what I possess."

**Gamification**  
Using game-design elements for emotional engagement

Communication

**Drastic simplification**  
Minimised time and mental effort required to use a product

**Online socialisation**  
Ubiquitous social networking, shared consumer experiences

**Visual communication channels**  
Shift from text and voice-based formats to "faster" media - images and videos

Customer experience

**Mobile-first approach**  
All products and services accessible via mobile applications

**Omni-channel approach**  
Seamless migration between communication or consumption channels, deep integration between offline and online

**Self-service**  
Development of self-service tools (virtual assistants, web interfaces, etc.)

Impact on Rostelecom

Need to design new user interfaces and develop self-service channels

Need to develop new entertainment services and ensure their accessibility from mobile devices

Need to personalise services to match specific customer needs, and develop accurate, customer-specific insights

Technology trends

The fast-paced technological advances are another driver behind our effort to review strategic goals and initiatives. Technologies like IoT, artificial intelligence and Big Data provide new growth opportunities to Rostelecom.

Major technological trends

Internet of Things

Increasing number of connected devices for household and industrial applications

- Smart home
- Smart devices
- Smart clothing
- Digital healthcare
- Industrial Internet of Things
- Drones

Artificial intelligence

Advanced training and robotics solutions available in all interfaces

- Machine learning
- Predictive analytics
- Voice interfaces
- Robotics

Big Data Era

Increasing volumes of available information. A new phase in improving data gathering, analysis and storage methods

- Quantum computing
- Digital twins
- Blockchain
- Open data and API
- Cyber security
- Cloud computing

Impact on Rostelecom

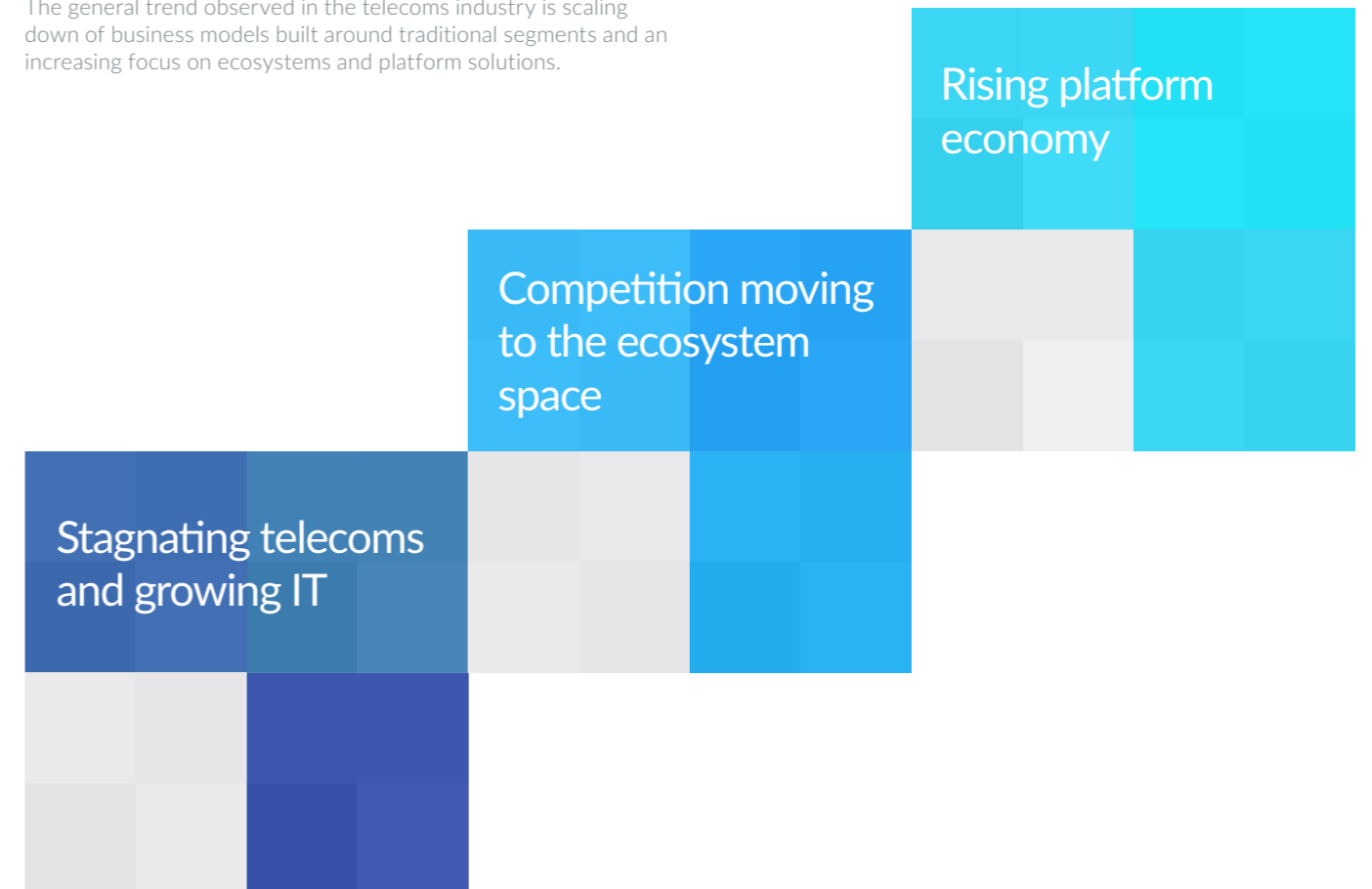
Availability of platforms enabling integration of any device

Partnerships with leading IT and internet companies for new product co-development

Development of tools and products for cloud computing and Big Data

Industry trends

The general trend observed in the telecoms industry is scaling down of business models built around traditional segments and an increasing focus on ecosystems and platform solutions.



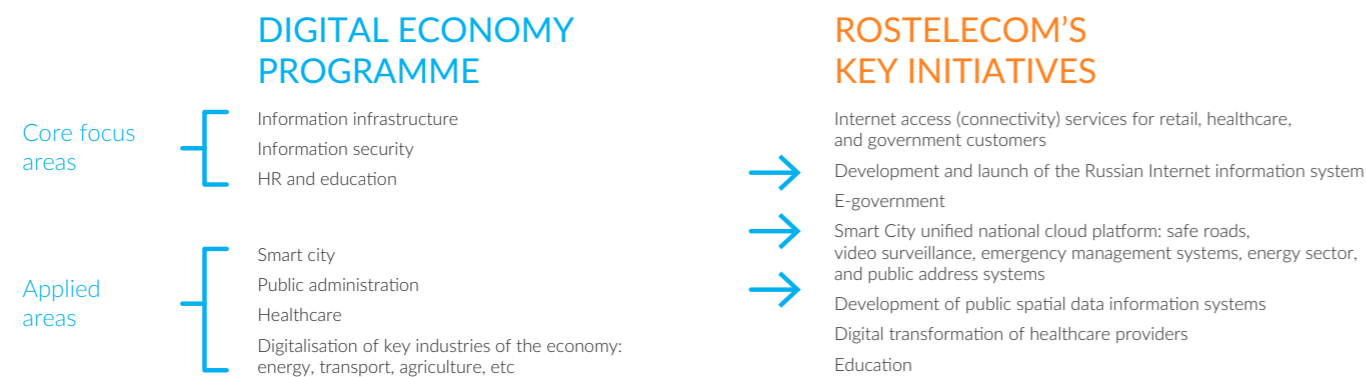
While the compound annual growth rate (CAGR) in the Russian telecoms market is approximately 1%, the market for IT services has been growing at 11% per year. An ecosystem-oriented approach will enable continued growth beyond the "core product", thus increasing sales and reducing churn.

The platform economy has established itself and is driving successful expansion of many innovative businesses, enabling matching of customers and partners via application programming interface (API).

Government-sponsored programmes

Government-sponsored programmes and initiatives have become a major driver behind our decision to update Rostelecom's strategy. A key objective the Company has achieved through its strategy update was its alignment with the Digital Economy of the Russian Federation programme<sup>(8)</sup> (the "Programme"), in which Rostelecom plays a major role. Rostelecom is the government's key partner in implementing infrastructure initiatives under the Programme, and developing state-of-the-art Russian digital services and platforms for the benefit of private citizens and businesses.

Rostelecom – the enabler for delivering the Government's digital agenda



According to expert estimates, building infrastructure to support 5G rollout will require 5 to 10 times as much investment as for previous generation networks due to a much greater density of base stations to be deployed and a much more extensive fibre network required to connect them. Rostelecom has accumulated vast capabilities and resources to build and operate a complex ICT infrastructure, which will ensure the successful rollout and management of the underlying infrastructure to support 5G wireless networks which could be shared with other telecoms operators. This approach will help the entire industry to cut costs of transition to next generation telecoms networks.

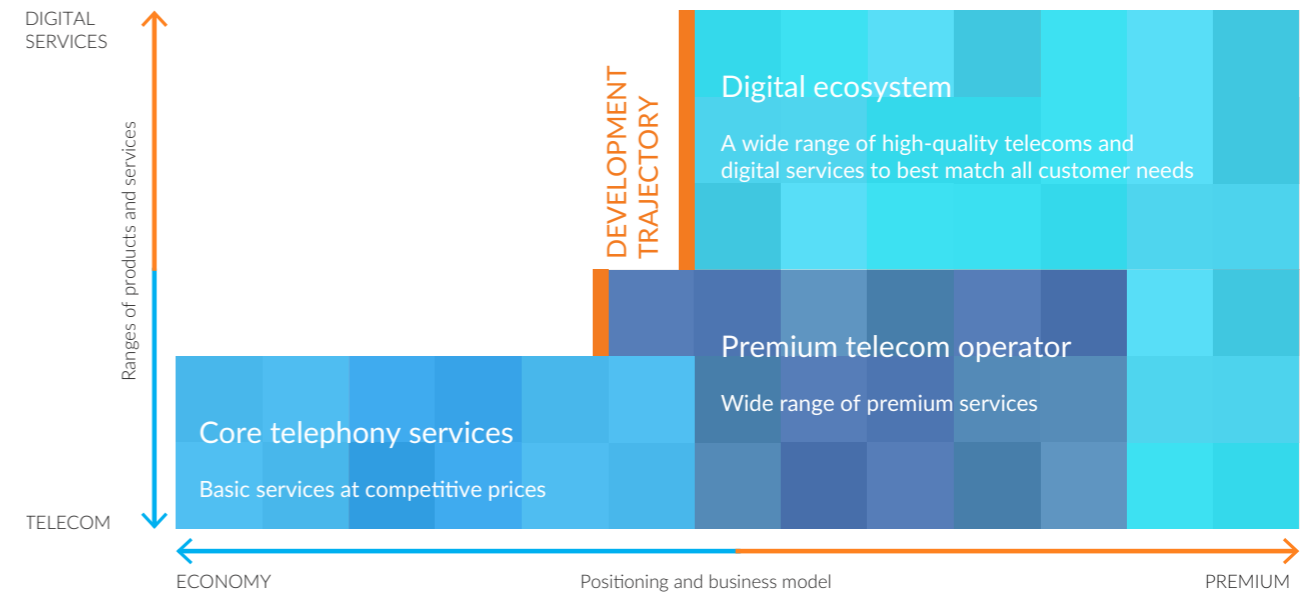
The rise of data economy will inevitably require transformation of data storage and processing. Rostelecom's capex programme provides for a major geographic expansion of the distributed data centre network to ensure we are present in every federal district. This effort will transform Rostelecom into the anchor company for data storage and processing projects under the Programme to accommodate growing data volumes.

Another important challenge for Rostelecom is to design a unified cloud platform for government authorities and migrate the bulk of federal-level information resources to such platform by the end of 2020. The future distributed system is expected to provide government authorities with data storage and processing services. The platform will be available to all data centre market players meeting the requirements of a standard to be developed and adopted for this purpose, and having their computing resources connected to the shared infrastructure. Rostelecom will assume operatorship of the new platform and invest up to RUB 200 million in the co-development of such platform with the government between 2018 and 2020.

(8) Approved by Decree of the Russian Government No. 1632-r dated 28 July 2017.

Rostelecom's Strategic Priorities until 2022

Strategic growth focus – a digital partner for retail, business, and government customers



Strategic priorities of the updated strategy

<p><b>Development of product, service, and customer service ecosystems</b></p> <ul style="list-style-type: none"> <li>» Development of product and service ecosystems around customers</li> <li>» Ensuring high standards of customer service</li> <li>» Development and enhancement of partner platforms</li> <li>» Scale-up of traditional business</li> </ul>	<p><b>Technological platform enhancement</b></p> <ul style="list-style-type: none"> <li>» IT landscape enhancement and centralisation</li> <li>» Expansion of fibre and enhancement of copper networks</li> </ul>
<p><b>Human capital development</b></p> <ul style="list-style-type: none"> <li>» Building digital skills and capabilities</li> <li>» Staff retraining and internal migration</li> <li>» Adaptation of approaches to staff development and corporate culture improvements to meet digital company requirements</li> </ul>	<p><b>Operational excellence</b></p> <ul style="list-style-type: none"> <li>» Continued implementation of the operational efficiency programme</li> <li>» Real estate portfolio optimisation</li> <li>» Improved decision-making and business processes</li> </ul>

**Rostelecom's ecosystems**

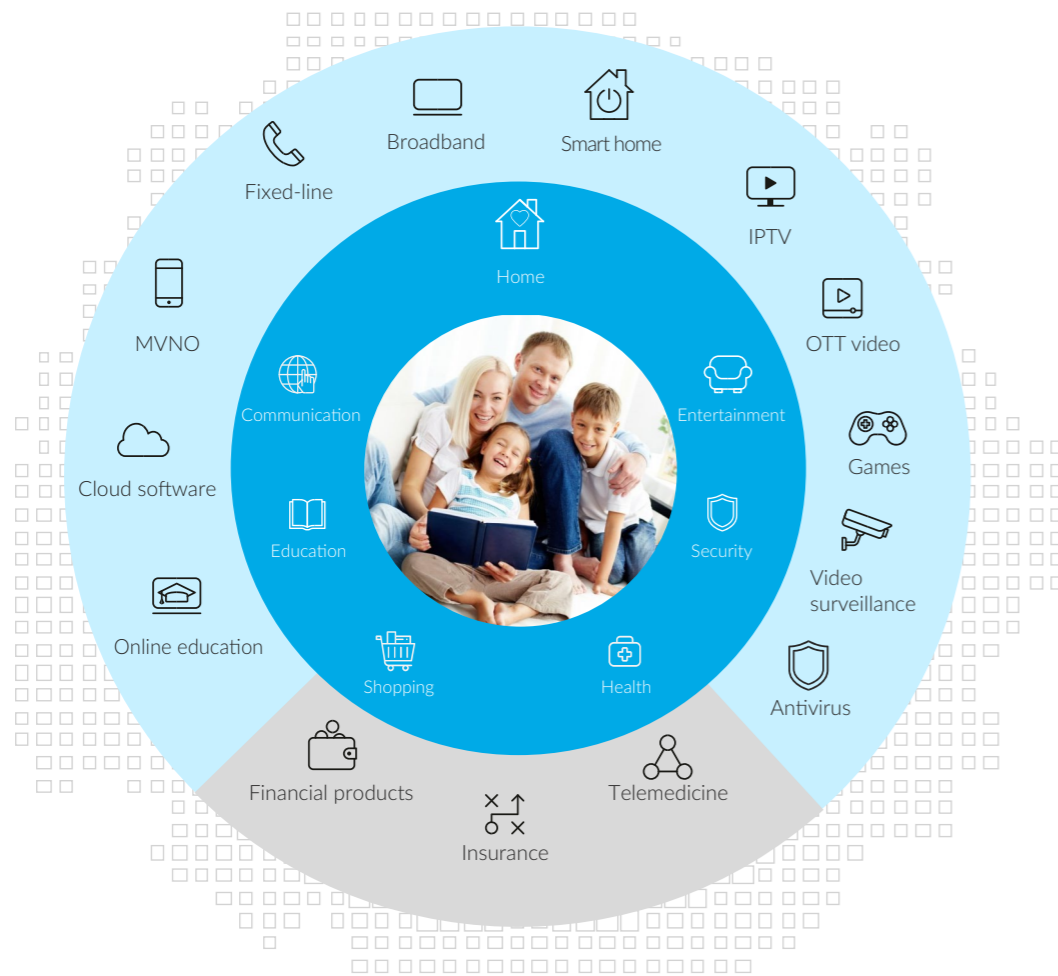
Rostelecom's strong position across all segments and its unique wealth of expertise make it well-positioned for building a digital ecosystem:

- » Leadership in high-opportunity markets by market share and customer acquisition rate
- » Secure, fault-tolerant, high-speed IP network with wide geography, covering over 33 million households
- » The benefit of having government as a reliable customer, including under long-term nationwide initiatives

A relevant ecosystem will be built around each of our customer segments to meet both current and future customer needs.

**Residential customers**

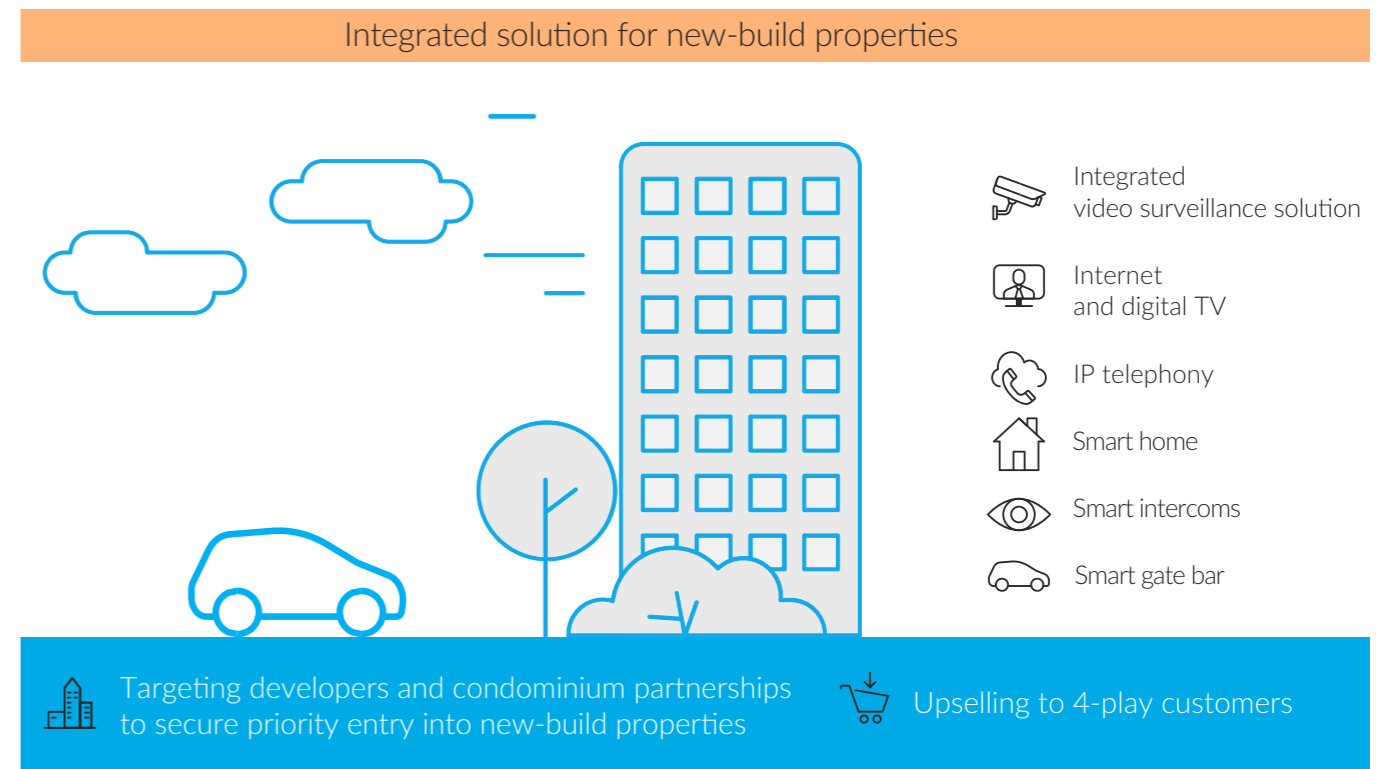
Rostelecom's ecosystem around retail customers will be based on such anchor products as broadband, IPTV, and telephony.



Strategic objectives in B2C until 2022:

- » Bring connectivity to new-build properties at the construction phase, thereby securing high service penetration rates and creating potential for partnerships with other operators in promoting Smart City initiatives
- » Promoting OTT video and consolidating market position in this segment
- » Increase profitability through anchor products
- » Expand the mobile base by selling converged bundles
- » Develop new product ecosystem: Smart Home, Game Streaming, and Online Education solutions
- » Improve customer satisfaction, quality of services, and customer service

Capturing the new build market initiative is a priority project expected to bring significant incremental increases in the retail revenue base. Rostelecom will seek agreements with developers and housing cooperatives to deploy network infrastructures required for the entire range of digital services. The Company will be able to offer the full range of Smart Home services and provide both core (TV and broadband) and new digital services as early as at the move-in stage: video surveillance, security alarm, smart intercoms, smart gate bar, etc. Rostelecom will also benefit from significantly increased penetration rates for its services compared to the traditional demand-driven sales model.





**Corporate and government customers**

Rostelecom's ecosystem targeting corporate customers is based on such anchor products as broadband, different types of telephony services, as well as virtual PBX, data centre, and cloud services.

Strategic objectives in B2B until 2022:

- » Strengthen technology leadership in traditional markets, switch to fibre, and SDN network development
- » Focus on major customers (acquiring federal-level customers and Top 100 customers in every region), improve margins by customising product offers and transforming technical support
- » Leadership in the SME market through best-in-class bundled solutions and enhanced customer touchpoints
- » Aggressive growth in new and adjacent markets



Rostelecom will remain a key partner for the government in addressing its digitalisation and ICT agendas. The ecosystem for government customers will be based on such anchor products as e-government solutions, broadband, and all types of telephony services, as well as services for the public education and healthcare systems.

Strategic objectives in B2G until 2022:

- » Develop application services: E-Government, Education, Healthcare, Geodata, Energy, and Security
- » Grow the existing Smart City (Area) business: Safe Roads, Video Surveillance, Emergency Management Systems, Energy Sector, and Public Address Systems
- » Contribute to the optimisation of national ICT infrastructure: Smart City unified national cloud platform, and other initiatives
- » Provide support to other government initiatives: Bridging the Digital Divide (BDD) programme, programme to connect public healthcare providers

As part of establishing a user-friendly ecosystem of digital products and services in the B2B/G segment, the Company will prioritise the development of the following solutions and products.

**Data centres**

The Company intends to further consolidate its dominant position in the data centre market, aiming to expand the aggregate capacity of its data centre fleet to over 10 thousand racks by 2022. This will absorb the growing demand for XaaS cloud-based services.

**Leadership in data centre and cloud services**

**2022 strategic target**

>10 thousand racks      +70% market growth in 2018–2022

Nº1 in the data centre market



**Smart cities**

Rostelecom is the leader in Smart City solutions, and plans to further develop this segment. The Company has the required expertise, experience, and financial resources to provide Smart City solutions based on a service model. The Company projects the revenue growth potential for its Smart City segment to exceed 50% by 2022.

Building smart cities

**+50%**  
growth in revenue from  
Smart City projects by 2022



**Information security**

Information security services are becoming increasingly important for both businesses and government, offering a significant growth potential for Rostelecom's customer base and revenue.

Information security as a service

- SOC – 24/7 monitoring and response
- Threat assessment and penetration testing
- Complex approach to Information Security
- Investing in a customer's security



Operator with an infrastructure advantage

**2022 strategic target**

- Provide turnkey infrastructure solutions
- Develop the O2O project
- Expand transit backbone infrastructure



**Services for operators**

In its relations with customers from the telecoms industry, Rostelecom views itself a single infrastructure operator, with offering based on anchor products of voice and IP transit, line leases, and IP VPN services.

Strategic objectives in B2O until 2022:

- » Develop the O2O project: provide infrastructure maintenance services for mobile and fixed-line operators, enable infrastructure for 5G
- » Standardise Rostelecom's infrastructure services: development of a single catalogue of products and services, eliminating gaps in infrastructure accounting
- » Develop and optimise backbone network infrastructure: TEA project to improve connectivity between Russia and Europe, and Central Asia, with speeds between 2 Tbps and 4 Tbps
- » Increase international market shares: revenue retention in the existing Central Asia and CIS markets, boost direct sales and enter new markets

**Technological platform enhancement**

The Company aims to sharpen its technology leadership by enhancing its network infrastructure and IT systems.

This objective involves the following strategic priorities:

- » Expanding the backbone network to prepare it for heavy content delivery and meeting new speed requirements
- » Optimise the access network to improve quality, reduce outages, and provide connectivity for IoT/SmartHome/SmartCity devices
- » Adopt NFV/SDN to enable better network control and reduce operation costs
- » Enhance service platform to streamline the development and customisation of product offers
- » Migrate to a target IT architecture to improve control of product launches and marketing activities
- » Transform the IT landscape to automate sales, connection, customer service, and maintenance processes

## The best network

### 2022 strategic targets

Expand the backbone IP network to provide higher speeds and ensure heavy content delivery

Optimise the access network to improve quality, reduce outages, and provide connectivity for IoT/SmartHome/SmartCity devices

Adopt NFV/SDN to enable better network control and reduce operation costs

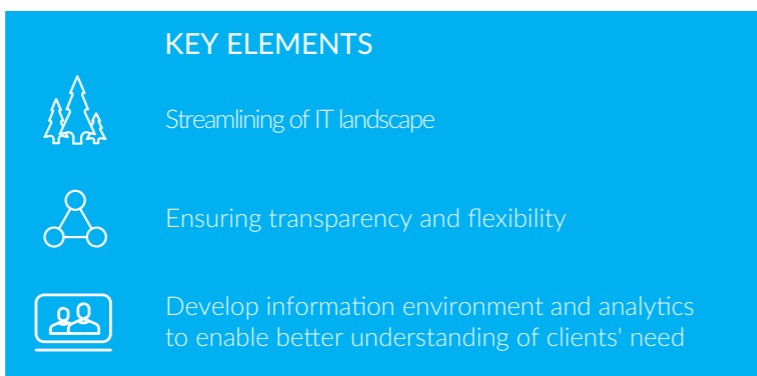


## Convenient IT to open up vast business opportunities

### 2022 strategic targets

**> 30%**  
reduction in the number of systems operated

**1 to 5 months**  
time-to-market for new or developed products



### Human capital development

The Company is focused on human capital development, seeing employees as central to its business development, as people are the main asset and the key driver of Rostelecom's digital transformation.

The key objectives in human capital development are as follows:

- » Help employees fully unlock their potential
- » Improve employee performance
- » Transform employees into change agents in the Company while maintaining their engagement levels

Rostelecom will mostly focus on fostering an environment conducive to talent development, teamwork, and commitment to excellence. Customisation of all processes and services in the Company to better reflect employee interests and needs will be central to this transformation effort. Workplace and work schedule, compensations, benefits, support processes and applications will be personalised to match the role-specific needs of specialists. Employees are to feel comfortable in their working environment, from their very first minute with the Company. Workflows will be customisable while the support base will be improved on a daily basis – from provision of a mobile app to guide them through the induction process to offering company-sponsored training opportunities.

A priority is to integrate Generation Z<sup>(9)</sup> talent into the Company's business for it to make up 20% to 25% of its total workforce by 2022. The distinctive features of Gen Z employees include higher mobility and flexibility, prioritisation of interesting work, and awareness of the importance of a result-oriented approach and feedback. The Company is introducing a new, digital language within Rostelecom to increase engagement levels among young Gen Z specialists. The Company plans to actively target younger generations to foster sustained visibility among young people, boost its profile and brand recognition among Gen Z.

Rostelecom is consistently building its HR brand to become a Top 5 employer in the IT industry.

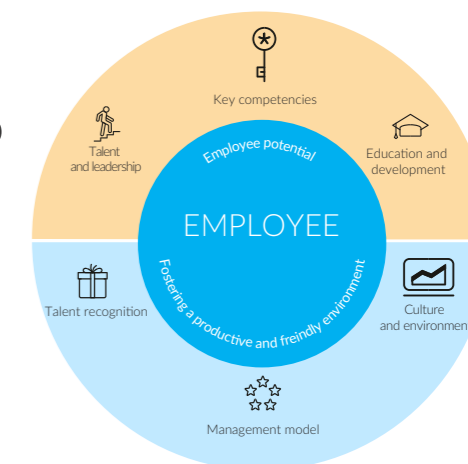
Rostelecom will continue the implementation of its labour productivity programme. The Company aims to increase its labour productivity by 40% by 2022 while reducing the share of labour costs in its revenue by 2%. The total headcount will be reduced by 10% to 15%. The company's personnel structure will also change significantly. The percentage of specialists with digital and analytics skills will reach 25%, while the proportion of employees working through protocols or responsible for routine operations will steadily decline due to process automation and optimisation, and as a result of a flatter organisational structure.

## Employees are central to the Company's business development

**Up to 20%**  
automation of the workplaces by > 80%

**20% to 25%**  
the proportion of Gen Z employees by 2022

- Growing percentage of employees with digital skills and competencies
- Demand for digital professions



Rostelecom's initiatives to ensure progress towards these goals cover multiple areas:

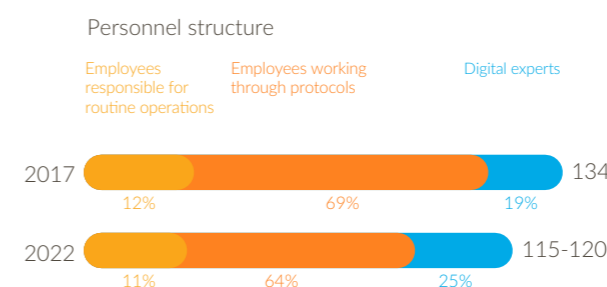
- » organisational transformation
- » optimisation of business processes and Rostelecom's Production System
- » automation and robotisation.

## Focus on labour productivity and performance

### 2022 strategic targets

**+40 %**  
increase in labour productivity

**-2 pp**  
decrease in payroll share of revenue



**10%-15%**  
headcount optimisation

(9) Generations of people born approximately after 1995 according to the Generational theory by William Strauss and Neil Howe.

## Human capital development

**Sergei Anokhin,**  
Senior Vice President and CFO



"To increase the involvement of employees in value creation across the entire value chain and ensure the high quality of our service offering and customer service, the NPS measure has been added to KPIs for all employees as of 2018."

**Operational excellence**

Internal efficiency improvement will remain the Company's top priority throughout 2022. The key areas to drive efficiencies will include real estate portfolio optimisation, continued implementation of the operational efficiency programme, and improved decision making.

The economic benefit from continued operational efficiency improvements will total additional RUB 20 billion for a period until 2022.

Following the real estate portfolio optimisation, the total area of company-owned properties is expected to decrease by 20% to 7 million square metres by 2022, with additional revenue from real estate monetisation exceeding RUB 30 billion. The programme implementation will also significantly reduce operating expenses and generate over RUB 3 billion in aggregate savings between 2018 and 2022.

## Improving efficiency to support margins

**2022 strategic targets**Operational efficiency  
improvements

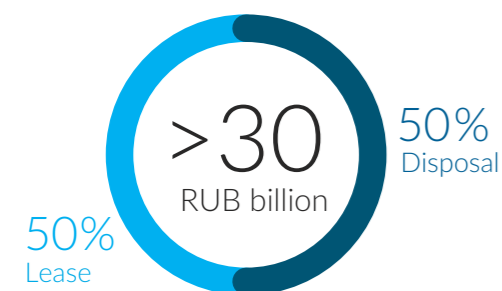
up to 20

RUB billion savings between  
2018 and 2022Real estate  
management

&gt;30

RUB billion revenue from  
real estate operations  
between 2018 and 2022

## Optimised real estate portfolio drives OIBDA

Revenue from real estate  
operations between 2018 and 2022Opex savings due to  
reduced portfolio

+3

RUB billion  
total savings between  
2018 and 2022

&gt;1

RUB billion  
annual savings  
starting from 2022**Long-Term Development Programme**

In December 2017, the Board of Directors approved Rostelecom Group's Long-Term Development Programme for 2017–2021<sup>10</sup>, developed in accordance with the Governmental directives and guidelines of the Russian Ministry of Economic Development.

Along with the Long-Term Development Programme, the Board of Directors also approved Key Performance Indicators (KPIs) for 2017–2021<sup>11</sup>.

The scope of the Long-Term Programme covers all activities of Rostelecom in consolidating its market position, driving infrastructure development, supporting innovation-driven growth, and improving business performance.

Adequate investment, HR and management resources were allocated to support the activities set out in the Long-Term Programme. These activities are well balanced to reflect financing capabilities of the Company.

**Tele2 Russia Strategy**

Tele2 Russia, 45% owned by Rostelecom, is fully independent in pursuing its own strategy in the mobile market. At the same time, Tele2 Russia and Rostelecom team up for the implementation of a number of projects to derive synergies from joint delivery of services and joint procurement, shared network infrastructure, etc.

The Development Strategy until 2021 approved by Tele2 Russia in late 2016 places a special focus on the customer's emotional and rational choice of operator and emphasises Value for Money.

Tele2 Russia plans to become a key player of a new digital ecosystem through partnerships with other companies. The company sees its role as providing a convenient, attractive platform to market new products and services while maintaining its fundamental principles of operating with transparency and integrity.

**Tele2 Russia****Our new vision:**

We will become the preferred mobile operator of choice for those who are not willing to overpay.

**Mission:**

We provide an alternative to existing market practices by offering new life experience to mobile consumers: honest, transparent, and attractive offers, along with high-quality partner programmes and services.

**The Company's goals:**

- » to be the service provider of choice
- » to ensure the best ROI
- » to remain the employer of choice.

**Strategic focus areas:**

- » completely unique, attractive, simple and honest offers
- » leadership in efficiency
- » loyalty programme and digital partner services
- » faster time to market for new products and services.

(10) Approved by the Board of Directors on 29 December 2017. Minutes No. 13.

(11) Actual performance against the KPI targets set in the 2017 Long-Term Development Programme is detailed in paragraph 7 of Appendix 4 Actual Results of Compliance with Instructions and Directives of the President of the Russian Federation and Instructions of the Government of the Russian Federation to this Annual Report.