



**ANNUAL
REPORT**

'21

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Rostelecom Today

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ROSTELECOM TODAY



1.1 Company profile

About the Report

This Annual Report 2021 (the “Annual Report” or the “Report”) has been prepared by PJSC Rostelecom (“Rostelecom” or the “Company”) and its subsidiaries (jointly, the “Group”), based on PJSC Rostelecom’s management reports and in line with the Company’s consolidated financial statements prepared under International Financial Reporting Standards (“IFRS”) for the year ended 31 December 2021. PJSC Rostelecom’s Annual Report was pre-approved by the Board of Directors and the Annual General Shareholders’ Meeting.

As a public joint stock company with securities listed on Moscow Stock Exchange, Rostelecom is committed to the highest standards of corporate governance and disclosure. As we continually seek to further improve our corporate practices and enhance information transparency, we strive to provide investors and shareholders with comprehensive data on Rostelecom’s operations, ensuring that all disclosures are accessible and easy to use.

Disclaimer

This Report contains certain forward-looking statements regarding future events, which include (but are not limited to):

- assessment of the Company’s future operating and financial results as well as forecasts with regard to factors affecting the present value of future cash flows
- the Company’s plans to take ownership stakes in other organisations
- the Company’s anticipated capital expenditures and plans to construct and modernise its network
- the Company’s expectations as to the growth in demand for its services, plans to enhance existing and develop new services, as well as their pricing forecasts
- the Company’s plans with respect to improving its corporate governance practices
- the Company’s expectations as to its position in the telecommunications market and forecasts on the development of the market segments within which the Company operates
- economic outlook and industry trends
- the Company’s expectations as to the regulation of the Russian telecommunications industry and assessment of impact of regulatory initiatives on the Company’s activities
- assessment of the risks affecting the Company’s financial and business operations, and risk mitigation plans
- other statements regarding matters that are not historical facts.

Forecasts in this Report do not reflect the complex nature of the geopolitical context and uncertainty of the macroeconomic risks which can have a negative impact on the dynamics of the results of subsequent periods

Such forward-looking statements are subject to risks, uncertainties and other factors, which could cause actual results to differ materially from those expressed or implied by these forward-looking statements. These risks, uncertainties and other factors include:

- risks relating to changes in political, economic and social conditions in Russia as well as changes in global economic conditions
- risks relating to Russian legislation, regulation and taxation, including laws, regulations, decrees and decisions governing the Russian telecommunications industry, securities industry as well as currency and exchange controls relating to Russian entities and their official interpretation by regulatory bodies
- risks relating to the Company, including the achievement of the anticipated results, levels of profitability and growth, ability to create and meet demand for the Company’s services including their promotions, and the ability of the Company to remain competitive in a liberalised telecommunications market
- technological risks associated with the functioning and development of the telecommunications infrastructure, technological innovations as well as the convergence of technologies
- other risks and uncertainties.

For a more detailed discussion of these and other factors, see the Company’s public filings. Most of the above factors are beyond the Company’s control or cannot be predicted by the Company. In view of the above, the Company does not recommend relying on the statements regarding future events presented in this Report without proper guidance. The Company assumes no obligation to publicly revise its statements – neither to reflect events or circumstances after the date of this Report, nor to report on any unanticipated events, except where required by the applicable law.

Minor discrepancies between sums of percentage changes, constituent figures and totals in the charts and tables of the Annual Report are due to rounding.

Forward-looking statements regarding future events include, but are not limited to, the meaning defined by the US federal securities laws, and are, therefore, regulated by these laws, which release from liability for any act done or omitted in good faith.

Building digital Russia

Rostelecom is the undisputable leader in the Russian digital services market. The Company targets different customer segments: households, private businesses, government authorities, and municipalities and is focused on developing innovative digital technologies within a segment- and cluster-based model.

The Company is actively expanding its footprint in the markets with high growth potential, takes advantage of fixed-mobile convergence and has the necessary infrastructure to implement and roll out technologies of the future.

In 2021, Rostelecom presented its **updated strategy** announcing new development areas combined with leadership in all traditional businesses.

The Company invariably emphasises that social responsibility is crucial to long-term success. As part of its updated development strategy, Rostelecom presented the Company's ESG long-term goals for the first time.

In this Annual Report, we would like to highlight our achievements and present an updated vision for the Company as well as talk about new digital products and the resilience of traditional businesses. Rostelecom is committed to providing comprehensive disclosure and enhancing the Company's investment case.

1.2 Highlights

Rostelecom is the largest integrated digital services provider operating in all segments of the telecommunications market. The Company serves millions of households, public and private enterprises.

Rostelecom is a key participant in the Digital Economy of the Russian Federation programme, implementing nationwide technological and IT projects and opening up new opportunities in all areas of Russian citizens’ lives.

In 2021, we were able to demonstrate efficient and well-coordinated team effort across all our business segments, which is evidenced by our strong financial performance.

Key achievements in 2021

<div>Revenue</div> <div>+6% YoY</div> <div>580</div> <div>bn RUB</div>	<div>OIBDA</div> <div>+13% YoY</div> <div>219</div> <div>bn RUB</div>	<div>Net profit</div> <div>+26% YoY</div> <div>32</div> <div>bn RUB</div>
<div>+62 %</div> <div>growth in the user base of the Wink online video streaming service</div>	<div>+18 %</div> <div>growth in active mobile data users</div>	<div>+12 %</div> <div>growth in recurring revenue from proprietary cybersecurity products</div>
<div>+8 %</div> <div>growth in fibre broadband revenue</div>	<div>+37 %</div> <div>growth in Virtual PBX subscribers</div>	<div>+88 %</div> <div>IaaS revenue growth¹</div>

1 Infrastructure as a Service.

Key achievements in 2021

Contact-centre

+22 %
Revenue growth

Wi-Fi¹

+39 %
Revenue growth

Backbone network capacity

40.1 Tbps
+ 23 % year-on-year

242 thsd
households connected to the Rostelecom Key service

>4,000
channels set up for social infrastructure facilities

47.5 million
mobile subscribers

No.1
in broadband and IPTV in Russia

No.1
in data centres and IaaS in Russia

No.1
in the market by number of Wi-Fi hotspots

Metric ¹	2017	2018	2019 ²	2020	2021	Change 2021/2020, %
Revenue, bn RUB	305.3	320.2	475.8	546.9	580.0	6 %
OIBDA, bn RUB	96.7	100.9	170.7	194.1	218.8	13 %
Free cash flow, bn RUB	20.4	14.8	30.3	22.7	32.5	43 %
Net profit, bn RUB	14.1	15.0	21.9	25.4	31.8	26 %
CAPEX, excluding government-sponsored programmes, bn RUB	55.9	59.0	105.7	107.1	118.7	11 %
Broadband and VPN subscribers ³ , million	12.7	13.0	13.2	13.5	13.5	0 %
Mobile subscribers, million	–	–	46.0	46.6	47.5	2 %
Pay TV subscribers, million	9.8	10.2	10.4	10.8	10.9	1 %
Backbone network capacity, Tbps	15.5	20.3	25.2	32.6	40.1	23 %
Data centre racks, thousand	5.3	5.9	11.5	13.2	13.7	4 %
Headcount, thousand	133.7	128.6	135.2	136.7	126.8	(8 %)
Salary expenses, bn RUB	67.2	69.8	85.0	98.6	99.5	1 %
Investment in training, m RUB	463.6	496.0	575.4	442.5	479.0	8 %
Contributions to Telecom-Soyuz and Alliance private pension funds, m RUB	163.5	756.7	1,020.0	1,392.0	1,191.4	(15 %)
Health and safety expenses, m RUB	640.8	697.8	772.8	1,865.0	1,589.6	(15 %)
Income tax, m RUB	4,856.0	4,427.0	5,513.0	8,659.0	8,984.0	4 %
Other taxes, m RUB	4,661	5,747	5,892	5,605	13,918	2.5x
Member fees, charitable giving, payments to trade unions, m RUB	697	767	874	951	992	4,3 %
Environmental expenditure, m RUB	145.5	159.5	162.4	174.0	163.9	(6 %)

1 Data are as per the methodology in place at the time results for respective periods were published.
2 Results of the mobile business subsidiary have been consolidated since 2019.
3 Data for 2017 exclude B2B VPN customers.

1 A service for business and government customers.

1.3 Digital service ecosystems

Our mission is to provide convenient and high-quality digital services for a comfortable life and effective business.

Rostelecom unlocks new digital opportunities in all areas of Russian citizens' lives. The Company's strategic projects and initiatives are changing the lives of millions of people across the country for the better. We develop and deploy various digital products and solutions for society, business and the state, creating a comfortable and accessible digital environment for all customers.

As part of its strategic plan for 2021–2025, the Company will continue evolving as Russia's largest integrated provider of digital services and solutions and a reliable partner for society, business and the state.

Innovative products launched by Rostelecom in 2021¹



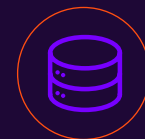
Gaming platform

Our new gaming platform is designed to integrate leading gaming partners and expand the range products for gamers. Rostelecom subscribers now benefit from unique gaming content on a single platform as well as attractive cross-product bundled deals (high-speed internet + access to gaming content)



Mini version of the Kapsula smart speaker

In 2021, Rostelecom launched a mini version of this popular product through a strategic partnership with VK and expanded the functionality of Marusya, an integrated voice assistant, by implementing new commands for Rostelecom's Wink service



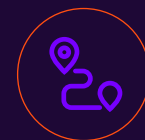
GFN cloud gaming

A new server went online at Rostelecom's data centre in Siberia, making the service available to users in Russia's eastern regions



Wi-Fi 2.0 platform

A new platform for corporate customers offering advanced statistics and analytics capabilities to analyse user behaviour in public Wi-Fi networks



Fleet Tracking service

The solution targeting SME customers enables the remote tracking of a vehicle's parameters and movements



Solar addVisor

Russia's first employee productivity monitoring system, which analyses the digital footprint of employees' workplace activities and enables better managerial decisions to increase labour productivity



Solar MSS Sandbox

To enhance technological development, the Solar MSS ecosystem was complemented by the service for advanced cyber threat protection

¹ For more details, see the Operating Results section.

Rostelecom’s priority strategic projects

Major nationwide infrastructure projects are central to building a digital economy. Each such project makes a difference for millions of people and is a milestone in the transition towards a common digital space. Rostelecom is fully committed to these vital projects of national significance.

In 2021, Rostelecom acted as an operator and contractor for a number of ambitious projects and major contracts:

- Connected social infrastructure facilities to the internet
- Continued installing access points under the Bridging the Digital Divide programme
- Provided video surveillance on the Single Voting Day as well as video surveillance and online broadcasting of the primary and secondary periods of the Unified State Examination
- Provided remote e-voting functionality on the Single Voting Day
- Continued developing the Unified Biometric System

National digitalisation in 2021

Infrastructure projects

Sparsely populated settlements

14 thousand

The number of communities in which access points were installed under the **Bridging the Digital Divide** programme

122 thousand km

fibre were laid as at 2021-end, including 18.7 thousand km in 2021

Social infrastructure facilities

31 thousand

organisations connected to the internet under the project to **connect social infrastructure facilities**

38.5 thousand km

fibre laid as at 2021-end, including 19.9 thousand km in 2021

Educational organisations

2 thousand

Educational organisations in 16 Russian regions in which **broadband** (Wi-Fi) and **video surveillance** systems were set up

Platform solutions

Telemedicine

5 regions

covered by telemedicine consultations

139

healthcare facilities connected to the E-Prescription service in 5 regions

Digital regions

70 thsd

CCTV cameras connected during the year (total: 370 thousand)

~500

Traffic enforcement cameras set up during the year (total: 4.4 thousand)

E-voting

> 635 thsd

voters in 6 Russian regions took part in remote e-voting



1.4 Chairman's statement

Dear Shareholders,

In 2021, Rostelecom consolidated its leadership in key markets by maintaining momentum in its critical business segments, modernising infrastructure, launching new products and services, and successfully engaging with major government and corporate partners.

Despite external headwinds affecting the Company's performance in 2021, the Rostelecom team's well-coordinated and effective efforts helped achieve the targets set by the Company's Board of Directors and shareholders.

One of the year's key highlights was the approval of the Company's updated 2025 development strategy by Rostelecom's Board of Directors in April 2021. This strategy focuses on strengthening the Company's leadership across its traditional markets as well as in innovative sectors. Rostelecom aims to become the country's largest telecom operator in the retail market by subscriber base and revenue, while remaining a recognised national champion driving the development of the Russian telecom market and maintaining strong partnerships with business and the state.

In November 2021, the Company presented its strategic vision for the Data Centre and Cloud Services and Information Security clusters as part of its new strategy. Already in 2021, the efforts to deliver the strategy's ambitious vision resulted in the improved performance of these business segments: Rostelecom has significantly boosted its position in the cloud services and data centre market, as well as in cybersecurity, by bringing its proprietary innovations to the market.

Rostelecom's clear competitive advantage is its network infrastructure, which covers all Russian regions, allowing us to provide various digital services, including internet access, even in the remotest communities. For many years, Rostelecom has been a key partner for the government in the rollout of modern digital

Over many years, Rostelecom has been successfully adopting sustainable business development practices and using advanced technologies to train employees and educate customers, as well as protect the environment and improve the well-being of society.

infrastructure within the Digital Economy programme. In 2021, we implemented a number of projects critical for various sectors of the economy and public administration, which contributed to the improvement of the existing telecom architecture, boosting information security, bridging the digital divide, and bringing communications services and internet access to public authorities, local governments, healthcare facilities, and other social infrastructure facilities.

Over many years, Rostelecom has been successfully adopting sustainable business development practices and using advanced technologies to train employees and educate customers, as well as protect the environment and improve the well-being of society. Rostelecom strictly complies with all applicable laws, is guided by the principles of transparency and accountability, and is committed to ethical stakeholder engagement. Our efforts are aligned, as far as possible, with the United Nations Sustainable Development Goals (UN SDGs) in areas of security, education and environmental protection.

In the reporting year, Rostelecom presented its first strategic ESG¹ goals to 2025, highlighting the significance of these initiatives for the sustainable development of the Company, society and the telecom industry.

As one of Russia's largest employers, Rostelecom is committed to providing comfortable working conditions for its people and creates opportunities for development and self-fulfilment. In 2021, Rostelecom's salary expenses totalled close to RUB 100 billion. The Company has invested about RUB 0.5 billion in employee training while health and safety expenses came in at RUB 1.6 billion.

Rostelecom is committed to reduce its environmental footprint and foster an environmental culture in society. In 2021, we sent over 33 tonnes of miscellaneous waste for recycling, up 4.6% year-on-year. During the year, the Company invested a total of RUB 164 million in environmental projects and activities.

For the third year running, Rostelecom has been included in the Bloomberg Gender-Equality Index, which is not accidental as about half of our workforce are women, and they play a major role at all levels including the Company's governance structure.

The consistency and quality of Rostelecom's sustainability efforts are also reflected in the Company's high ESG rankings.

In the reporting year, the Company topped the ESG ranking by the National Rating Agency across all ESG metrics in the non-financial sector.² Rostelecom also ranked among the top companies for sustainable development on the 2021 ESG indices compiled by the Russian Union of Industrialists and Entrepreneurs (RSPP); namely, the RSPP Sustainable Development Vector Index (Group A) and the RSPP Responsibility and Transparency Index (Group A).

Investing in human capital development is one of our priorities. Rostelecom has in place several programmes for employee motivation and development as well as for onboarding young professionals. The Company provides its employees with a wide range of training programmes and drives productivity by improving working conditions and implementing social support and process digitisation programmes.

Our initiatives to improve corporate governance performance have also received well-deserved praise from experts. In 2021, Rostelecom ranked among the leaders of the National Corporate Governance Index³ for completeness and quality of disclosures. The Russian Institute of Directors assigned Rostelecom a rating of 7++, reflecting our strong corporate governance practices.⁴

On behalf of the Board, I would like to thank my colleagues and all of Rostelecom's employees for their valuable contribution to corporate performance. Unfortunately, the severe deterioration of the geopolitical situation already in early 2022, as well as the unprecedented sanctions pressure faced by Russia and the country's individual industries and companies, force us to be more cautious in our forecasts for the future. Nevertheless, I am convinced that the direction that we set – to grow Rostelecom into a leading integrated provider of digital services and products and an attractive and reliable partner for all customers – will remain unchanged despite the current environment.

Sergey Ivanov
Chairman of the Board of Directors
PJSC Rostelecom

1 ESG stands for Environmental, Social, Governance.
2 https://www.ra-national.ru/sites/default/files/analitic_article/%D0%A0%D1%8D%D0%BD%D0%BA%D0%B8%D0%BD%D0%B3_ESG_%D0%9F%D0%9D%D0%9A_1.pdf#page=5.
3 <http://cgindex.ru/wp-content/uploads/2021/12/National-CG-Index-2021.pdf>.
4 <http://rid.ru/nacionalnyj-rejting-rezultaty-nrku>.

Letter from the President

Dear Shareholders, Partners and Colleagues,

Over the past years, we have faced a number of challenges that have impacted many areas of our activities. The year 2022 will be even more challenging, with geopolitical tensions and considerable uncertainty on financial and commodity markets likely to affect some of the Company's strategic initiatives and the development of certain business segments.

Nevertheless, we are optimistic about the future. The achievements of the Rostelecom team and the performance we delivered in 2021 set the Company up for a continued steady growth in the future.

Rostelecom's revenue increased by 6%, OIBDA 13%, free cash flow 43%, and net profit 26%. The Company's solid financial results and steady improvements in business performance were enabled, among other things, by our highly effective cost control. In 2021, Rostelecom consistently improved operational efficiency, including by transforming its management model and driving cost reduction in internal processes. Due to its stronger operating cash flow, the Company implemented some investment projects ahead of schedule and kept its CAPEX/revenue ratio at moderate levels while also reducing its relative debt burden.

Strong financial and operational performance for the year was largely driven by changes enabled through Rostelecom's 2025 updated strategy, adopted in 2021. The Company is dynamically evolving as Russia's largest integrated provider of digital services and solutions and a reliable partner for society, business and the state.

During the year, we continued to implement major strategic projects, including those within the Digital Economy national programme. Each of these initiatives makes a difference for millions of people and is a milestone in building a common digital space in Russia.



As part of the project to bridge the digital divide, Rostelecom has installed internet access points in almost 14,000 localities. In addition, mobile services have been brought to hundreds of sparsely populated municipalities, and we plan to further expand mobile coverage to maximise the accessibility of modern communications services for residents of these areas.

Also in 2021, Rostelecom completed an ambitious project to bring internet connectivity to social infrastructure facilities, which connected more than 30,000 organisations all across Russia. These customers included primary care centres and rural health posts, educational organisations, state and local government authorities, polling places, fire stations, and other social infrastructure facilities. Importantly, the implementation of the project generated demand for Russian-produced fibre optic cables and telecommunications equipment.

As part of efforts to enhance our E-Government service, an updated multipurpose portal with an improved interface and performance was launched in 2021, driving its popularity and boosting user activity. The portal's services are already available to 95 million people across the country. During the year, the number of visitors to the portal increased by more than 50%, with the average monthly service requests doubling. Through the portal, Rostelecom made it easier for citizens to receive payments for school-age children and enabled the issuance of vaccination certificates, remote e-voting, online university enrolment and many other important public services.

In 2021, Rostelecom also set up a digital infrastructure for the 2021 All-Russian Population Census. The Company has supplied regional authorities with tablets for census takers that run on the only domestic mobile operating system, Aurora, which Rostelecom is rolling out.

During the year, Rostelecom successfully grew and improved its product range, increasing the share of innovative digital services, expanding its business, and strengthening its market position in key segments.

The mobile, fixed access and Pay TV segments have traditionally performed well. Even more impressive growth has been achieved in cloud services, information security, data centres and smart digital services for households, business and government customers.

We continued upgrading our access networks to provide customers with high-quality digital services driven by modern communications technologies, with the capacity of Rostelecom's backbone network increased by almost a quarter. Almost 40 million households were passed by modern high-speed fibre.

Rostelecom's mobile business continues to go from strength to strength. In mobile, the Company remains the only player with double-digit growth rates in an already mature market, driven by its clear edge of industry-leading NPS.¹ In 2021, we focused on the quality of connections and the retention of key customers, who are the most active data users and the company's biggest profit generator. As a result, we expanded our customer base to 47.5 million subscribers on the back of a significant increase in the number of active mobile data users, improved churn rates and double-digit ARPU growth rates.²

In 2021, the number of fibre-to-the-home customers grew three times faster than the market. Fibre broadband revenue growth was also outpacing the market.

The Pay TV subscriber base grew close to 11 million customers, largely driven by a migration to the Wink platform: the user base for this service increased by tens of percent during 2021.

As part of its efforts to deliver strategic priorities in 2021, Rostelecom consolidated its dominant position in the data centre market, both in terms of active rack count and revenue growth, and in innovative cloud technology, primarily through explosive growth in IaaS revenue.³

The Information Security cluster's revenue grew by almost 50% over the year, with a marked increase in recurring service revenue from proprietary cybersecurity solutions.

Rostelecom makes a significant contribution to the sustainable development of society and the telecom industry. We create long-term economic, environmental and social value for both current and future generations.

Investing in human capital development is one of our top priorities. Rostelecom has in place a range of programmes for employee motivation and development as well as for onboarding young professionals. The Company provides its employees with a wide range of training courses and drives productivity by improving working conditions and implementing social support and process digitisation programmes.

Rostelecom made it to the top of the 2021 Corporate Philanthropy Leaders ranking in a competition held by the Donors Forum with the support of Russia's Federation Council, Ministry of Science and Higher Education, Ministry of Culture, and Ministry of Economic Development among other partners. The Company was named the best in Group A – Best Practice.⁴

On behalf of the entire Rostelecom management team, I would like to express my deep gratitude to all employees for their boldness, ambition, agility in responding to changes, and selfless dedication, sometimes stretching themselves to their limits. Thanks to each and every one of you, we have not only maintained but also enhanced our position in the market.

We have even more ambitious tasks ahead of us, and we can only achieve them together.

Mikhail Oseevsky
President of PJSC Rostelecom

1 Net Promoter Score – an index that measures consumer loyalty to a product or company (willingness to recommend) and is used to gauge repurchase intent.
2 Average Revenue per User.
3 Infrastructure as a Service.
4 <https://www.donorsforum.ru/reports/obyavleny-lidery-korporativnoj-blagotvoritelnosti-2021-goda/>.

1.6 Rostelecom's structure and geography of operations

Rostelecom continuously expands its footprint, implementing projects and programmes that make a difference across Russia.

With a unified approach across all regions, we can deliver large-scale and highly efficient projects. We focus our efforts on supporting social projects in all regions and ensuring digital equality and affordable communications not only in cities, but also in the most remote and small communities.

Rostelecom continuously improves its social policy in line with the Company's and the government's strategic goals and the national social and economic development. The Company comprises over 60 regional branches and over 200 subsidiaries and affiliates engaged in providing services across Russia.

CODE REFERENCE

57

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LARGE CODE

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1.7

Key events

History milestones

1993	<ul style="list-style-type: none">■ Incorporation of Rostelecom Open Joint Stock Company	2014	<ul style="list-style-type: none">■ Joint venture established with financial investors to develop the mobile business
1995	<ul style="list-style-type: none">■ Svyazinvest, a state-owned holding company, established to run 85 regional telecom operators	2018	<ul style="list-style-type: none">■ Rostelecom's Strategy 2022 launched to transform the Company into a digital partner for society, business and the state
2002	<ul style="list-style-type: none">■ Seven interregional companies (IRCs) established through merging regional telecom operators	2020	<ul style="list-style-type: none">■ Completed a transaction consolidating 100% of Rostelecom's mobile business
2011	<ul style="list-style-type: none">■ Stage 1 of the government-initiated reform to consolidate state communications assets completed, as IRCs merged into Rostelecom	2021	<ul style="list-style-type: none">■ Rostelecom presented its corporate strategy to 2025 and the dividend policy for 2021-2023 approved by its Board of Directors
2013	<ul style="list-style-type: none">■ Stage 2 of Rostelecom transformation completed, as Svyazinvest and 20 subsidiaries merged into one company, Rostelecom		

Key events of 2021

January	01.01	Rostelecom brought IP–telephony to the YooMoney payment service Rostelecom was included in the 2021 Bloomberg Gender–Equality Index
February	01.02	Rosselkhozbank’s biometric system, created jointly with Rostelecom, was named the best IT project of 2020 in the financial sector
	01.02	Rostelecom developed a geographic information system for Udmurtia’s agroindustrial sector
	03.02	Rostelecom’s print service ranked the best IT project of 2020
	11.02	Rostelecom subsidiary was recognised as market leader in satellite communications in Russia
	17.02	Rostelecom completed the submarine FOCL to Kaliningrad
	24.02	Rostelecom launched a new platform, Wi-Fi 2.0
March	19.03	Rostelecom launched the first base station under the Bridging the Digital Divide project
	31.03	Mail.ru Group and Rostelecom launched the Sferum educational platform
April	05.04	Rostelecom ranked first by the number of Virtual PBX customers in 2020
	06.04	Rostelecom led TMT Consulting’s ranking by the number of public Wi-Fi access points in 2020
	20.04	Rostelecom presented its corporate strategy to 2025 and the dividend policy for 2021–2023 approved by its Board of Directors
	21.04	The smart helmet developed by Rosatom and Rostelecom won a mining industry digitalisation contest
	29.04	Over 100 thousand school students joined the Sferum digital educational platform
May	25.05	Rostelecom ran its first webinar for teachers and organisers of courses within the ABC of the Internet project Rostelecom implemented a data analysis system based on the Foresight Analytics Platform software solution
	27.05	Rostelecom set up a centre of excellence to develop software solutions for Russian CPUs

June	01.06	Rostelecom’s mobile business was the first to link eSIM to the Unified Biometric System
	02.06	Rostelecom hosted DST–URAL tractor plant’s IT systems in the cloud
	04.06	Promsvyazbank and Rostelecom signed a cooperation agreement Gazprom Mezhhregiongaz, Bank GPB and Rostelecom signed an agreement on cooperation in digital projects
	08.06	Rostelecom launched Fleet Tracking, a service for car fleet monitoring
	24.06	Rostelecom released 100 thousand whitefish fry into the Baltic Sea to restore local fauna
July	05.07	The number of subscribers to Rostelecom’s Virtual PBX exceeded 500 thousand
	08.07	Rostelecom topped the ESG ranking by the National Rating Agency
	21.07	Rostelecom launched the first base stations at the Srednevelyuyskoye gas condensate field
August	03.08	The Sferum educational platform became a Skolkovo resident
	04.08	Rostelecom set up a call centre for the Okolo aggregator
	10.08	All data centres of Rostelecom–DC were certified to PCI DSS. Rostelecom’s voice assistant was awarded as the best project in the national competition among multifunctional public service centres
	12.08	Rostelecom signed a contract with Russian Post to provide communications services for Russia’s largest corporate data network
	24.08	Rostelecom adapted the portal of the remote e–voting system for the visually impaired
September	02.09	Rostelecom and Naretrends Inc., a leading precision agriculture company in the Republic of Korea, signed a memorandum of understanding on cooperation in information and communications technology (ICT) in agriculture
	06.09	Rostelecom was among the three leaders of the social performance rating of major Russian companies
	16.09	Rostelecom built more than 100 base stations under the Bridging the Digital Divide 2.0 project
	17.09	Rostelecom subsidiary pioneered a mobile app for satellite internet users
	21.09	Rostelecom subsidiary and Konnect Russia agreed to develop satellite communications for maritime and river vessels

Key events of 2021 (continued)

September (continued)	21.09	Rostelecom subsidiary and Iridium will develop communications services to improve consumer safety in hard-to-reach locations in Russia	07.12	Rostelecom and Success Rockets, a Russian private space company, signed a cooperation agreement
	22.09	AK&M upgraded Rostelecom's ESG reporting rating to Resg1	08.12	Andrey Chibis, Governor of the Murmansk Region, and Mikhail Oseevsky, President of Rostelecom, signed an agreement on the Company's involvement in the digitalisation of the region's resource providers
October	05.10	Rostelecom-DC opened a new Tier III data centre in Moscow	10.12	Rostelecom and Russian Railways signed a four-year agreement on cooperating in information security, expanding communications networks and improving Russian Railways' energy efficiency
	11.10	The number of urban CCTV cameras installed by Rostelecom exceeded 350 thousand	16.12	Rostelecom's 2020 Annual Report ranked first among telecom and FMCG companies in the Annual Report Competition by the Moscow Exchange
	13.10	Rostelecom set up a unified call centre to keep citizens informed about social support measures	21.12	Rostelecom piloted a call centre of the Unified Gasification Operator – Gazprom Gasification
	14.10	The number of users of the Sferum information and educational platform exceeded 1 million	22.12	Rostelecom acquired an MVNE platform provider
	21.10	Rostelecom used data science to create a system of predictive models to generate personalised offers for customers from small and medium-sized enterprises Rostelecom collaborated with ICT industry experts to conduct a study of global experience, which informed the development of the Comprehensive Programme to Promote 5G in Russia		
	22.10	Rostelecom's centre of excellence for developing software solutions for Russian CPUs, in partnership with MCST, the developer of Elbrus processors, announced the creation of a cloud platform and provision of cloud infrastructure services based on Elbrus processors – the Russian Elbrus Cloud		
	25.10	Rostelecom Group acquired 50.01% in a developer and provider of integrated IT systems for digital transformation of public administration		
	29.10	The Association of Major Software and Hardware Consumers was launched in Russia to bring together leading customers of IT solutions engaging with government regulators, software developers and hardware vendors		
November	09.11	Rostelecom took the lead in a survey of anti-corruption hotlines		
	11.11	Rostelecom was ranked first among Russia's major data centre services providers by iKS-Consulting		
	19.11	Rostelecom and Rostselmash Group signed a partnership agreement to implement digital development projects		
	22.11	Analytical Credit Rating Agency (ACRA) verified and affirmed Rostelecom's social impact bonds		
	23.11	Rostelecom topped the ranking of the largest Russian IaaS providers according to CNews Analytics		
December	01.12	Open Mobile Platform (a Rostelecom subsidiary) unveiled a major upgrade to Aurora OS, Russia's only mobile operating system		
	03.12	Rostelecom made it to the top of the Corporate Philanthropy Leaders ranking		

1.8 Strategic vision and priorities

Rostelecom’s ambition is to maintain its leadership in all traditional communications segments while successfully developing digital business, including through new strategic partnerships.

To deliver its strategic priorities, the Company transitions to a customer-centric segment- and cluster-based development model with a focus on cost efficiency leadership. Traditional customer segments will be supplemented with dedicated fast-growing clusters such as Data Centres and Cloud Services, Information Security, Digital Health, Digital Regions, Public Sector Digital Services and Products.

Strategy 2021–2025 results

By 2025

1

Rostelecom becomes the largest integrated telecommunications and ICT player and undisputable leader across all key customer market segments by 2025

2

Company value to grow at least 1.5x, supported by significant improvements in profitability and stable dividend growth

3

Firm foundation for future growth, underpinned by a solid customer base and 25% growth in revenues from new services

4

Rostelecom is a key partner in digitalising public service

Rostelecom 2025 vision

Who?

A digital partner
for society, business and the state

A powerhouse that shapes the Russian telecommunications market

Leadership in selected new business segments

Customer-centric transformation, cost efficiency leadership

Sustainable financial growth

How?

People

Digital framework

Network infrastructure and distributed data centre network

New solutions: information security and cloud services

Leading role in digitising public services

Own IT cluster

1. ESG and sustainable business

Creating a sustainable digital space

As part of its strategy to 2025, Rostelecom stated and presented its ESG long-term goals for the first time.

Rostelecom’s responsible approach to business implies openness and honesty with customers, partners, investors and other stakeholders, as well as a strong focus on charitable and volunteering activities and building positive and mutually beneficial relationships between the Company and its employees. Rostelecom sees care for the future of society as its principal social role.

Rostelecom has integrated the United Nations Sustainable Development Goals (UN SDGs) into the management of the Company’s operations and considers them when preparing annual reports and designing sustainability projects.

ESG initiatives

As part of its updated strategy, Rostelecom continues to consistently pursue its stated ESG goals until 2025, highlighting the importance of the Company’s sustainability initiatives.

E

Environmental

- Reduce energy consumption (excluding the Data Centres and Cloud Services cluster) by 15% by end-2025
- Increase the use of renewable energy
- Implement programmes to collect and recycle used cables, network equipment and devices
- Launch Green Office environmental management systems across all offices by 2025

S

Social

- Gender equality: achieve female representation both in management and across the Company at 40% by 2025
- Regional equality: functional decentralisation through Company-wide competence centres in the regions and creation of equal opportunities for career migration

G

Corporate governance

- Integrate ESG in procurement management by 2025
- Promote ESG principles among customers by offering products and solutions that drive responsibility

United Nations Sustainable Development Goals prioritised by Rostelecom

First priority goals



Second priority goals



Rostelecom's ESG performance in 2021

Environment

>33 thousand tonnes

of waste were passed for disposal and neutralisation, up 4.6% year-on-year

164^m RUB

environmental investments and expenditures

-1.5 %

reduction in emissions of air pollutants

Society

44 %

of employees are women, the proportion of women in management is over 1/3

4.6^m RUB

Revenue per employee, +14% y-o-y

31.5 hours

The average training time per employee

1.6^{bn} RUB

Health and safety investments

Governance

91 %

of Board members are non-executive and independent directors

17.4^{bn} RUB

paid in dividends in 2021

29 %

of ordinary (voting) shares in free float¹

2

women sit on the Company's Management Board

¹ Percentage of the total outstanding ordinary shares as at 31 December 2021.

Investment case

Rostelecom’s investment story is based on sustainable growth and digital transformation of the business combined with an attractive dividend yield. Rostelecom is committed to the continuous improvement of operational efficiency and communications network upgrade, prioritising the development of human capital and the long-term growth of shareholder value.

Dividends

At least **5 RUB**

annually and at least 5% more per share than in the previous reporting year

≥ 2×

to the dividend for 2020, dividend growth potential per share over 5 years

At least **50 %**

to 100% of net profit distributed as dividends

Efficiency

5 %

or 386 thousand sq m — the decrease in the Company’s real estate portfolio as a result of the optimisation programme

4.6^m RUB

revenue per employee, +14 % y-o-y

10.1^{bn} RUB

real estate income in 2021

Motivation

- Management Long-Term Incentive Programme for 2020–2022 Share matching plan (SMP)
- Three annual implementation cycles: 2020, 2021, 2022
- KPIs: free cash flow, net profit, ROIC¹

up to **1,000**

employees are eligible for the Programme

>50 %

of matched shares provided to a top manager during the first cycle must be kept for eligibility for the second and third cycles

Position in the market

Leader in the Russian broadband and IPTV market²

6.6^m IPTV customers **13.5^m** Broadband and VPN customers

- 40 %** B2C broadband market share³
- 49 %** B2B broadband market share³
- 75 %** IPTV market share³

Leader in the Russian data centre and IaaS market

13.7^{thousand} Data centre racks

- 28 %** Data centre market share⁴
- 18 %** IaaS market share⁵

Leader by NPS⁶ in the mobile market

47.5^{million people} Mobile base

19 % Market share⁷

Infrastructure

40.1^{Tbps}

backbone network capacity

39.3^m

households are connected with fiber technology, +1 m y-o-y.

1 Return on Invested Capital.
2 By revenue, according to TMT Consulting data.
3 Source: TMT Consulting.
4 By number of racks, according to iKS-Consulting and Company data.
5 Source: iKS-Consulting, Company data
6 Net Promoter Score – an index reflecting consumer loyalty to a product or company (likelihood to recommend).
7 Source: TMT consulting, B2C market share.

STRATEGIC REPORT



21 Industry overview and competitive analysis

Global industry

The global telecommunications industry is constantly evolving through the use of new technological and infrastructure solutions launched regularly in end-user markets.

Incumbent telecom operators have recently focused their digital transformation efforts on building new sources of revenue beyond fixed-line and mobile service sales. These revenue streams include B2C and B2B services such as Pay TV, media and advertising, IoT¹, cloud technology, security, financial services and lifestyle products, as well as solutions for vertically integrated industries.

According to a market report by GSMA Intelligence, adjacent services now account for 10% to 40% of total revenue of the largest global telecom operators.

As the anchor services market reaches saturation levels, global telecom operators have to address this problem by making forays into new segments, including those related to the deployment of next-generation networks. While all the implications of 5G deployment are still difficult to gauge, 5G rollout will certainly be a crunch point for the entire industry, primarily in terms of subscriber base expansion, deeper penetration of new technologies, and operators' CAPEX and revenue.

As new technologies spread across the globe, the sustainable business agenda becomes central to network development, focusing, among other things, on information security for all users and lower environmental impact.

1 Internet of Things.

Global trends in the industry

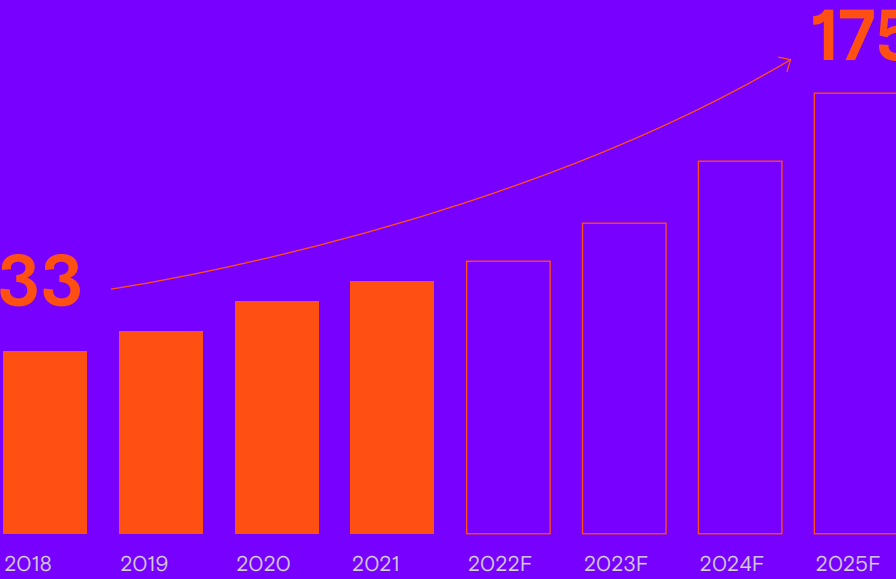
Telecommunication companies

- Growth in demand for digital (ICT) services in a post-COVID world
- Convergence of fixed and mobile access
- Growing demand for vertical (industry) solutions and private networks (LTE, and then 5G)
- Active digitalisation of government bodies
- Declining returns on invested capital (ROIC) and increasing pressure to reduce costs

New business areas

- Convergence of telecoms with content – video and games
- Growth shifting to adjacencies: information security, data centres and IoT
- Telecoms making forays into new industries: fintech, smart home, digital medicine, and education
- New businesses growing around customer needs: home, mobility, security, work, and social life

Global data traffic growth in 2018–2025, ZiB



Source: International Data Corporation (IDC)

Market forecasts in this section are as at January 2022

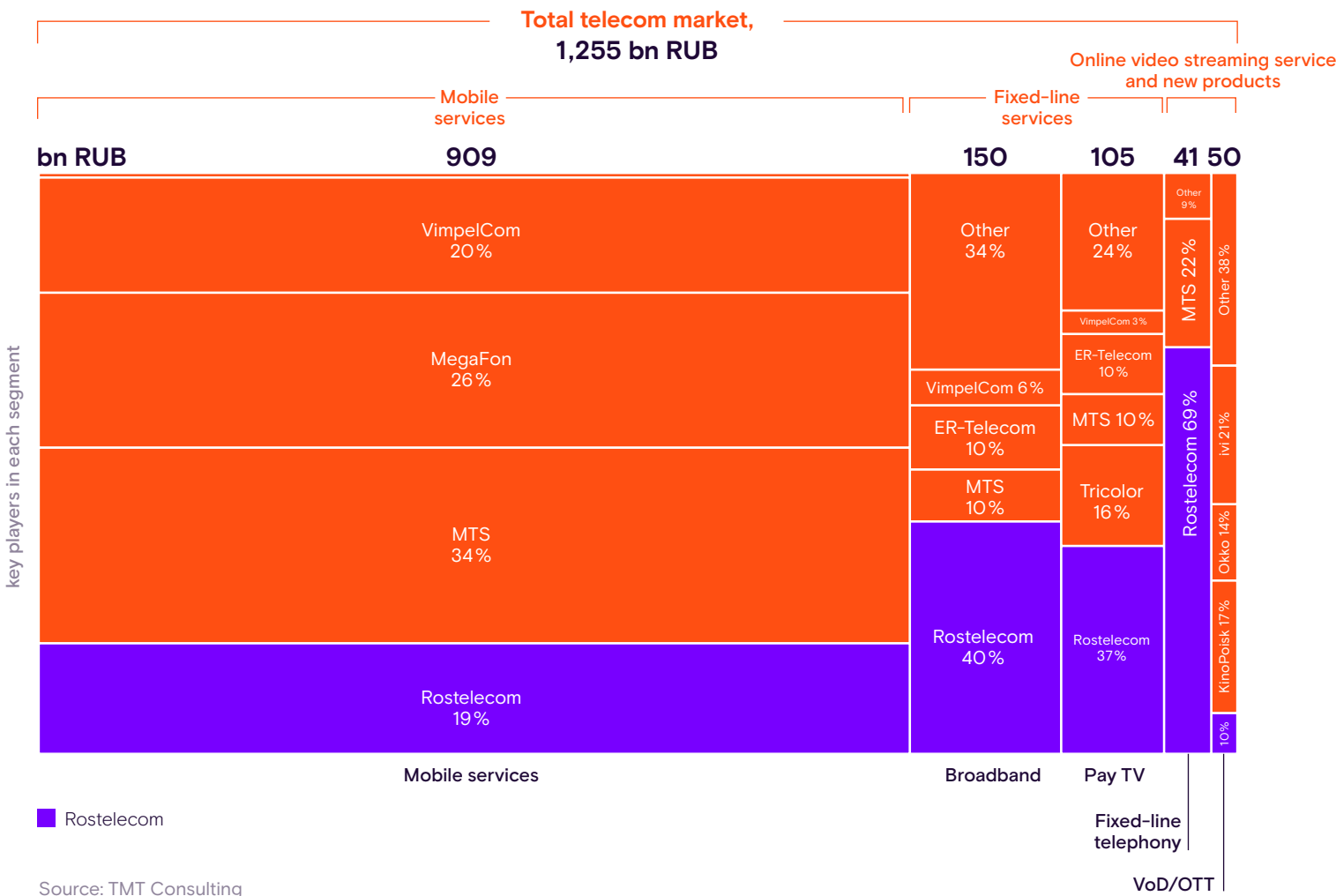
In Russia

Telecom services for retail customers (B2C)

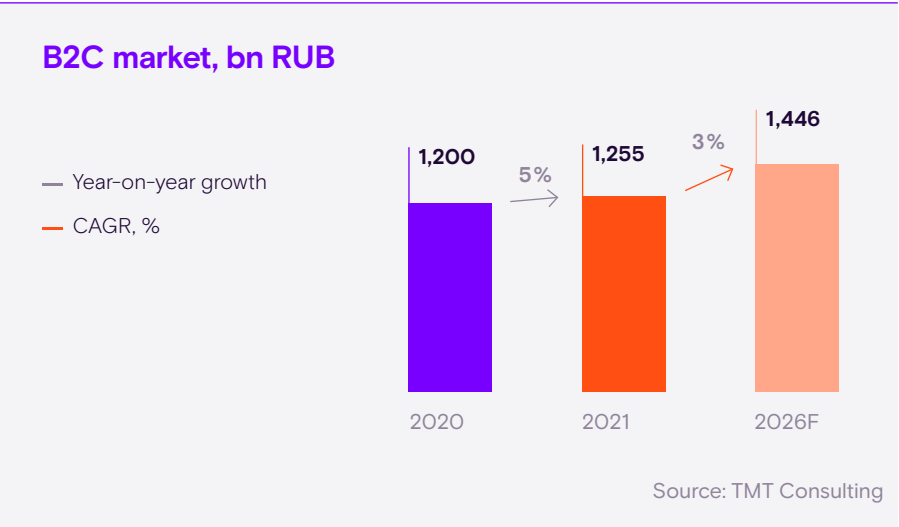
Experts estimate that populations of key Russian regions and cities will continue to grow. According to the Federal State Statistics Service (Rosstat), migration flows between regions will intensify, with population getting concentrated in a few large regions and the proportion of cities with more than 750 thousand residents growing faster than other cities.

Mobile services exceed 70% in total revenue mix from basic retail telecom services. Rostelecom is the only universal player with a significant presence across all market segments, including mobile, broadband, pay TV, and fixed-line telephony. At the same time, major players have consolidated the mobile and fixed-line segments between themselves, while the broadband and online video streaming service markets remain fragmented, with the share of other players exceeding 30%.

B2C market in 2021 / revenue shares of major players

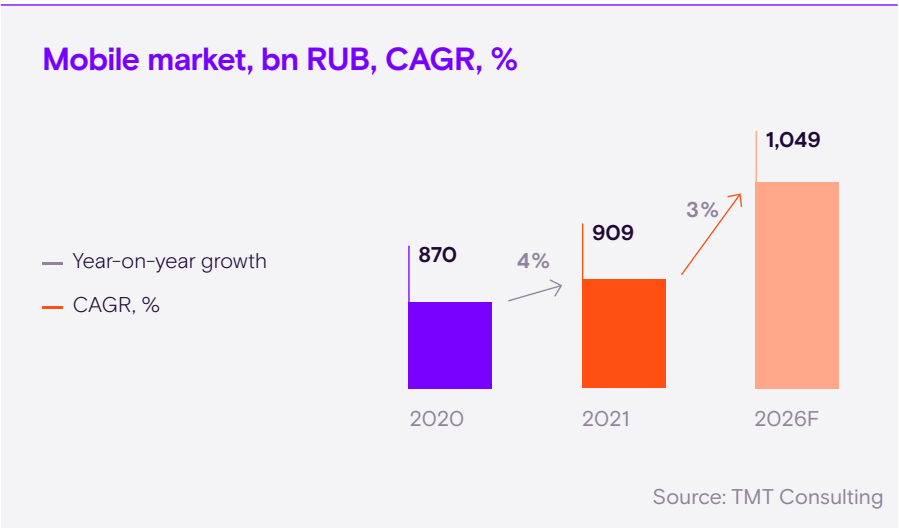


The Russian retail telecom market is expected to grow at a CAGR of about 3% until 2026. The mobile market's growth will remain the key driver, primarily due to higher average revenue per user (ARPU) levels. The online video streaming service market will also grow apace, potentially reaching RUB 110 billion in 2026 primarily due to user base growth. Experts expect the subscriber base to be stable as declines in fixed-line telephony subscribers and the optimisation in mobile SIM card numbers will be offset by growth in pay TV and online video streaming service subscribers.



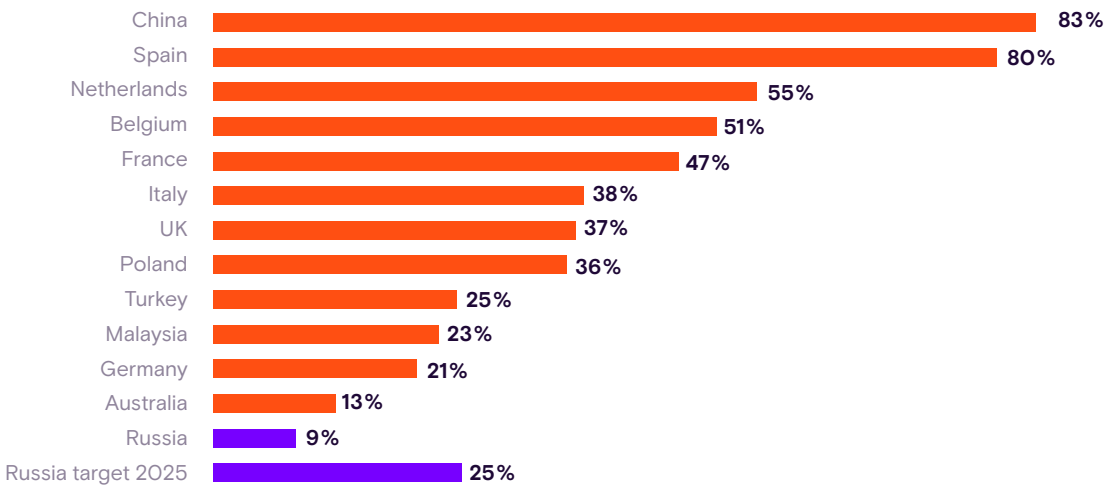
Mobile market

The number of SIM cards in the market is expected to decline as costs are optimised and the number of additional SIM cards held by subscribers decreases. Revenue growth will be driven by a higher quality of subscriber base and larger service bundles with value-added digital services. While the number of mobile data users grows every year, they will also place increased demands on connectivity, with mobile players trying to match their expectations with consistently high levels of service quality.



Fixed mobile convergence (FMC) can become a growth driver, as it has a greater growth potential due to both higher ARPU (driven by higher service usage levels and increased numbers of SIM cards required to take advantage of converged offers) and low FMC penetration of the broadband user base in Russia.

FMC penetration, % of the broadband base

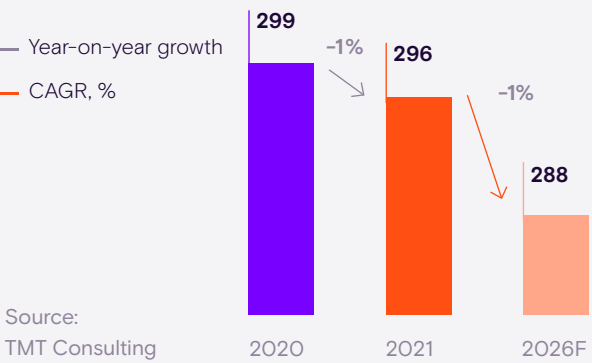


Source: Analysys Mason

Fixed-line market (broadband, pay TV and telephony)

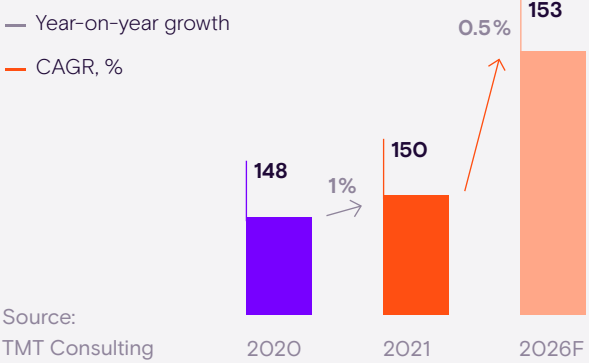
Historically, the fixed-line market (fixed telephony, broadband and pay TV) was growing at about 2% annually, but the market has reached saturation in broadband, its core fixed-line service, which limits its potential for further growth. The broadband market continues to be driven by new home builds. In pay TV, only the IPTV segment is expected to show a positive trend, but this will depend on broadband performance as well as on growth of its competitor, the OTT¹ market.

Fixed-line telephony market, bn RUB



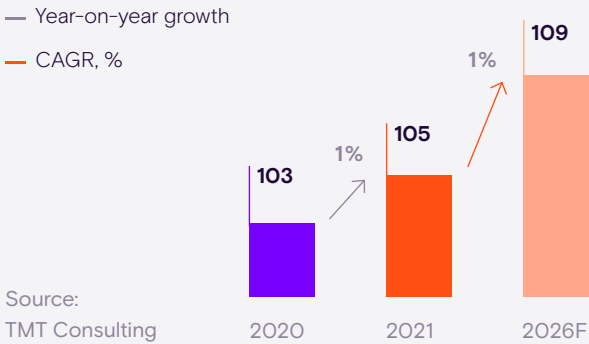
Source: TMT Consulting

Broadband market growth forecast, bn RUB



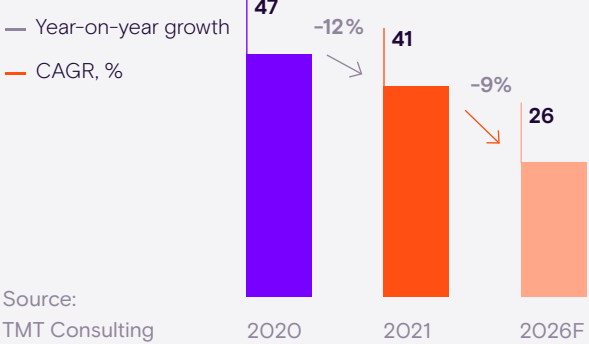
Source: TMT Consulting

Pay TV market growth forecast, bn RUB



Source: TMT Consulting

Fixed-line telephony market growth forecast, bn RUB

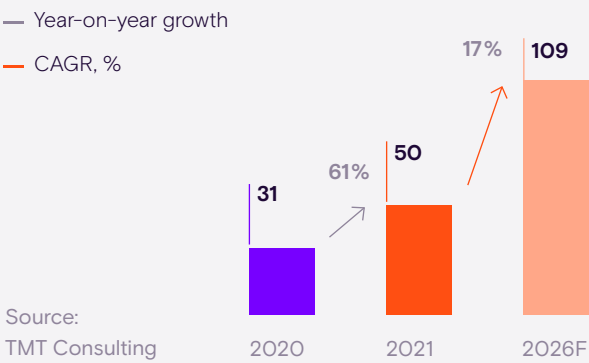


Source: TMT Consulting

Online video streaming services (VOD/OTT)

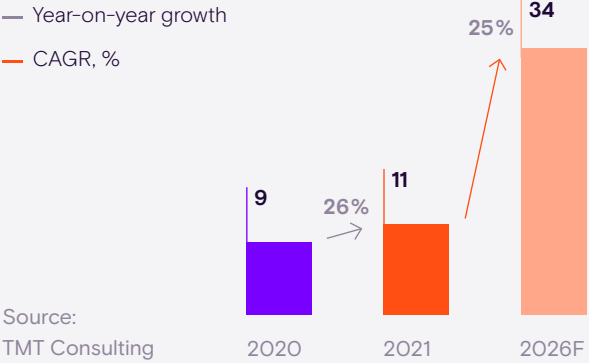
Online video streaming services are among the fastest growing markets with a CAGR² of around 17% until 2026. Today, the major players in the Russian online video streaming service market include Okko, ivi, KinoPoisk, and Wink (Rostelecom). By 2026, the online video streaming service market is expected to become more consolidated and still have the potential to grow. The penetration of OTT subscriptions will increase to 45%, with the market continuing to grow strongly until 2030. In the United States, for instance, the penetration rate of online video streaming services is 75%. The increase in Smart TV penetration from 50% in 2020 to 70% by 2030 and the demand for original content will be among key growth drivers. Customers are expected to use two or three online video streaming service subscriptions as various content sources will be available. Until 2026, online video streaming services are expected to continue integrating with large ecosystems such as banks, telecom operators and digital companies.

Online video streaming services market growth forecast, bn RUB



Source: TMT Consulting

Number of subscribers per online video streaming service, million



Source: TMT Consulting

¹ OTT (Over-the-Top) is a means of providing television and film content over the internet which implies that a content provider is going over the top of existing internet services.

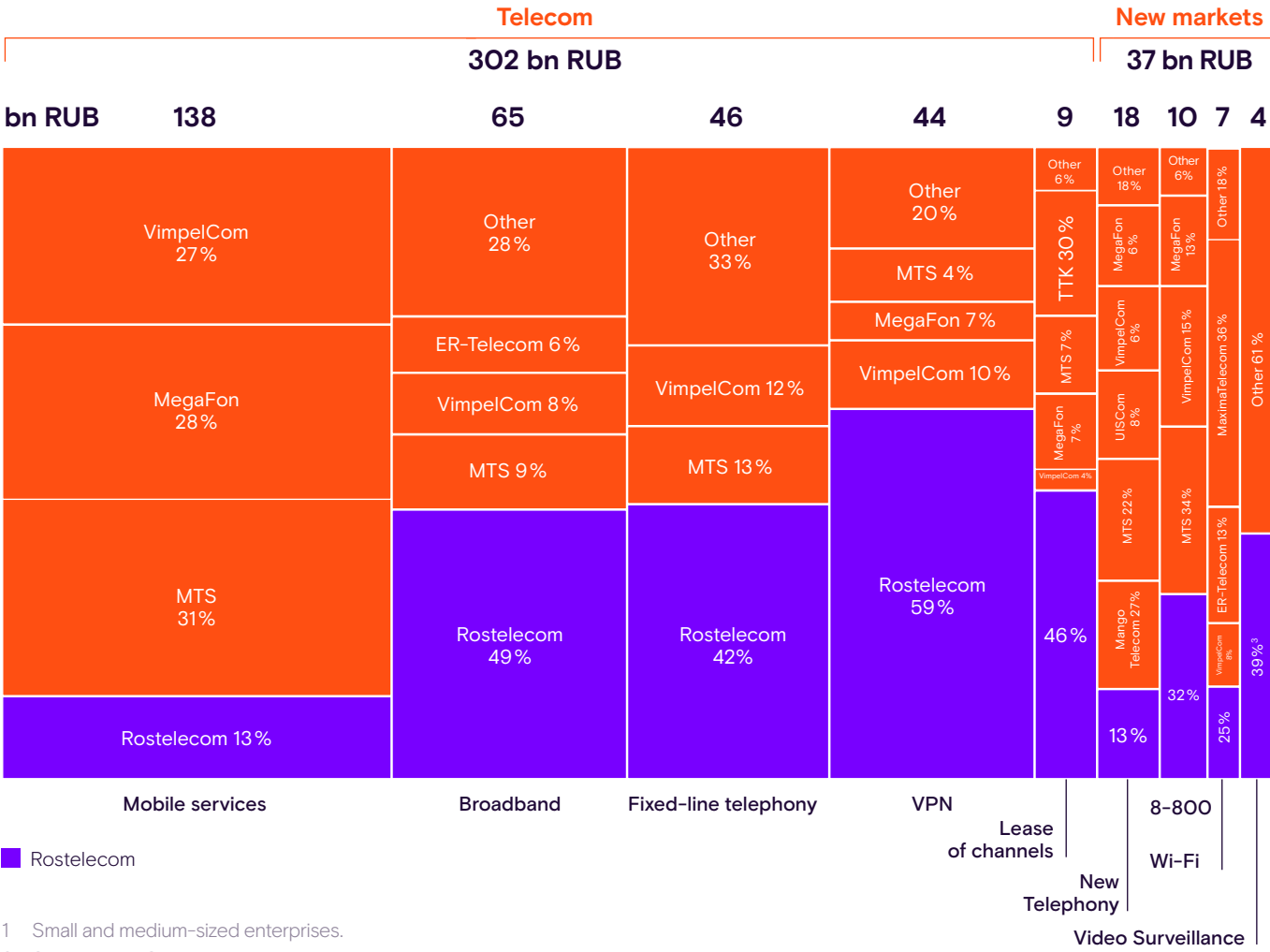
² Compound average growth rate.

Telecom services for business and government customers (B2B/B2G)

The Russian business customer base in these segments is highly consolidated: the top three industries account for about 70% of the aggregate revenue of Russian operators while Moscow, the Moscow Region and Saint Petersburg generate about 50% of all relevant revenues in Russia. Despite a decrease in the overall numbers of companies in Russia, TMT Consulting predicts accelerated growth of the business and government customer base in 2021–2022 as the market recovers and SMEs¹ return.

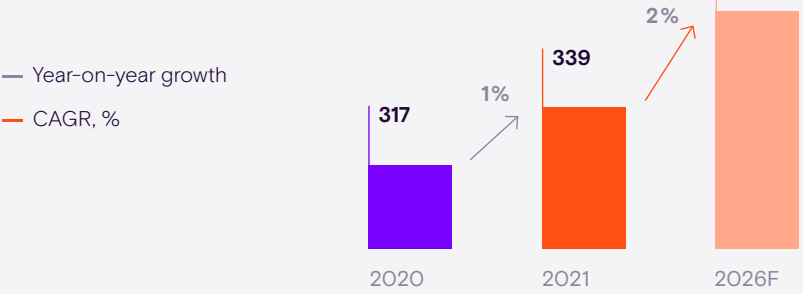
The aggregate revenue pool of traditional and new B2B/B2G telecom services is estimated at more than RUB 340 billion, with CAGR to 2026 expected to hover at around 2%. The declining share of traditional services is expected to be offset by new telecom products (New Telephony, 8 800, Wi-Fi, and Video Surveillance), which are rapidly growing but are still no match for traditional services by market size in monetary terms.

Telecom and adjacent markets (B2B/B2G)², 2021



1 Small and medium-sized enterprises.
2 Source: TMT Consulting
3 Source: TMT Consulting and company data.

B2B/B2G telecom market in Russia, bn RUB



Source: TMT Consulting

Growth forecasts for specific product markets



Source: TMT Consulting

The B2B/B2G segment of the mobile market is expected to maintain its growth momentum in the medium term, with tailwinds from higher contribution from value-added services (IoT, A2P SMS,¹ etc.). In addition, 5G launches may provide a new impetus to the market, but the timing for the deployment of full-scale next-generation networks in Russia has not been determined yet.

The growth of the market for traditional communications services (broadband, VPN and channel lease) in 2021 was driven primarily by connections of phase 3 social infrastructure facilities and the recovery of SMEs from the negative impact of the lockdown measures. Going forward, the traditional communications market is expected to grow steadily, driven by slight increases in VPN services as operators advance their B2G projects and amid a slight decline in channel lease services as customers migrate to broadband and VPNs. Other tailwinds for the market include a slight fall in broadband and fixed-line telephony services amid price competition and budget optimisation in the B2G segment.

Growth in the new markets will mainly come from virtual PBX and cloud surveillance. The positive trends in the virtual PBX market will slow down; however, the 2021–2026 average CAGR will be close to 12% thanks to regional expansion and growth of solutions for medium and large businesses based on virtual PBX (voice analytics, call tracking, voice assistants, etc.). The cloud video surveillance market will grow at double-digit rates, with CAGR averaging around 18% over 2021–2026. The tailwinds will include the deployment of the Digital Economy national programme, as well as the introduction of the Smart City and Safe City solutions in Russian regions and the growth of intelligent transport systems.

1 Application-to-Person SMS Messaging – the process of sending mobile messages from an application to a user’s mobile phone.

B2O market

In recent years, the Russian telecommunications market has in effect been stabilising. According to J’son & Partners Consulting, the Russian B2O segment has demonstrated a steady downward trend as compared to the industry overall. The segment is expected to reach RUB 86.9 billion in 2025.

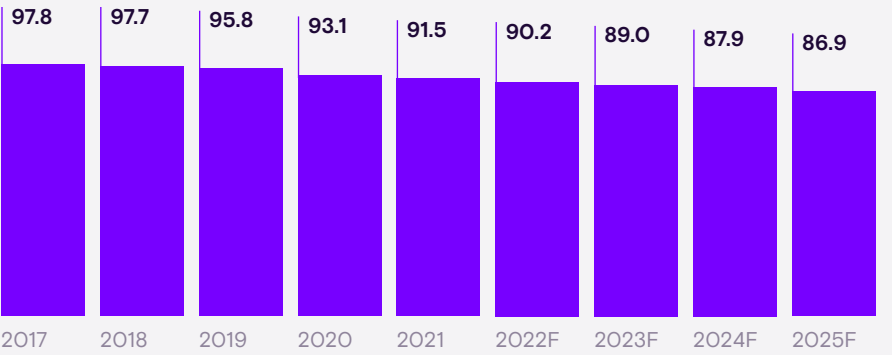
Rostelecom is the leader in the B2O market, with a market share exceeding 45%. There are also several other significant market players (TransTeleCom, MegaFon and VimpelCom), with the largest of them accounting for no more than 15% of the market.

Looking at the B2O market for traditional communications services, J’son & Partners Consulting experts identify the following factors as the key trends.

- Continued decline in revenues from interconnection and traffic transit services due to the rapid reduction in the number of fixed telephone lines, which will be partly offset by a surge in mobile traffic driven by the ongoing migration of users from traditional to mobile telephony.
- A higher-than-normal growth in internet traffic exchange between operators (peering) resulting from the accelerated growth in on-net consumption of heavy entertainment content as well as the sharing of this content via various social media platforms between customers of different operators.
- Migration of users from channel lease services to VPN services and gradual increase in revenues from VPN services due to the expansion of fibre networks as part of the Bridging the Digital Divide and Digital Economy national programmes.
- Sluggish growth in revenues from international IP transit and channel lease services, including transit between Europe and Asia, due to lower prices amid continued strong growth in demand in terms of capacity volumes.

In 2020–2021, the COVID-19 pandemic had a major impact on the B2O market. IP transit and channel services were affected more than other segments with operators having to quickly reconfigure their networks to cope with increased traffic volumes as many users transitioned to remote work and the consumption of entertainment content increased amid travel restrictions.

Russian B2O market evolution in 2017—2019 and a run-rate forecast to 2025, bn RUB



Source: J’son & Partners Consulting

Data centre and cloud solutions market

According to an iKS-Consulting study, the supply of rack units in data centres across Russia has increased by 15% to almost 56 thousand racks. The growth in data volumes and a paradigm shift in the use of outsourcing will remain the key growth drivers for the commercial data centre market in the coming years.

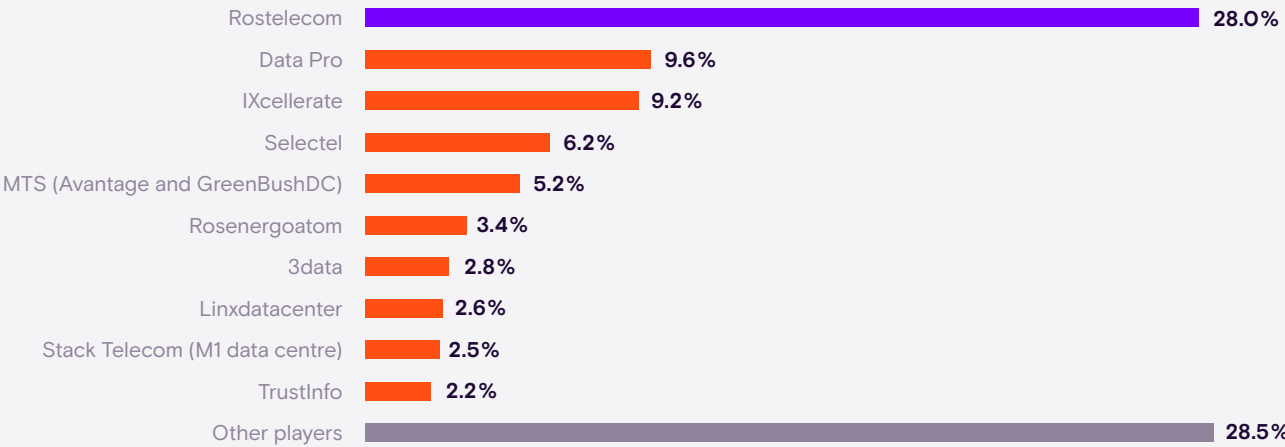
Data centres

The industry’s financial performance remains consistently strong on the back of higher cloud demand in Russia and across the globe in general. Companies are not only increasing the consumption of classic IaaS services, enabling them to reduce financial costs, but are also more actively using PaaS services. As a result, corporate IT systems get transformed as quickly and efficiently as possible, getting adapted to a cloud environment to generate real economic benefit and accelerating the launches of new products and services.

COVID-19-induced social and political restrictions have provided a powerful incentive for a shift to remote ways of doing business, predicated the need for remote access to corporate mail and databases, use of various online communication and business tools, deployment of virtual workplaces for employees, as well as the use of information security tools.

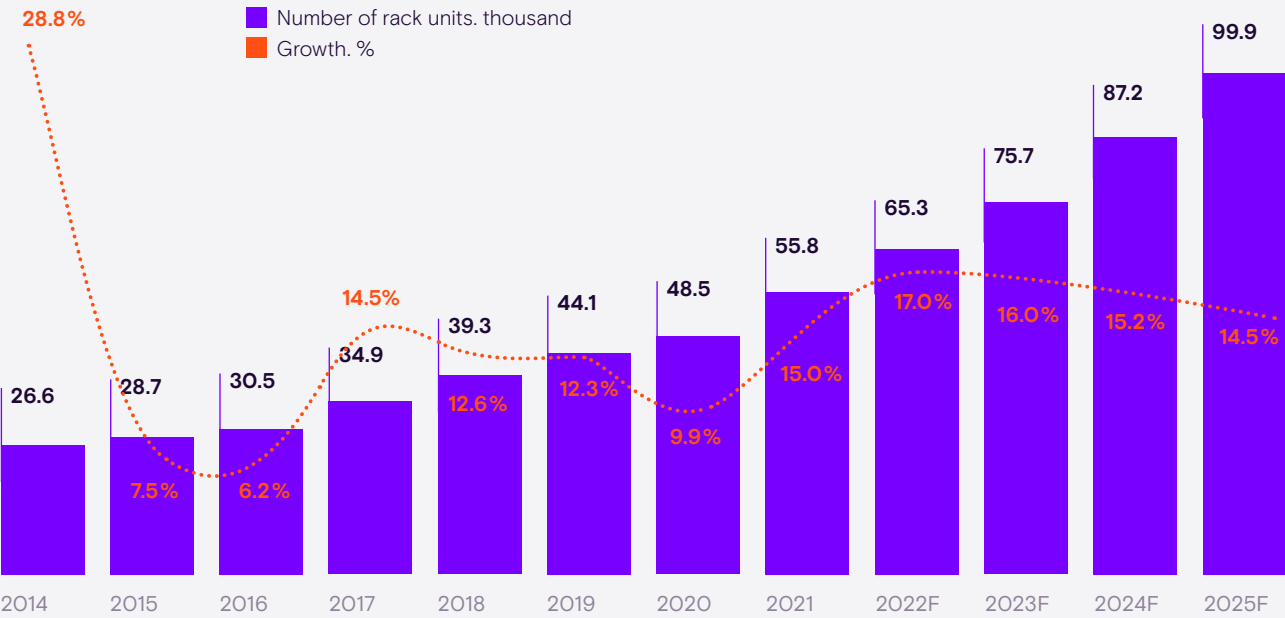
All of these technologies require immense computing capacity, which, in turn, relies on a data centre physical infrastructure.

Shares of the top 10 players by number of rack units commissioned as at end-2021 (forecast)



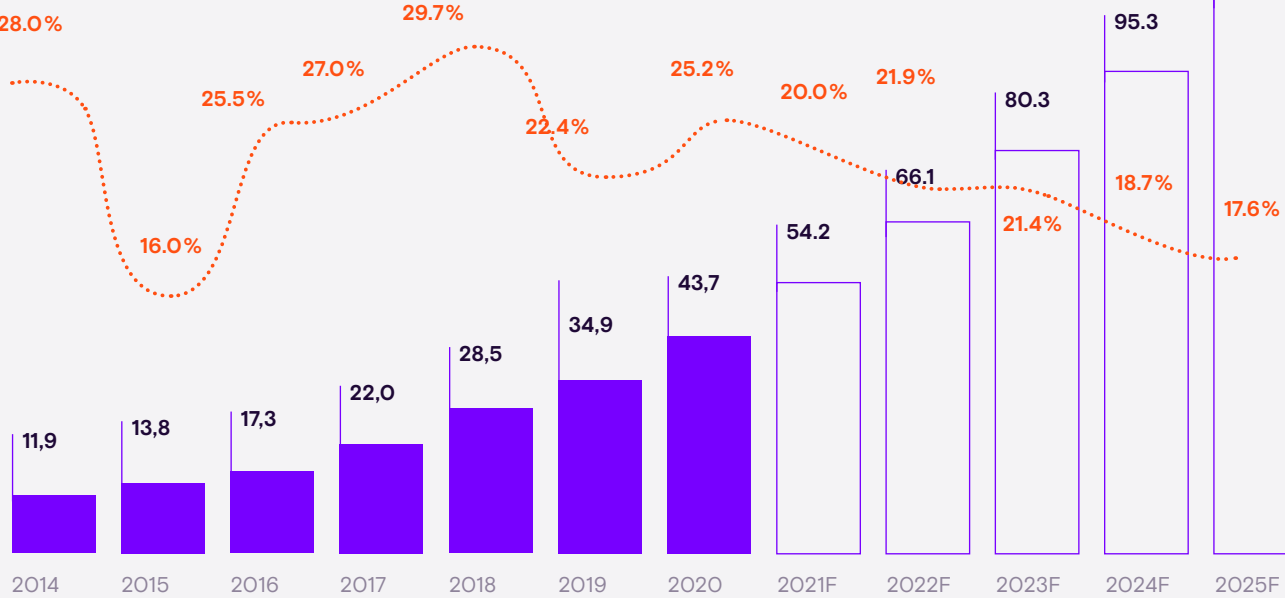
Source: iKS-Consulting

Russian commercial data centre market evolution forecast (base-case)



Source: iKS-Consulting

Revenue growth in the Russian commercial data centre market (2014–2025). bn RUB



Source: iKS-Consulting

Cloud services

Cloud services boomed during the COVID-19 pandemic, bringing new entrants into the market – fintech companies, internet integrators and telecom operators.

The COVID-19 pandemic has triggered the accelerated digitalisation of industries across the economy and facilitated changes in the cloud service usage patterns among retail customers and businesses. There is every reason to believe that in the medium to long term, the changes brought about by the COVID-19 pandemic are set to become a catalyst for the growth of the cloud service market.

Increased activity of the government in promoting cloud services deserves a special mention. The Russian market sees continued consistent efforts to grow cloud-based public services and actively move federal and regional authorities to a single cloud platform. This migration includes consideration of a number of initiatives aimed at encouraging government organisations and regional executive authorities to use cloud services, with organisations both taking commitments to drive digital transformation of their operations and placing restrictions on the expansion of own IT infrastructure. In September 2021, the Prime Minister of the Russian Federation approved an action plan to further promote the development of the IT industry, which implies, among others, the establishment of requirements to supplement digital transformation programmes of government agencies with an instruction to use domestic cloud services and not to use public funds to build data centre infrastructure without proper justification. A ban is also introduced on building data centre infrastructure to meet the needs of regional executive authorities without proper justification. Massive adoption of cloud services in the B2G segment will boost the popularity of clouds in the B2B segment as well and should help maintain the strong momentum in the Russian cloud market.

IKS-Consulting (in its end-2021 forecast) estimates that the cloud services market will reach nearly RUB 55 billion in the near future.

Key market drivers:

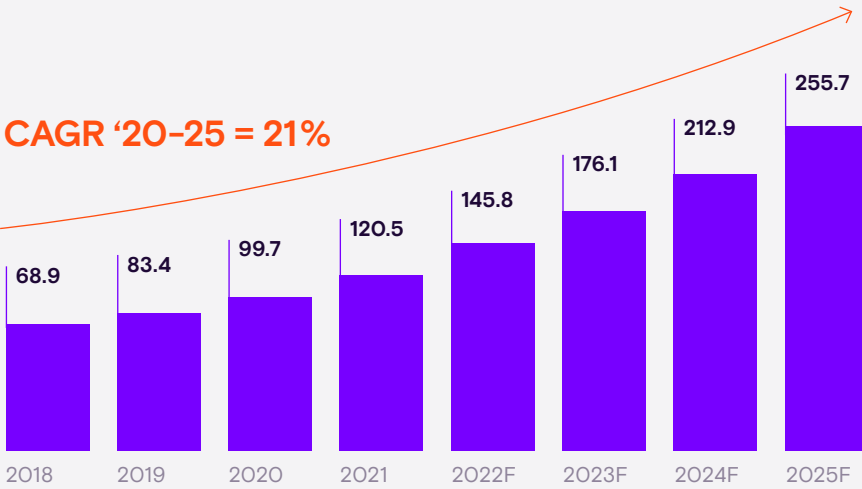
- Increased penetration of cloud services
- Introduction of new services by cloud service providers
- Growing trust in cloud services on the part of large businesses
- Focus on optimising IT infrastructure costs shown by many companies
- New entrants coming into the market and major providers pivoting towards cloud services
- Transition to hybrid production processes and the resulting higher loads on IT infrastructure, as well as increased demands for IT infrastructure scalability, as well as data security and processing speed
- A range of government measures to protect and develop the national market

According to iKS-Consulting forecasts, these drivers will ensure market growth at an annual rate exceeding 20%, with the IaaS segment expected to expand by 26%–27% annually.

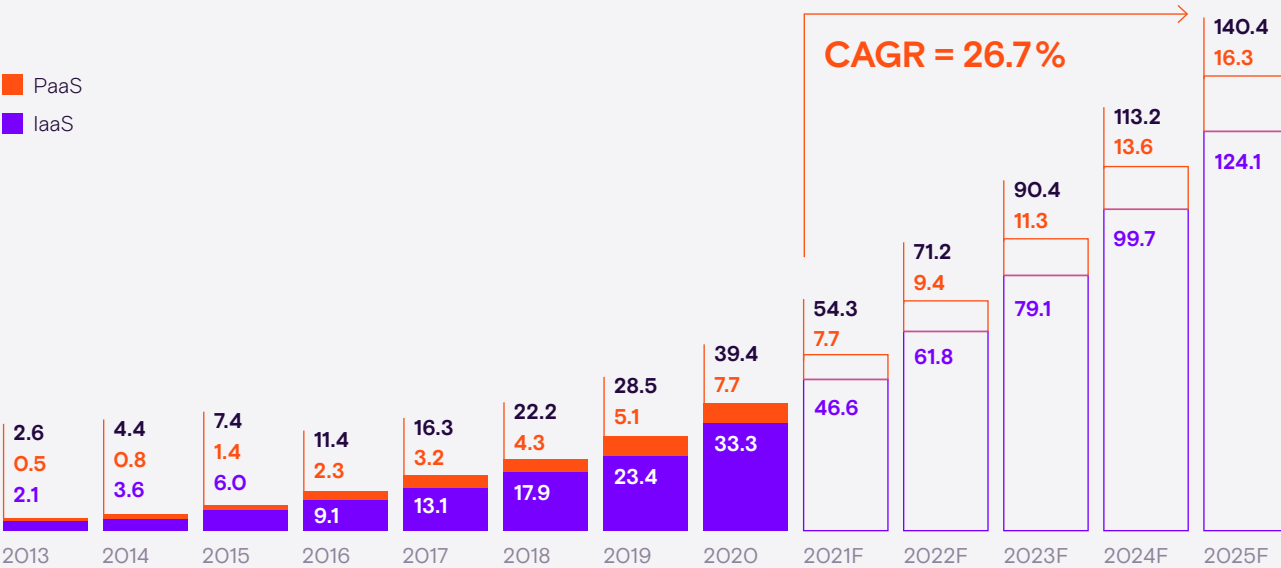
Today, the SaaS segment accounts for the largest share of the cloud service market, but the real market driver, as argued by iKS-Consulting, is the IaaS segment, which showed the highest growth in 2020.

At the same time, according to IDC, consumer interest in PaaS services increased in 2021, suggesting the maturity of the Russian market and its readiness for the deployment of platform solutions. As noted by IDC, the future evolution of the Russian public cloud service market will be largely determined by vendors capable of providing an advanced ecosystem of platform solutions.

Projected growth of the Russian cloud service market, bn RUB



Projected growth of cloud infrastructure services in Russia until 2025 (base-case forecast), bn RUB



Source: iKS-Consulting

Cybersecurity market

The global cybersecurity market continued its growth in 2021, reaching USD 155 billion.¹ It is expected to expand to USD 233 billion by 2025.

In Russia, market growth was driven by digitalisation across various Russian industries, the pandemic and the mass transition of employees to remote working, the implementation of the Digital Economy programme, and a partnership between the government and corporate sector to deliver key initiatives, as well as by regulatory requirements, a surge in the number of cyber threats and growing data traffic in Smart Home projects, automated process control systems and the Internet of Things segment. The Russian market growth rate was slightly below 10%. Currently, key market players are system integrators and consultancies, which will be overtaken by information security service providers within the next few years.

These organisations have all necessary technology, talent and other resources to complement their core offerings with information security services.

Key future players in the information security market

B2B/G

- Insourcers and carve-outs from state-owned corporations
- Vendors offering their solutions as a service
- Telecoms already focused on information security services
- Internet giants
- Large-scale ecosystems

B2C

- Internet giants with segment-specific promotion experience capable of offering information security services to complement their core offerings
- Telecoms
- Vendors offering their solutions as a service
- Fintech companies

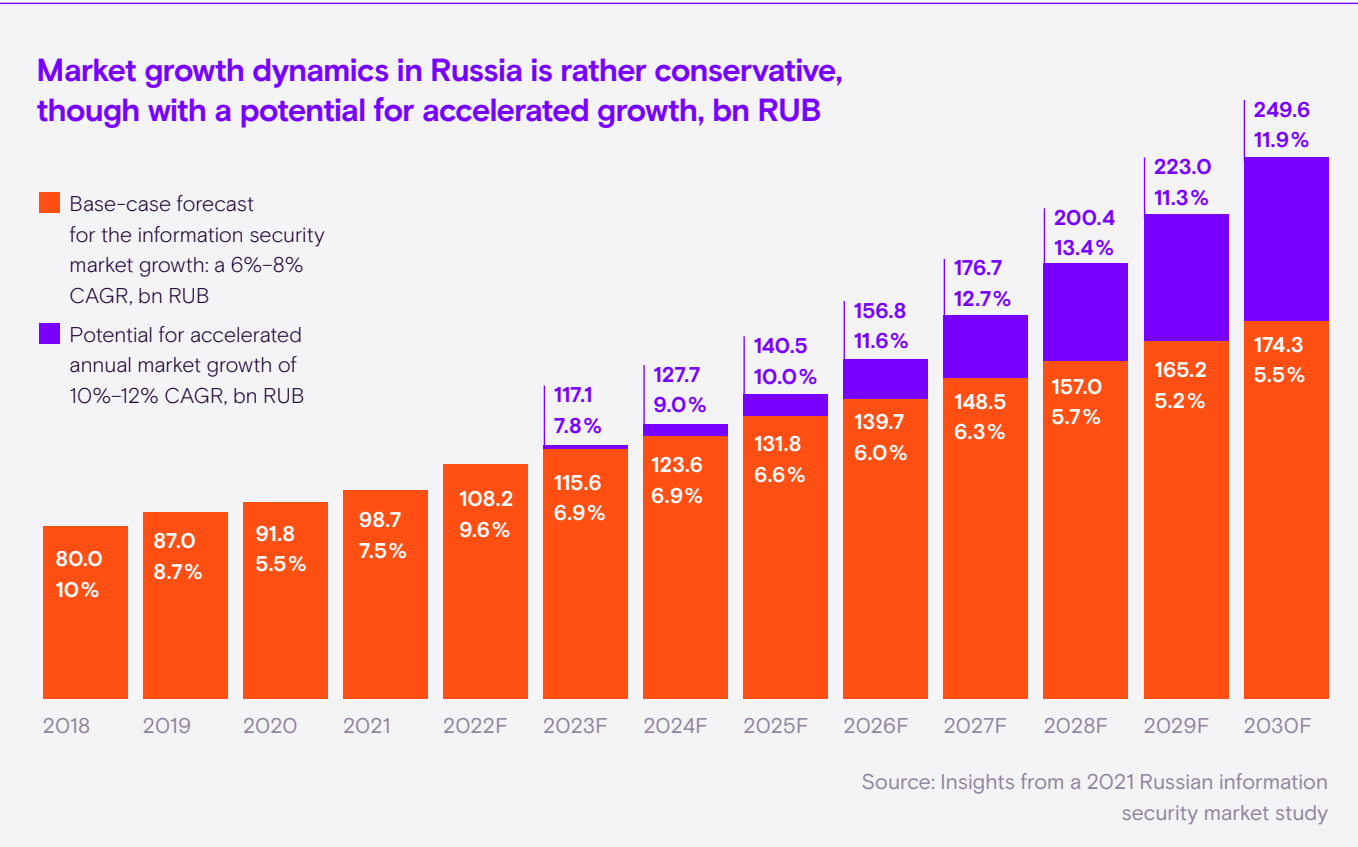
¹ Source: Gartner.

Drivers of the information security market:

- Legal framework enhancement
- Trends for import substitution of information security services
- Digitalisation and the need to protect banks and critical infrastructure
- Growing number of cyber threats
- Growth of information security services and solutions
- Growing trust in outsourcing
- Shortage of information security talent
- Limited use of global cloud services due to sanctions risks, regulations on personal data protection and import substitution policies

Information security services accounted for close to 46% of the global information security market in 2021 (RUB 71 billion in Russia), with the potential to grow slightly below the market to 41% (RUB 95.8 billion) in 2022. Opportunities for the development of information security technology lie in building integrated data protection systems, designing cloud security servers, User and Entity Behaviour Analytics (UEBA) systems, and attack mitigation systems, as well as higher sales of employee cyber literacy trainings, technical support and incident investigation services.

In Russia, the total size of the information security market (in terms of end-user spending) was around RUB 99 billion in 2021, growing 8% year-on-year.



Strategy 2021–2025

Approved by the Board of Directors
on 19 April 2021, Minutes No. 9.

In 2021, Rostelecom adopted a new strategy for 2021– 2025, maintaining its focus on its transformation into an integrated provider of digital services and a reliable partner for society, business and the state. Rostelecom's vision for its future development is focused on becoming a digital customer-centric group of companies driven by human capital and cutting-edge digital data processing and transmission technologies, including for the benefit of the state.

1

Under Rostelecom's updated strategy for 2021–2025, the Company's main priorities are to:

Pursue smart growth in traditional businesses to provide a higher return on investment and stronger cash flow

[Page 63](#)

2

Outperform the market in selected new business segments – achieve leading positions

[Page 68](#)

3

Maintain and expand Rostelecom's role as the state's key digitalisation partner

[Page 82](#)

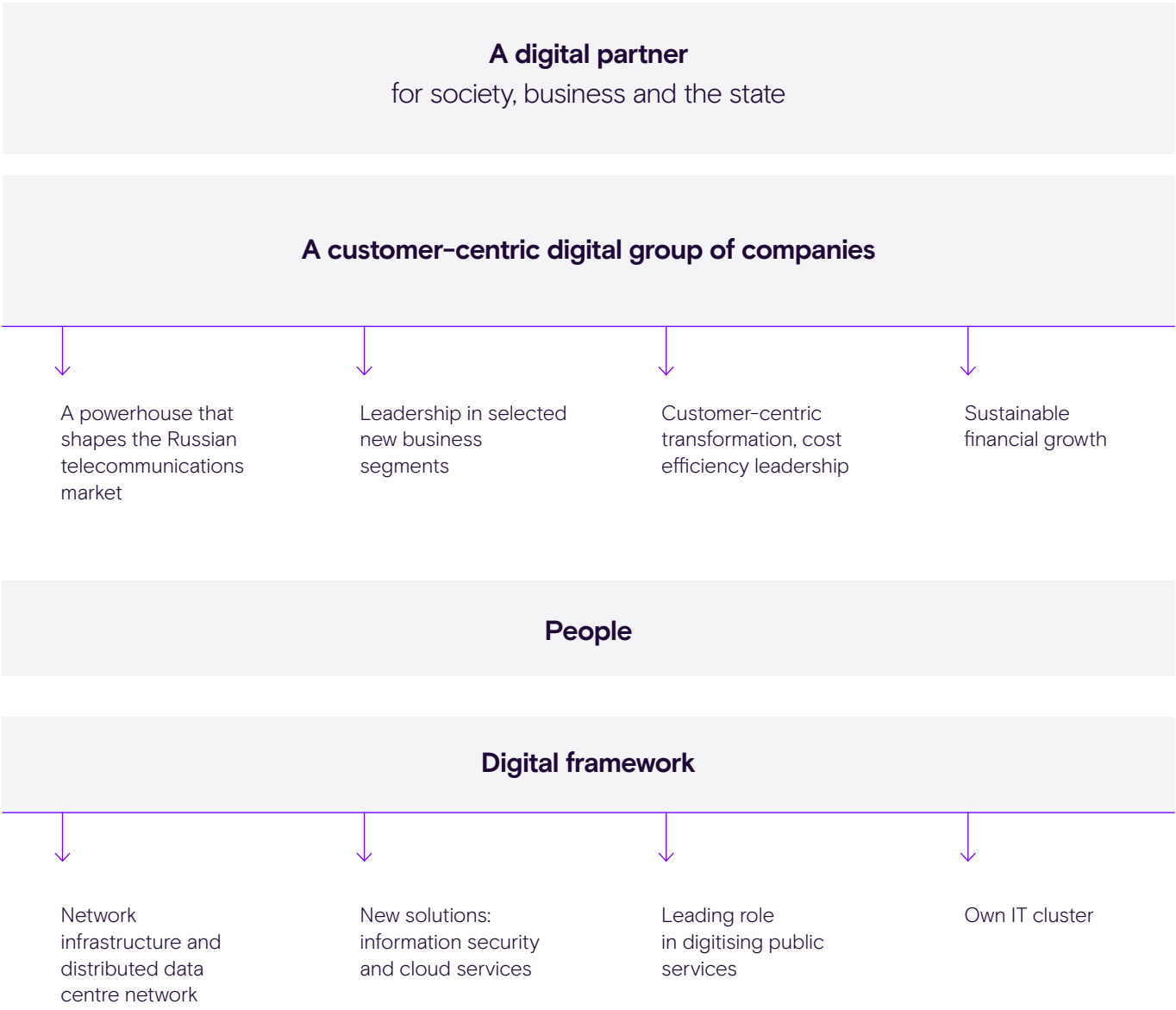
4

Increase operational efficiency in traditional business segments

[Page 84](#)

Strategic vision and priorities

Rostelecom 2025 vision



1

Pursue smart growth in traditional businesses to provide higher return on investment and stronger cash flow

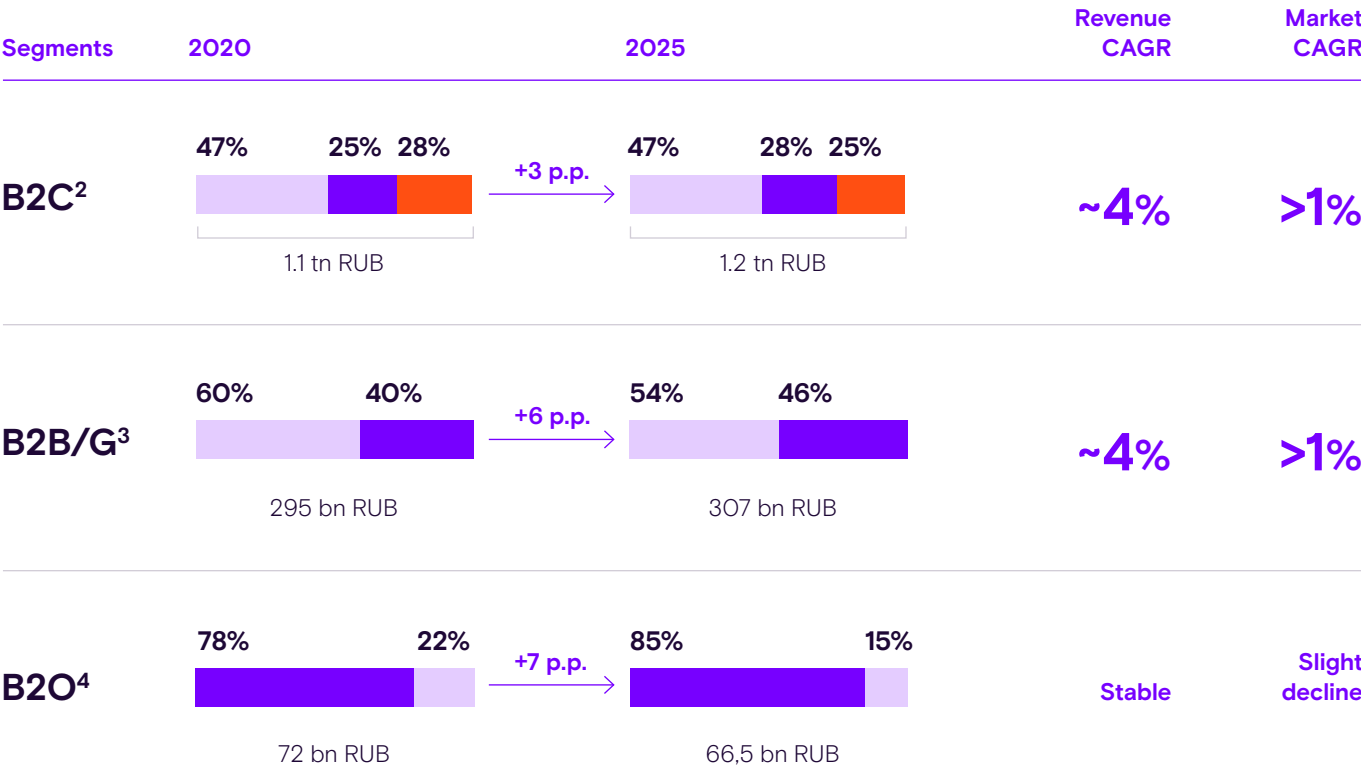
Leadership in all segments

According to the new strategy for 2021–2025, Rostelecom is transforming itself into a powerhouse that shapes the Russian telecommunications market.

The Company plans to secure leadership in traditional telecommunications services in terms of subscribers and revenue with a target base of over 100 million customers, while maintaining a leading position as a partner for business and the state.

Market share¹

Rostelecom Player 1 Others



1 Source: market forecast by TMT Consulting, J'son & Partners Consulting, IKS-Media, operators' statements, Company data
2 B2C includes fixed telephony, broadband, mobile, cable TV, and IPTV services.
3 B2B includes fixed telephony (including Virtual ATS and IP), broadband, mobile, VPN and channel lease, and M2M.
4 B2O includes interconnection and traffic transit services, IP transit, VPN and channel lease, and infrastructure services.

B2C

A growing subscriber base and increased penetration of services

2025 targets

100_m

Users of services and products

3+

Services per customer

top 3 NPS

Improve customer service and satisfaction with service quality

Ambition

To become the largest telecommunications provider for households

Key priorities

- Develop a converged offering (FMC¹): build a customer base and end-to-end customer service
- Maximise ARPU and increase the share of wallet by developing converged and digital services
- Improve the quality of customer service:
 - development of digital channels and self-service channels
 - digital product offerings
 - improving the quality of network services to curb subscriber churn

1 FMC, Fixed Mobile Convergence – a technological solution at the junction of different types of communication networks (fixed and mobile), which allows the creation of a single network of office and mobile phones with a common short numbering plan. The technology makes it possible to call directly by short internal numbers to employees from offices in different regions of the country or the world without using a real office PBX.

B2C

Mobile business: above market growth; expected to make a key contribution to B2C growth

2025 targets

5%

ARPU CAGR

2%

Subscriber base CAGR

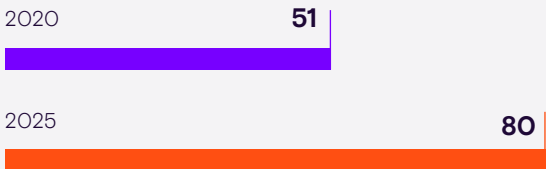
Top 3

Operator in Russia

Growth factors

- Continued market leadership in VFM, NPS, and TTM²
- Increased efficiency: digitisation of processes and services, shorter TTM, and consistently high levels of employee engagement
- Improved network quality
- Regular new unique offers

Share of active 4G users, %



2 VFM – value for money, NPS – Net Promoter Score, TTM – Time to Market.

B2B/G

A strategy of absolute leadership through digital and end-to-end solutions

2025 targets

50%

Share of wallet among large customers using digital products

+100ths

New SME¹ customers per year

Ambition

Maintain leadership and increase lead over competitors

Key priorities

- Move from the carrier concept to a comprehensive service provider:
 - increase sales of digital and comprehensive services to large customers
 - sell vertical industry-specific solutions in selected industries
- Provide a better service by digitising the processes of attracting, connecting, and servicing customers
- Establish end-to-end cascading responsibility for customer development within a segment/cluster

B2O

Increase profitability and grow market share

2025 targets

>20%

Market share of servicing FOCL and base stations of third-party operators

>5%

Share of revenue from new products in the segment

Ambition

Become a partner of choice for operators providing basic telecom and digital services

Key priorities

- New infrastructure services: joint use of radio access networks and the core network by mobile operators; smart pillars with sensors to provide cellular communication, Wi-Fi and Smart City services
- Transition to a full-cycle infrastructure partnership (from design to installation and service provision)
- Construction and monetisation of a new backbone line Transit Europe-Asia (TEA NEXT) providing unique consumer proposition
- Additional services:
 - Leasing out portions of spectrum
 - Monetising interconnection data

1 SME — small and medium enterprises.

2

Outperforming the market in selected business segments – achieving leading positions

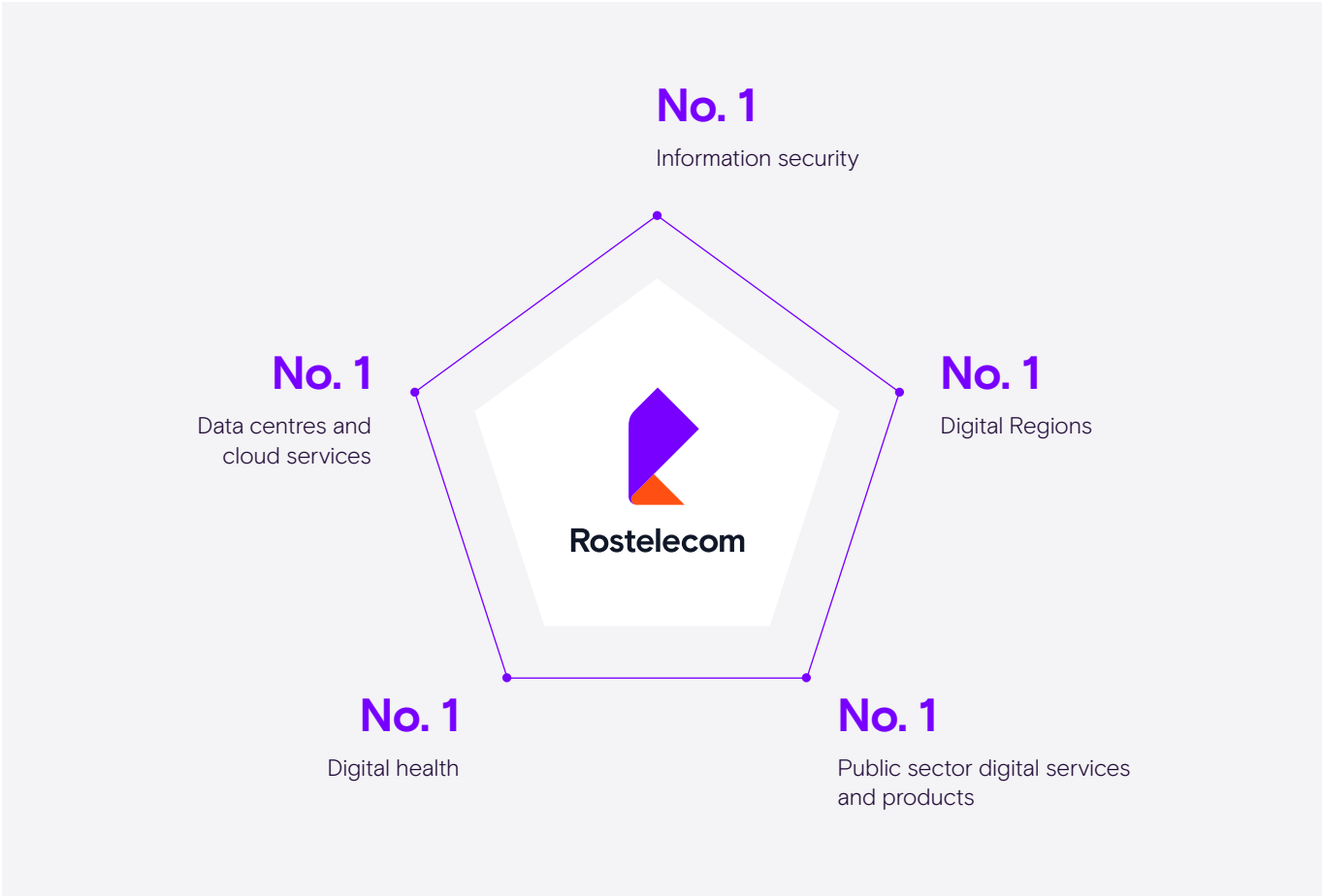
Segment and cluster based model

Rostelecom will not build a wide ecosystem at its own expense. Developing new digital businesses, the Company will focus on a limited number of adjacencies to its key IT and telecoms products, pursuing the following.

Key priorities

- Becoming No. 1 player in each selected market by 2025
- Aiming for new businesses to achieve higher multipliers than those of Rostelecom

In addition to the Company's own resources, Rostelecom plans to use venture projects, partnerships, and M&A to develop new businesses. Several businesses are considered for an IPO.



At the moment, the strategy provides for developing five new businesses in the cluster format. The number of clusters may be adjusted in the course of strategy implementation.

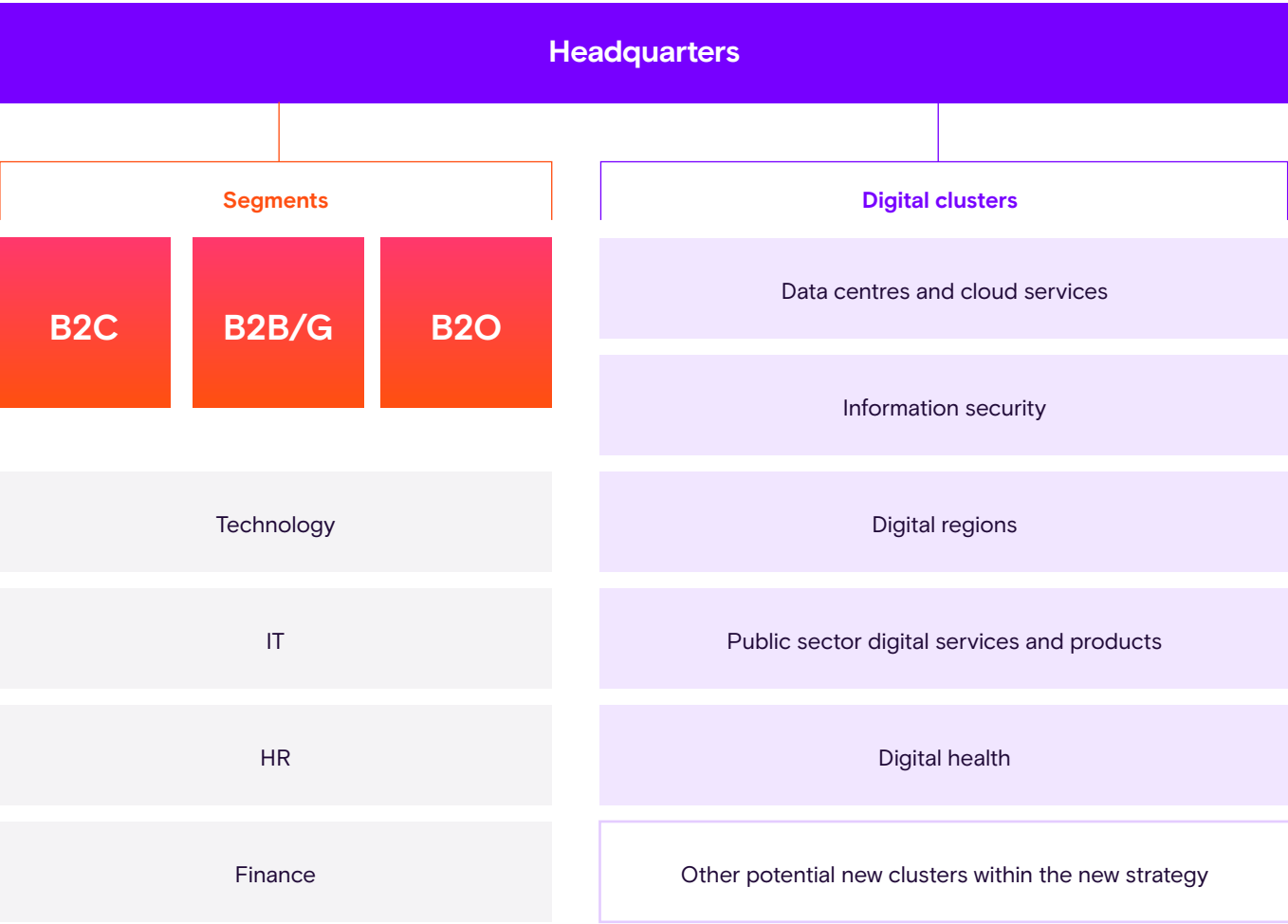
To focus development efforts, Rostelecom plans to build its segment and cluster based model as a holding structure:

- Rostelecom headquarters as the holding company without any additional holding superstructure
- Segments responsible for comprehensive customer service, with integrated fixed-mobile segments to be built by 2025

Digital clusters are units with a separate management model that are responsible for developing digital businesses.

In line with the adopted development strategy, Rostelecom prioritises five main clusters while also considering building additional digital clusters.

In November 2021, the Company presented its strategic vision for the Data Centre and Cloud Services and Information Security clusters.



Data Centres and Cloud Services cluster

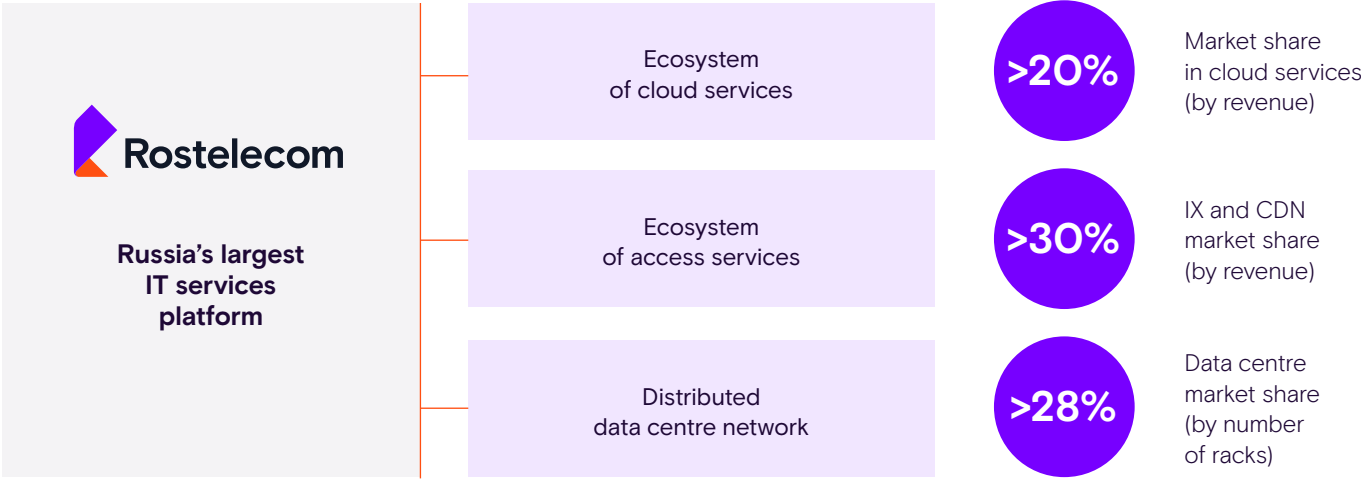
Rostelecom is the No.1 player in

- The data centre market
- The cloud services market (IaaS)
- The CDN market
- The IX market¹

Rostecom has been developing its data centres and cloud assets based on separate subsidiary. Network capacity of the Company’s data centres totals 12,700 racks.

Rostelecom DC and Cloud subsidiary has evolved from a data centre operator to a diversified IT outsourcer offering a wide range of vertically integrated services. Rostelecom has become a market leader by leveraging its business model of consistently expanding the range of services.

Cluster business model²



The next step is to enhance capabilities and product portfolio in PaaS, DevOps, development of complex information systems, and development and production of specialised import-substituting hardware and hardware/software solutions, including those using Russian microprocessor platforms.

1 A network infrastructure to establish fast interconnections and enable inter-operator IP transit (peering) between independent networks on the Internet. Traffic is exchanged by organisations that manage independent networks (autonomous systems).
2 Source: iKS-Consulting ratings, CNews, TMT Consulting, Company data.

Development strategy of Rostelecom DC and cloud services cluster for the next few years:

- Maintain leadership in existing segments
- Enter new product markets through:
 - accelerated technology-driven development
 - targeting new, highly competitive, and high-margin niches

Key success factors to build data centres business:

Development of the existing data centre network	The availability of adequate data centre capacity is an important driver of further growth. Moscow remains the key sales region in the data centre segment.
Further development of cloud solutions	The shift in demand towards cloud services is reflected in Rostelecom’s development strategy, which sees revenue from virtualisation services (IaaS+) growing faster than the market.
Larger investment in new business lines	The strategic picture of the market is one of rapid technological change in the industry. To maintain its leadership, the Company is constantly looking for new high-margin niches and promising projects and teams to invest in.

Investments in new strategic business lines

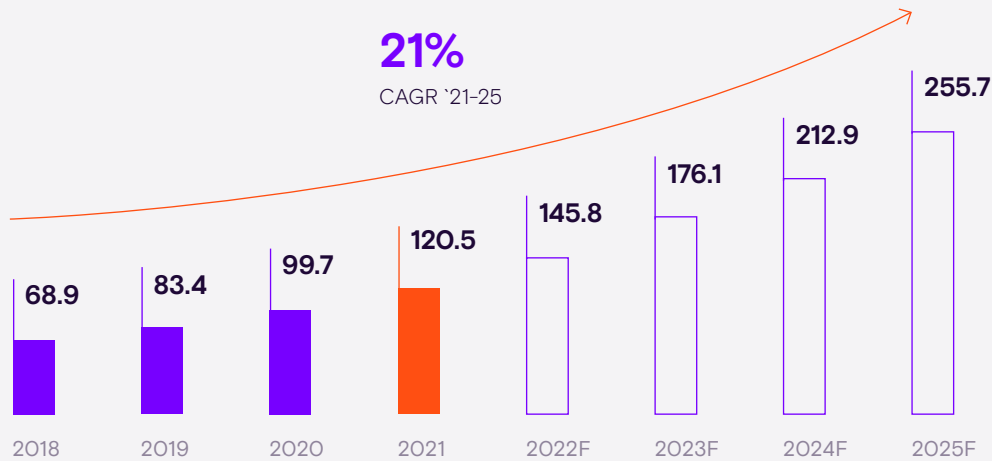
In 2025, new businesses are expected to generate around 25% of cluster’s revenue, becoming a powerful driver for further growth.	One of the most important development areas is the consistent expansion of the customer base with a focus on providing customised services to SMEs.
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New strategic business lines



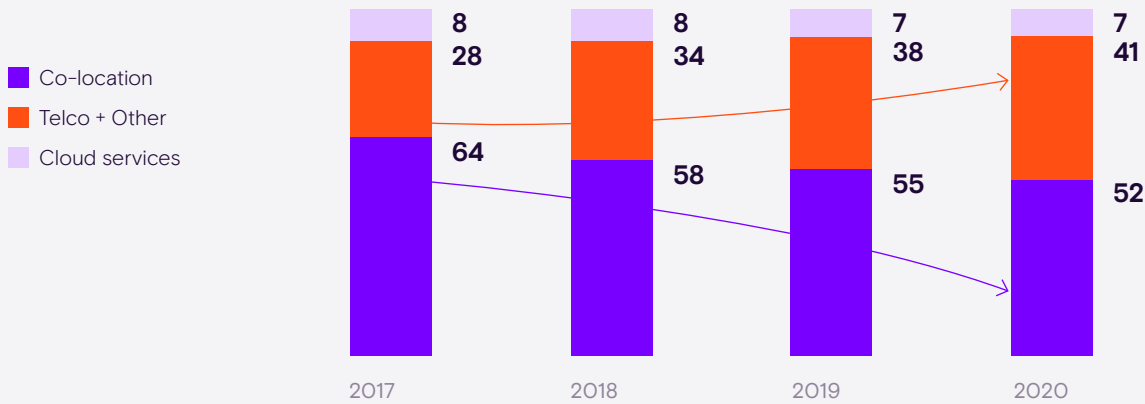
Strategic forecasts for 2021–2025

Projected growth of the Russian cloud service market, bn RUB



Source: iKS-Consulting

Data centre operators' revenue mix in Russia, %



Source: iKS-Consulting

The evolution of market structure reflects shrinking on-premise infrastructure and growth in private, public and hybrid cloud platforms with migration from IaaS to PaaS and SaaS.

Higher cloud demand in Russia and across the globe in general, with the Russian cloud services market expected to grow at a CAGR of 20% over the next five years.

2021–2025 targets

22+ thousand

Racks in 2025

75 bn RUB

Revenue in 2025 (CAGR 21%)

40 %

Target OIBDA margin

75 bn RUB

Total investments in 2021–2025

Information Security cluster

Provision of services and technologies for data asset protection, targeted monitoring, and information security management are one of the Company's top priorities.

Rostelecom is a national provider of services and technologies for data asset protection, targeted monitoring, and information security management.

To develop the Information Security cluster, the Company plans:

- portfolio expansion with proprietary technologies in fast-growing niches:
 - Network security
 - Monitoring and analysis
 - Access control
- dynamic entry into new niches and stronger positioning.

Customer segmentation in cybersecurity services is driven by a strategy aimed at defending traditional home market shares and developing new segments.

Cyber security

1

A partner for the state in cybersecurity

Ensuring reliability of digital public services

2

The leader and standard setter for B2B

Simple, efficient and easy-to-integrate cyber solutions for business, supporting safe and smooth digital operations

3

A society ambassador

Educating people about cyber hygiene and providing self-service security tools

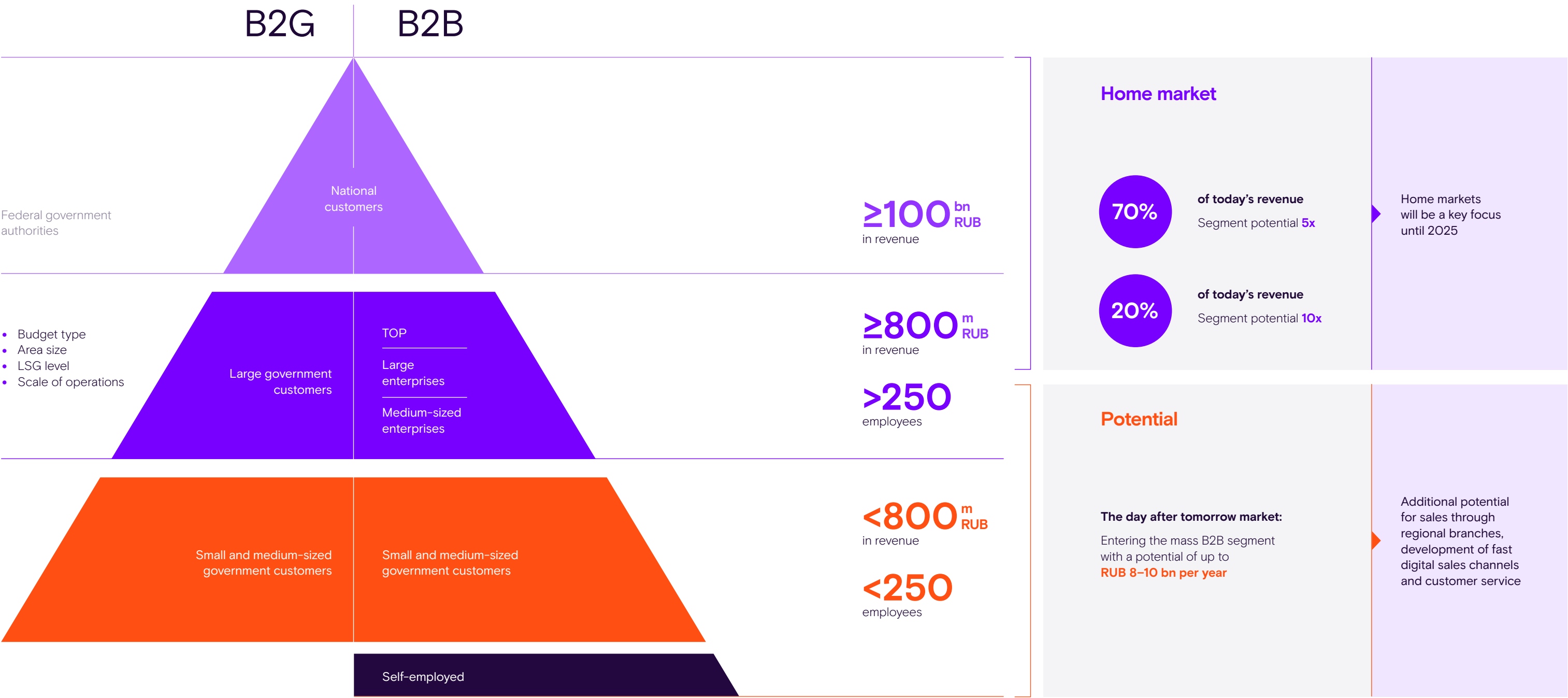
A key systemically important market player for cybersecurity

A powerhouse for best expertise and skillsets, paving the way for the next generation of digital and cybersecurity practitioners



Customer segments

Defending home market shares
and developing new segments



B2C

We intend to start developing the B2C segment by launching an information security risk awareness programme targeting citizens.

Key success factors in developing the cluster



1

Distribution of information security technologies through the service-based and outsourcing model as a key element of creating high added value and establishing long-term relationships with customers

2

Development of proprietary products and technologies providing a strategic advantage and high business capitalisation

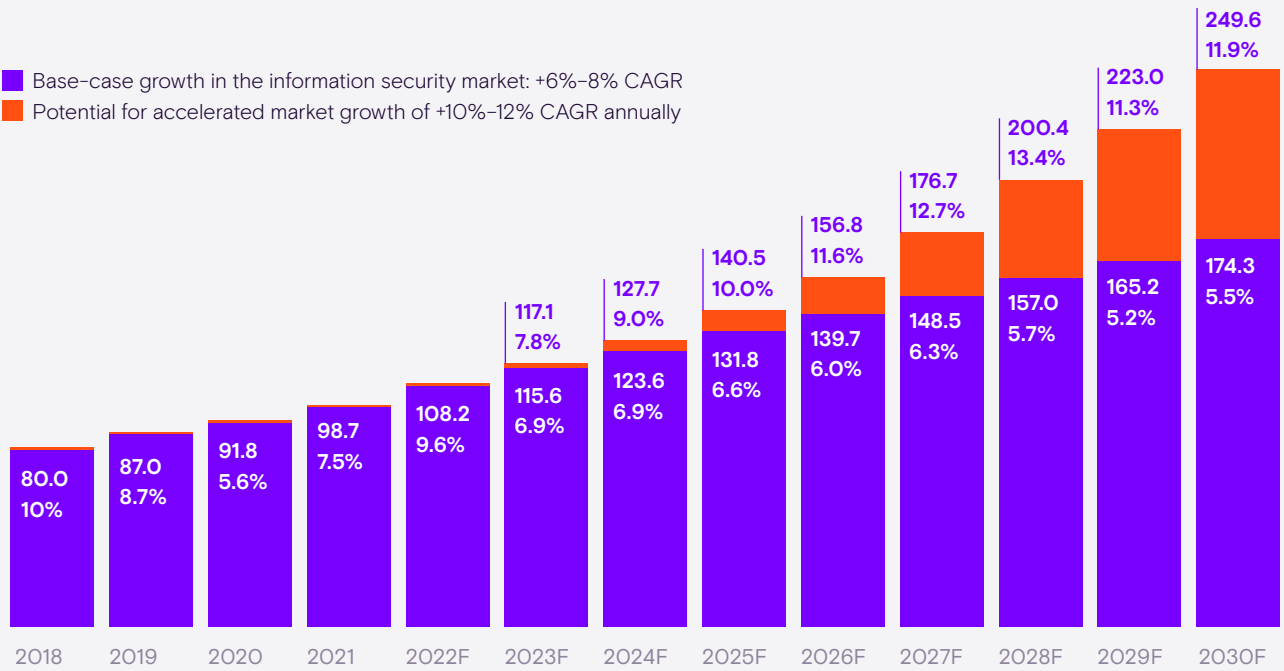
3

Focus on investments in market development, fostering mature demand, and building a talent pipeline for the Company and the market

Strategic forecasts for 2021–2025

Market growth dynamics in Russia are conservative, though with potential for accelerated growth, bn RUB

■ Base-case growth in the information security market: +6%–8% CAGR
■ Potential for accelerated market growth of +10%–12% CAGR annually



Source: results of information security market research in Russia in 2021

Organic growth

1. Building an ecosystem of cybersecurity services around customers in B2E (corporations) and B2G (federal executive authorities) home market segments and in the regions.
2. Defending market shares against tech players and telecom companies.

Investment development

Aggressive investment programme in R&D and M&A

1. Portfolio expansion with proprietary technologies in fast-growing niches:
 - Network security
 - Monitoring and analysis
 - Access control
2. Dynamic entry into new niches and stronger positioning

2021–2025 targets

player

No.1

in the Russian information security market
(with a market share of up to 25%)

>30 bn RUB

5.4x revenue growth by 2025

23.9 bn RUB

total investments in 2021–2025

11.8 bn RUB

OIBDA in 2025

¹ Excluding revenue from projects within the Digital Economy of the Russian Federation national programme.



The government’s key partner
in digitising the country

2025 targets

No.1

Maintain leadership
in providing traditional
services to government
customers

No.2

Maintain leadership
in selected areas of public
services digitisation

Ambition

Remain the government’s
key partner and consolidate
the Company’s leadership

Key areas of partnerships with government authorities

- Be the No. 1 operator of choice in all traditional services
- Become the No. 1 mobile operator for government customers
- Develop the E-Government project and interdepartmental cooperation systems
- Achieve leadership in the provision of Digital Region services
- Support the implementation of healthcare projects
- Participate in the Digital Economy national project and address tasks around the provision of communications services (the Bridging the Digital Divide project, connecting social infrastructure facilities to the Internet, etc.)

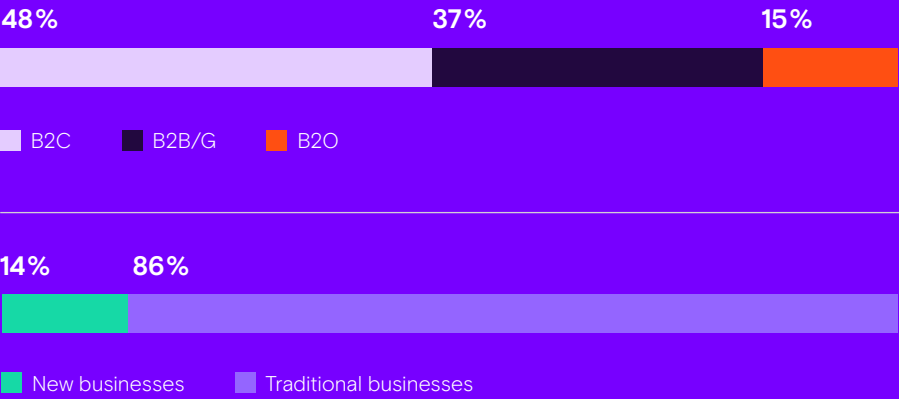
As a result of implementing the first three strategic priorities, Rostelecom’s total revenue will top RUB 700 billion by 2025, with the share of digital revenue from new business lines (clusters) exceeding 25%.

New business lines:

- Data centres and cloud
- Information security
- Digital health
- Digital regions
- Public sector digital services and products
- Other digital services

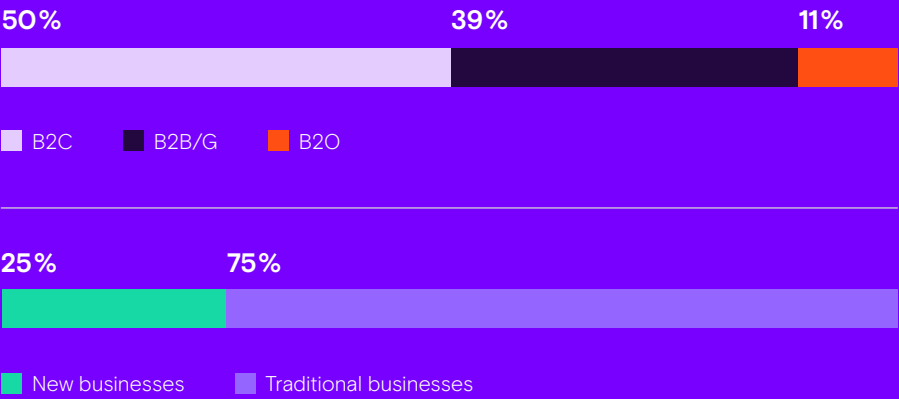
2020

547^{bn}
RUB



2025

700+^{bn}
RUB



4

Improve business efficiency through aggressive cost optimisation

2025 targets

20%

Target share of payroll in revenue

up to 2 p.p.

OIBDA margin increase due to optimisation of other costs

40%+

Target OIBDA margin

Ambition

Aggressive cost optimisation and driving business efficiencies

Key factors

- Reducing the share of personnel costs in revenue, including by increasing labour productivity
- Optimisation of other indirect costs, including:
 - materials, repairs, and maintenance
 - operating expenses¹.
- Improving operational efficiency:
 - Reducing the number of management levels
 - Optimising the asset portfolio, including the sale of real estate
 - Reviewing and simplifying key processes through the operational efficiency improvement programme

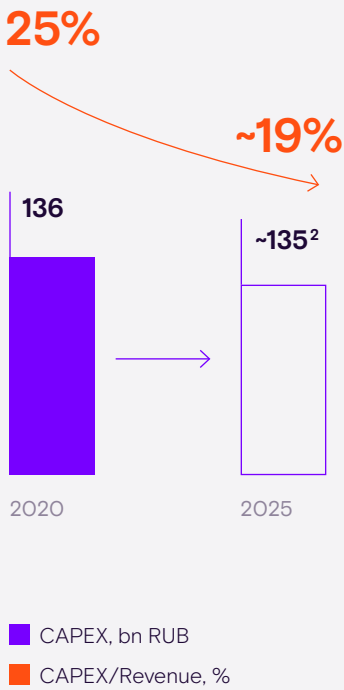
Increased efficiency in traditional businesses will be achieved through:

- aggressive cost optimisation, including costs associated with organisational transformation (reduction of management levels)
- changes in the approach to investment
- using a customer backwards approach in building development and optimisation models
- optimising the asset portfolio, including the sale of real estate
- reviewing and simplifying key business processes
- reducing the share of personnel costs in revenue, including by increasing labour productivity.

1 Including maintenance expenses; security services; support and maintenance of software and databases; third party services and expenses related to fees for audit, information and consulting services, etc.

A smart approach to investment

CAPEX dynamics



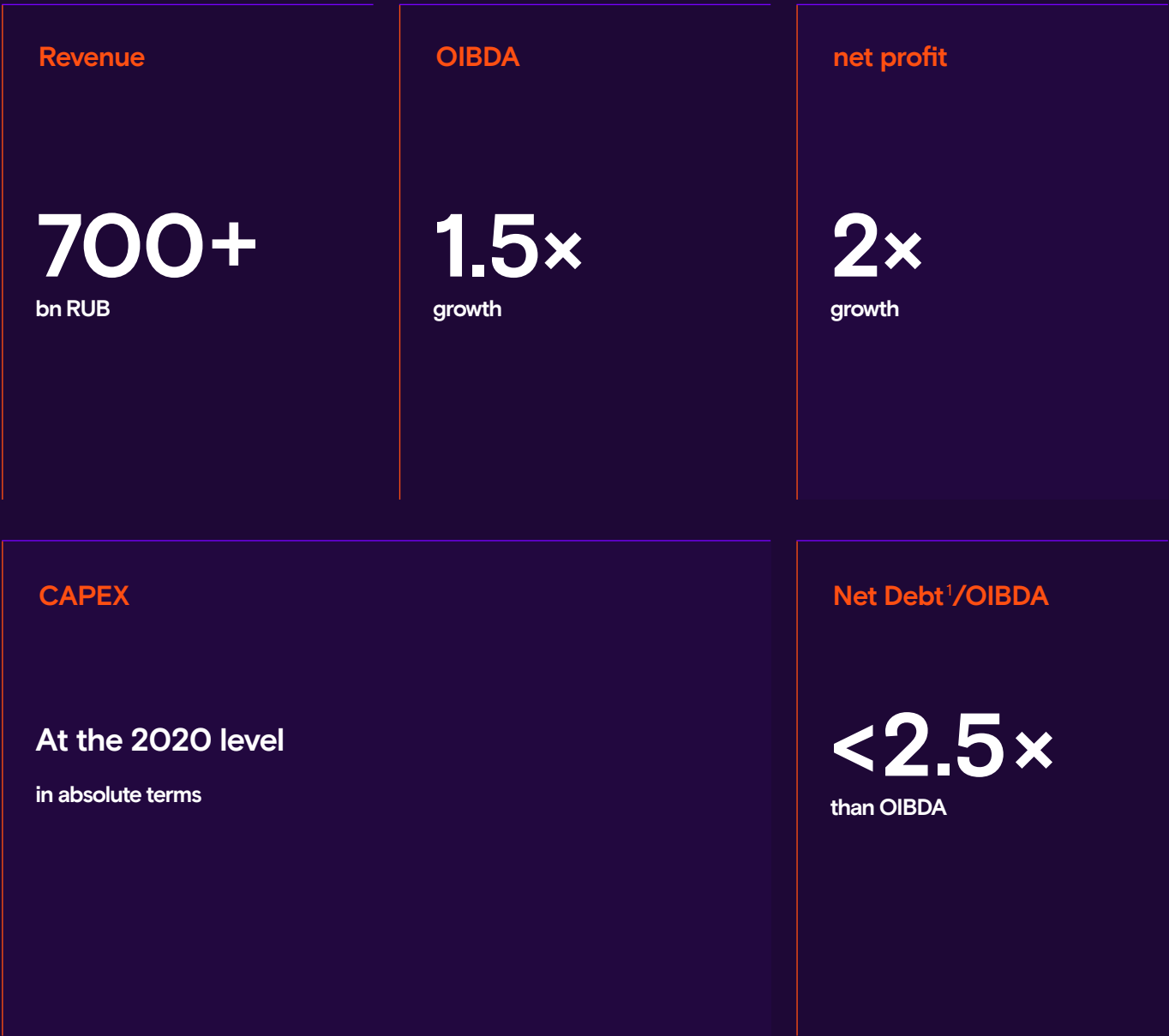
At the same time, the Company will strive to implement a smart approach to investment, which involves:

- transition to a less capital-intensive growth model in traditional businesses
- investment focused on priority regions in traditional businesses
- larger investment in the development of the fastest-growing products.

2 The forecast takes into account investments only in existing/known government projects.

Rostelecom Group’s 2021–2025 strategic goals

Following the successful implementation of the updated strategy initiatives, in 2025, Rostelecom will be able to:



1 Net Debt includes lease liabilities.

ESG initiatives

As part of its updated strategy, Rostelecom continues to consistently pursue its stated ESG goals until 2025, highlighting the importance of the Company’s sustainability initiatives.



Dividend policy

According to the new policy, the Company will strive to pay at least RUB 5 per ordinary share and at least 5% more per share than in the previous reporting year.

By implementing these strategic plans, Rostelecom also intends to steadily grow its dividend per share in line with its new Dividend Policy for 2021–2023 adopted by the Board of Directors.

The full text of the Dividend Policy is available on the corporate website at <https://www.company.rt.ru/en/ir/dividends>.



Long-Term Development Programme

Approved by the Board of Directors on 30 December 2021, Minutes No. 07.

In 2021, Rostelecom started implementing a new Long-Term Development Programme for 2021–2022, developed in line with Rostelecom’s updated Development Strategy for 2021–2025¹, directives of the Russian Government, and methodological recommendations of the Russian Ministry of Economic Development.

The Long-Term Development Programme covers all aspects of Rostelecom’s activities both in strengthening market positions in traditional businesses, achieving leadership in new business lines, infrastructural and innovative development, and in digital transformation and improving business efficiency.

The activities indicated in the Programme are supported by the necessary resources and are balanced in terms of the Company’s financial capabilities.

¹ Approved by the Board of Directors on 19 April 2021, Minutes No. 09.

Business model

Finance

580.1 bn RUB

Revenue

118.7¹ bn RUB
CAPEX

32.5 bn RUB
FCF

218.8 bn RUB
OIBDA

Intellectual property

11.5 bn RUB

Innovative R&D investment

Employees

126.8 thousand

Total headcount

82 %

employees trained

Brand and reputation

11.5 p.p.

ahead of the nearest competitor by NPS in the mobile business

No. 1

by awareness in the broadband and Pay TV segments

Environment

164 m RUB

Environmental expenditure

SEGMENTS

9.8 million
fibre broadband customers²

>3 million
Wink customers

49 %
Share of digital products in the segment revenue

1.2 million
broadband + VPN subscribers

+37 %
virtual PBX customer base growth

+39 %
Wi-Fi revenue growth

Connectivity with more than **230 telecom networks** in **70 countries**

Servicing infrastructure of other operators under the O2O project³:
>190 thousand km of fibre;
>100 thousand base stations.

Technology platform upgrade



40.1 Tbps
backbone network capacity

DIGITAL CLUSTERS

Data centres and cloud clusters

13.7 thousand
racks in 2021

>1,100
customers

No. 1
in the data centre (28%) and IaaS (19%) markets⁴

2.2x
growth in private cloud revenue

Information security

We protect **over 70** of Russia's top 100 businesses

+12 %
growth in recurring revenue from proprietary products

Digital regions

4.4 thousand
traffic enforcement cameras

~150
weigh stations

~0.5 million
electricity meters

370 thousand
smart surveillance cameras for entrance halls

Public sector digital services and products

Public Services Portal

Video surveillance and online broadcasting for the Unified State Examination

Unified Biometric System

Digital infrastructure for the All-Russian Population Census

Digital health

49
regions using digital healthcare services

Improvement of operational efficiency



Total real estate space reduced by **5%**

Risk management

ESG initiatives and sustainable business development

Shareholders

17.4 bn RUB

Total dividend for 2020
RUB 5 per ordinary share

86.6 RUB

Ordinary share price as at 31 December 2021

Employees

99.5 bn RUB

Salary expenses

479 m RUB

Investment in training

Government

9.0 bn RUB

Income tax

13.9 RUB bn

Other taxes

Customers: individuals, households, business and government customers, other operators

Advanced, high-performance digital ecosystems covering a wide range of tasks for retail, business and government customers

Society

992 m RUB

Member fees, charitable giving, payments to trade unions

1.5 %

Reduction in emissions of air pollutants¹

- 1 Excluding government programmes.
- 2 Number of internet users connected via fibre access networks.
- 3 Operator to Operator project.
- 4 Source: iKS-Consulting.

2024 Operating results

Rostelecom's key operational metrics showed a positive trend in 2021.

The implementation of its updated 2025 strategy helped Rostelecom to consolidate its leadership position in its key markets in 2021 while maintaining a strong focus on transforming itself into an integrated provider of digital services and a reliable partner for society, business and the state.

Rostelecom set out to develop as a digital customer-centric group of companies. In 2021, it increased the number of service users in key customer segments and managed to boost revenues from innovative digital clusters, primarily from platform solutions for digital public services, cloud services, data centre-based services as well as other digital products.

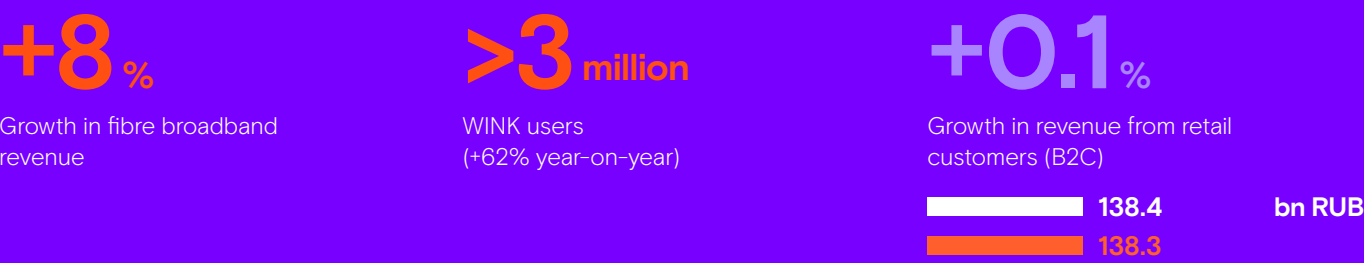
The Company's mobile business continued to outpace the market while showing a solid growth in sales of its converged offers.

In the reporting year, the Company's B2O revenue also showed growth thanks to wider fibre coverage and a larger number of other mobile operators' base stations serviced by Rostelecom.



Key achievements in major segments and clusters in 2021

Retail customers (B2C)



Business/government customers (B2B/B2G)



Services for operators (B2O)



Mobile business



Data Centres and Cloud Services cluster



Digital Regions cluster



Information Security cluster



1 Operator to operator
2 Source: iKS-Consulting.

Residential segment

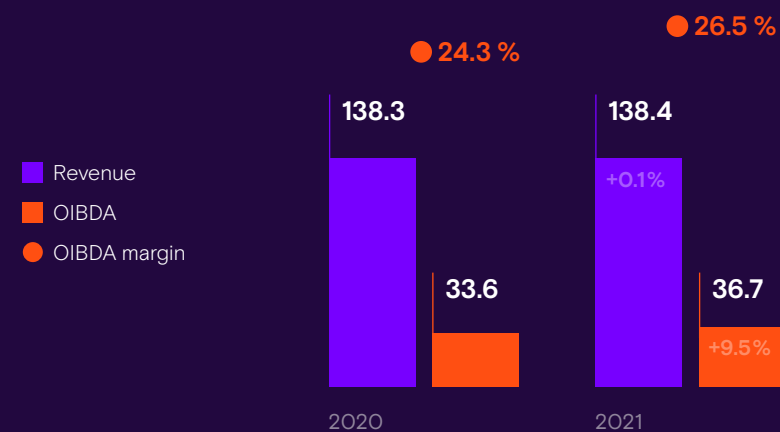
B2C

B2C: steady development with a larger role of VAS and digital services

Note: Year-on-year growth for 2021 is shown unless stated otherwise.

1 Under the new segment and cluster based model.

The segment's key financial highlights, bn RUB¹



+4%

Fibre broadband subscriber base growth

+8%

Growth in fibre broadband revenue

+5%

IPTV subscriber growth

>3^{+62% YoY}_m

WINK users
2.2x service revenue growth

3.2×

Growth in service revenue from the Video Surveillance and Smart Home solutions for households

+42^{>RUB 5 bn}%

Growth in converged service revenue

+6%

Growth in revenue from the Gaming tariff

49^{+4 p.p.}%

Share of digital products in the segment revenue

Customer service excellence

59%

Brand Awareness score of the Wink online video streaming service

In 2021, Rostelecom maintained its leadership as a telecom megabrand. The Company continued to deliver on its Technology of Opportunity communication strategy, with Rostelecom's marketing policy primarily aimed at supporting growth across new business lines – Wink, Smart Home, and Video Surveillance services, and the Gaming tariff – as well as consolidating Rostelecom's position in its traditional business. A record number of campaigns promoting new unique product benefits were delivered under the Wink marketing strategy. For the first time ever, a nationwide promotion campaign was run for our 4-in-1 converged proposition providing customers with broadband, IPTV,¹ and mobile services, as well as the online video streaming service and the Gaming tariff.

In 2021, aggressive promotion consolidated Wink's position among the top 5 online video streaming services, significantly narrowing its gap to category leaders across key metrics and becoming the fastest growing streaming online video service by brand awareness² (59% in December 2021) and consideration³ (23% in December 2021).

Thanks to the nationwide promotion of its converged proposition, Rostelecom's brand awareness and consideration hit all-time highs in the bundles category in 2021, with the Company regaining leadership in consideration towards the year end.

Top service for our subscribers

–1.6_{p.p.}

Improvement in broadband churn

By delivering a package of initiatives to improve service quality, Rostelecom reduced its broadband churn to 14.2% and TV churn to 15.6%. The decrease from 2020, when customers were less active than usual in switching providers amid lockdowns, was –1.6 and –1.4 p.p. for broadband and TV, respectively.

Rostelecom continues to develop its Relocation project, which helps relocating subscribers to keep telecom services from their previous homes. The number of subscribers who relocated their services grew 8% year-on-year to 246 thousand. The Online Moving-In digital channel used to apply for relocation was also actively developed. In order to use the service, a customer only needs to fill in an application on Rostelecom's website. The Company then contacts the subscriber and helps them with moving the internet connection, IPTV, and home phone to a new location. The number of customers using the Online Moving-In service totalled 99 thousand in 2021, up 15% year-on-year.

Rostelecom makes a continuous effort to improve communication service quality for its subscribers. Around 120 thousand households were switched from copper to optical technology in 2021. A federal-level project to replace legacy customer premises equipment free of charge was completed in order to improve service quality and reliability, with the Company providing modern routers to 186 thousand subscribers.

¹ Interactive TV is a form of media convergence adding data services to traditional television technology.

² The brand awareness metric is a combination of three key indicators of brand health (top-of-mind, spontaneous and aided awareness) used in marketing.

³ The brand consideration metric describes subscribers' willingness to connect to the network.

Driving subscriber loyalty

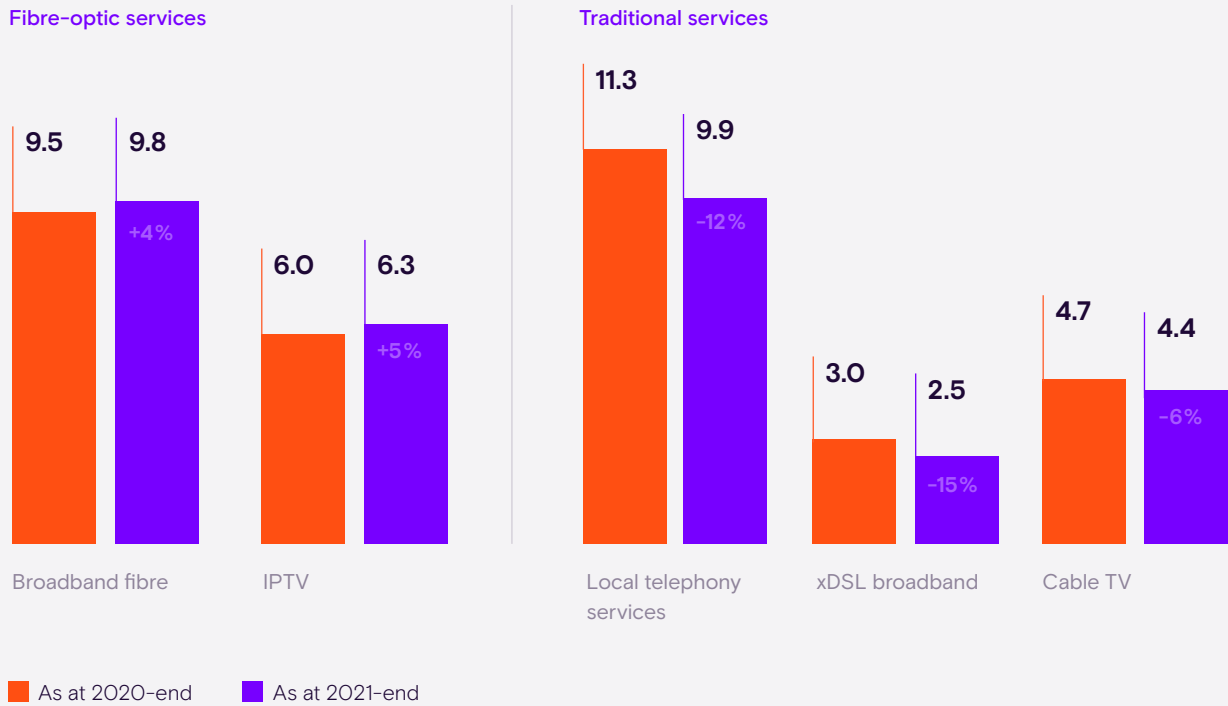
Tycoon, a new online economic simulation game, was launched on 10 October 2021 for subscribers who are members of the Bonus programme. The exciting game allowed players to redeem the points they earned for New Year gifts.

More than 350 thousand customers from all over Russia joined the project to compete for 250 thousand valuable prizes.

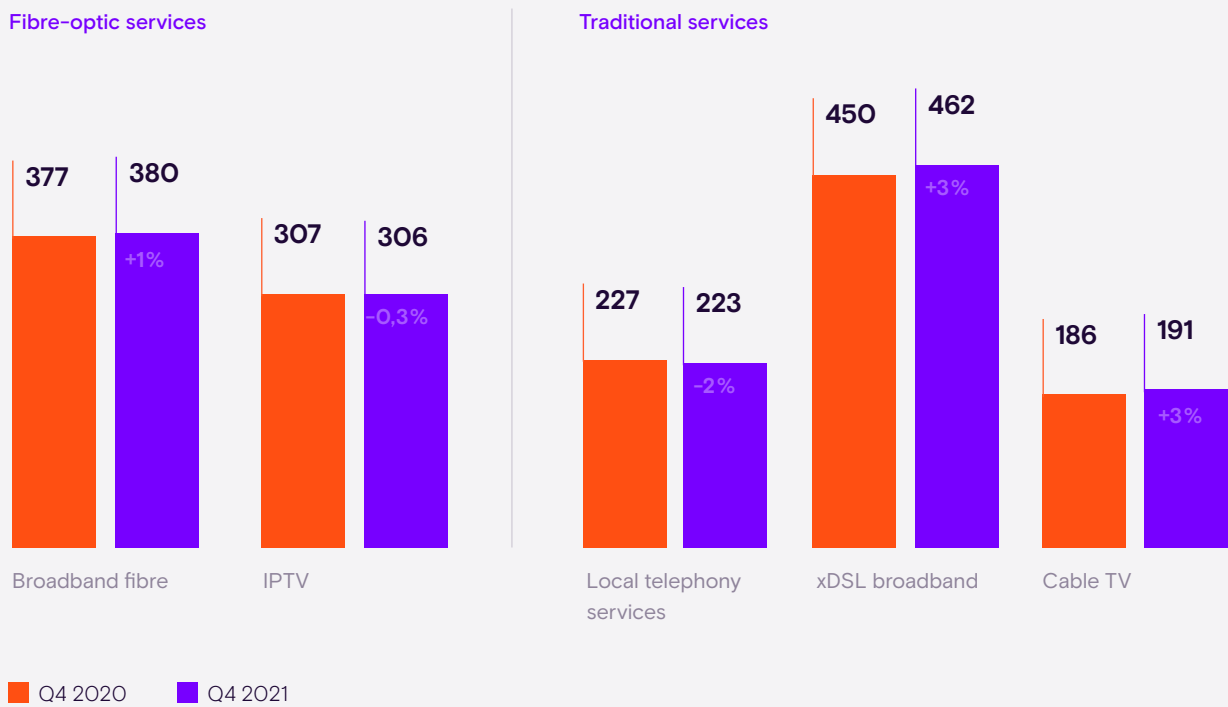
Improving customer experience

- In 2021, Rostelecom continued to deploy automated customer service technologies:
- Thanks to expanded functionality and aggressive promotion, 31.31% of Rostelecom’s broadband customers used the online customer account and My Rostelecom app as of December 2021. The online customer account penetration grew 4 p.p. over the year
 - An AI chatbot was launched to help customers contacting the Company’s live chat to solve various issues. In its first year, the virtual assistant was able to handle up to 14.4% of total chat messages. Users highly appreciated the chatbot’s communication skills, speed, and helpfulness: 77% of users rate the service at 4 or 5 out of 5

B2C customer base, million subscribers



B2C ARPU, RUB



Basic connectivity services

10 million devices

are used to consume content from the Wink digital video service

>1.5 million customers

used the Transformer tariff

The anchor services of broadband internet access and pay TV continue to make a significant contribution to the Company’s revenue growth. Despite the progressive saturation of markets, Rostelecom managed to build up its customer base and revenues in these segments.

In 2021, B2C internet subscribers totalled 12.3 million. The number of customers on the most popular fibre data plans grew to 9.8 million, up 4% year-on-year, or three times faster than the market.

Fibre broadband revenue increased by RUB 3.6 billion to RUB 47.8 billion during the year. The 8% growth rate is well ahead of the market average of +2.2%. Fibre broadband ARPU for the year rose to RUB 380, over 10% above the market.

Converged service revenue hit RUB 5.1 billion in 2021, up 42% year-on-year. The Company launched its converged proposition at its mobile operator with no additional investment.

The number of pay TV subscribers reached 10.8 million, boosted by a 5% growth of IPTV subscribers to 6.3 million.

The success of pay TV products was driven by migration to the Wink platform, which combines IPTV and online video streaming functionalities. The transition to the new platform drove growth for both new connections and the expansion of the existing customer base: by the end of 2021, all interactive TV customers switched to Wink, while cable TV customers were provided with access to Wink as a complement to their existing plan. In 2021, a number of innovative services were launched on the Wink platform, notably Movie Replacement and the Gift Movies loyalty programme. Thanks to closer technical and commercial cooperation with the Rostelecom mobile operator, Wink customers can exchange their operator’s tariff minutes for movies on the Wink platform.

In 2021, the number of devices used by customers to consume content from the Wink digital video service grew 25% to 10 million.

The new bundling approach maintained its leading position in the Wink connections mix (the Transformer tariff), with over 1.5 million customers taking advantage of this tariff option in 2021. The Transformer subscription service enables personalised selection of TV channels, movies and series for a fixed fee to match their taste.

Local, intra-zone, long-distance domestic and international fixed-line services remain Rostelecom’s traditional segment. There was, however, a decline in local telephony revenue in 2021 due to subscriber churn driven by the growth of VoIP products and solutions.

Developing the range of connectivity services

Gaming

To develop projects targeting gamer customers, Rostelecom created a gaming platform to integrate leading gaming partners and expand its product range for gamers. As a result, Rostelecom subscribers now benefit from unique gaming content on a single platform as well as attractive cross-product bundled deals (high-speed internet + access to gaming content). With the gaming content platform, Rostelecom will become the largest provider of game services in Russia, increase revenue many times through a wider product portfolio of game projects, and expand its customer base. Towards the end of 2021, a technical solution was fully developed, followed by a technical launch.

In 2021, Rostelecom expanded its range of options for players east of the Urals: a new server went online at Rostelecom’s data centre in Siberia, making the GFN cloud gaming service available to users in Russia’s eastern regions. Rostelecom’s subsidiary in Far East launched a Gaming tariff providing subscribers with high-speed internet access and exclusive benefits in partner games.

Gaming development also included improvement of the customer experience for subscribers: the Gaming Services project has simplified the customer journey for taking up gaming products, and LPs’ of flagship gaming products were updated and refreshed.

Rostelecom Books

Faced with the pandemic, the Company maintained a relentless focus on user needs and expanded its partnerships to provide access to digital books:

- The free trial period was extended to 30 days for all new subscribers to Rostelecom Books (LitRes catalogue) who took up the service between 6 and 31 December 2021
- All subscribers to Rostelecom’s Internet service were offered the basic subscription and the All-Inclusive subscription to Rostelecom Books (LitRes catalogue) on special terms

Kapsula

In 2021, through a strategic partnership with VK (formerly Mail.ru Group), Rostelecom launched a mini version of the Kapsula smart speaker and expanded the functionality of its integrated voice assistant called Marusya, implementing new commands and a voice control feature for Rostelecom’s Wink service. Since launch, revenue from the sale of these devices has topped RUB 350 million. Over 50% of subscribers who bought the smart speaker activated the Wink voice control feature.

Rostelecom Lyceum

25 thousand

regular users of the Rostelecom Lyceum service

Lyceum is Rostelecom’s online educational platform covering the entire school curriculum from the 1st to 11th grade as well as providing development courses. Access to the platform is available on a monthly (RUB 199), 3, 6, 9, 12-month (a 10% discount), or daily (RUB 8) subscription basis (the daily subscription option is available to Rostelecom’s mobile operator subscribers only). The lessons offered on the platform were prepared by lecturers from Russia’s leading universities. Each lesson is accompanied by a test and a practice task to reinforce learning, as well as interactive tips and prompts. The platform tracks students’ progress and shows it to their parents. Lyceum helps to fill gaps in learning and prepare for the Basic/ Unified State Examination. The Development Courses section contains courses on career guidance, educational animations, practice tasks to develop reasoning and other useful services.

In 2021, the number of regular users of the Rostelecom Lyceum service reached 25 thousand. The educational platform launched a new course for high school students titled “Quantum Technologies” developed by IT market experts, updated its payment interface, added subscription information and new subscription management options to the customer account, and simplified authorisation.



Innovative services for retail customers

Rostelecom Key

250 thousand

households use the Rostelecom Key service

A quarter of a million households in Russia use the Rostelecom Key service featuring a convenient and versatile package of services for managing access to an apartment block (Smart Intercom), energy efficiency management tools (online telemetry of resource meters), and residential premises security for residents and property management companies. All Rostelecom Key services have uniform user interfaces.

In 2021, the number of apartments in buildings with digital intercom, neighbourhood surveillance cameras or any other Rostelecom Key services exceeded 242 thousand. Service revenue grew by more than 43% year-on-year, while unique mobile app installations increased by 152% from 2020.

Other product highlights include:

- The number of unique users opening the app at least once a month (MAU)¹ exceeded 100 thousand.
- According to a survey, over 75% of those who installed the app are still using it six months later.
- Rostelecom Key’s score remains high – a strong evidence of the Company’s relentless focus on high quality and service continuity, smooth user experience, and intuitive interfaces.
- The mobile app’s net promoter score (NPS) is consistent at 40%.

Cloud Video Surveillance

>3x

increase in the cloud video surveillance service revenue

The Cloud Video Surveillance service is part of the Smart Home ecosystem of services designed to provide security and automate home control (motion, door/ window and leak sensors, smart sockets, etc.). A customer can install and activate any number of Rostelecom-connected smart cameras from anywhere in the world, receive alerts when a built-in motion sensor is triggered or a camera is obscured, watch and record specific periods of video archive via a mobile app or from their online customer account. A cloud-based video storage and processing platform allows archiving videos for a period of 7 to 30 days.

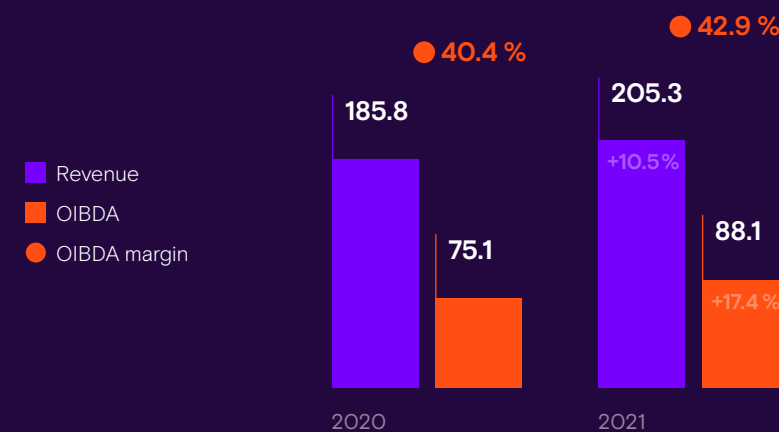
- Rostelecom focuses on boosting its service revenue and growing its active user base, as well as on delivering cost optimisation:
- Over 654 thousand CCTV cameras were sold as at the end of 2021
 - Video surveillance service revenue more than tripled in 2021
 - Strong customer loyalty to cloud surveillance services is evidenced by a steady increase in the proportion of users opting to pay for the service after the free trial period (currently at 48%)

1 Monthly Active Users – the number of active users per month.

Mobile business highlights

Mobile business: mobile data remains a key driver of revenue growth

The segment's key financial highlights, bn RUB¹



Note: Year-on-year growth for 2021 is shown unless stated otherwise.

¹ Under the new segment- and cluster based model.

Revenue from our mobile business grew by 11% year-on-year to RUB 205.3 billion. Mobile operator's customer base grew to 47.5 million by year-end 2021.

At the same time, mobile operator was effectively managing churn, pushing this metric down by 2 p.p. year-on-year to 31.4%.

+47.5 ^{+1.8 YoY}
million

Mobile subscriber base

+18 %

Growth in active mobile data users

+10 %

Mobile operator's ARPU growth to RUB 375

31.4 ^{-2 p.p. YoY} %

Annual subscriber churn

Key business results of Rostelecom's mobile business

Mobile business's faster-than-market topline growth is driven by its differentiation strategy, growing customer loyalty, and a high quality of services

A product under different rules

The operator's subscribers can:

- roll over unused minutes and data indefinitely
- swap minutes for movies, a Xiaomi smartphone, coffee, etc.
- receive discounts of up to 20% on communications services through group buying
- make any tariff child-friendly.

Technical development

In 2021, the operator:

- acted as a centre of excellence for the BDD 2.0 project
- was the first in Russia to launch 5G in the metro
- increased the total number of base stations using any technology by 18%.

International experts recognised operator as the best in 4G availability

New connections and churn reduction

- The operator started selling SIM cards on Yandex.Market, OZON and AliExpress with delivery by Yandex.Lavka
- The operator was the first to link eSIM to the Unified Biometric System
- The operator was the first in Russia to connect customers remotely using the Goskey
- The operator and global leader Plintron will launch virtual operators in Russia
- The operator acquired an MVNE platform provider

In 2021, the mobile operator continued to pursue its Other Rules business strategy aiming to establish a unique proposition for customers and support their digital lifestyle.

The pandemic prompted the company to adjust its approaches and focus on the quality of connections in 2021. The operator set a key goal: to attract the so-called "Core Live Subs" (CLSs), i.e. key customers who are the most active data users and the company's biggest profit generator. The operator's existing subscriber base is a source of business growth; therefore, improving its quality became a key objective not only for 2021 but also beyond. The mobile operator met its target for CLSs, who totalled 26.7 million at year-end 2021. As a result, the company achieved a significant increase in ARPU.

A step change in the customer base growth came on the back of focused efforts targeting high-margin and corporate segments. B2P² revenue accounted for more than 6% of the company's total revenue in 2021. As Rostelecom and its mobile operator developed the segments, their sales teams successfully joined forces to drive customer acquisition. Fixed-line products such as 8 800, Virtual PBX and others were added to operator's B2P portfolio and had a strong take-up.

¹ Business to Professional Consumers – provision of corporate communications services to small and medium-sized enterprises, as opposed to the B2B segment focused on large businesses.

The operator remains the undisputed leader of the industry by the NPS metric, staying 11 p.p. ahead of its nearest competitor. That said, customer loyalty metrics slipped for all market players amid the pandemic, as they had to adjust prices to finance major investment programmes. The operator remained the market leader by key marketing metrics: relevance, consideration and VfM.¹ VfM leadership indicates that customers still perceive operator as an attractive service provider.

Unique products for the global telecom industry

60 million minutes

exchanged for discounts by the operator’s customers

Under its Other Rules strategy, the operator continued to offer its subscribers innovative digital services unparalleled not only in Russia but also on the global telecom market. The company’s customers were allowed to roll over unused minutes and data indefinitely. The operator provided subscribers with an option to use their minutes as a new currency: they can now be swapped for movies on the Wink online video streaming service platform, coffee at the Shokoladnitsa coffee house chain, or discounts on Xiaomi smartphones.

The project to exchange minutes for discounts on devices, which the operator implemented through a partnership with Xiaomi, was unique in the global market. In less than two months after the programme launch in November, customers exchanged over 60 million minutes for discounts. Customers receive a 30% discount, with an average market price of a Xiaomi smartphone of RUB 13 thousand. The operator achieved conversion rates above expectations and partner projections, with more than a half of the product retail sales generated through the offer.

The operator improved the terms of its Come Together programme helping customers to get discounts through group buying. The operator teamed up with the Visa payment system to target the programme towards a wider group of users, as discounts are now available for mini groups as small as two people. The company thus attracts new users and secures a guaranteed flow of monthly payments (automatic top-up is a prerequisite for joining the programme).

The operator continued to enhance joint products through synergies with Rostelecom. For example, subscribers in the Moscow and Tula Regions can add home internet to their existing price bundles and select its speed. The company gave subscribers an opportunity to make their tariff plan child-friendly with a special Kids Online service. The service will let a child watch educational videos and children’s movies on the Wink platform with protection against accidental subscriptions. The operator launched a movie tariff plan in 2020 and included Wink subscription in its most popular tariff plans in 2021.

In the reporting period, the operator offered its customers products to improve quality of life and simplify routine tasks. A case in point is the Smart Parking payment assistant relieving Moscow motorists of the need to do anything manually. The company remains the only operator to offer such service to users of paid parking in Russia’s capital. Smart Parking is popular with both individuals and companies, which are installing Smart Parking devices in their vehicle fleets.

Bridging the digital divide and high-tech projects

24 regions

had the network core’s voice segment upgraded

830 thousand people

benefitted from improved mobile coverage as part of the BDD project

Although the telecommunications industry was still affected by COVID-19, the operator made steady progress on coverage and perceived network quality. Data usage per customer grew 27% over the year. Mobile data usage growth was driven by the transition of businesses and educational institutions to remote work, as well as by an increased proportion of CLSs and the rising popularity of digital services and data allowances offered in tariff plans.

A large-scale investment programme for technical development of the network allowed the operator to maintain perceived service and mobile data quality at high levels. The company upgraded the voice segment of its core network in 24 regions and reduced the proportion of problematic spots. This led to an improved NPS for mobile data from the year before. In 2021, an Opensignal report looking at real consumer mobile experience ranked the company as the best Big Four operator by 4G availability.

The Krasnoyarsk Territory, the Republic of Buryatia, and the Chelyabinsk, Orenburg, and Kemerovo Regions were chosen as priority areas to drive technical development. The operator commenced construction to provide coverage in the Khabarovsk Territory, not previously covered by its commercial operations.

In 2021, the operator participated in the second phase of Rostelecom’s Bridging the Digital Divide project. This initiative makes digital services available to people in small communities with populations of between 100 and 500 people. The operator acted as a centre of excellence and installed more than 330 base stations in such communities during the year. The company has also built 500 base stations in 55 regions of Russia at the facilities of the Russian Television and Radio Broadcasting Network. The project rolled out the connectivity from scratch and improved coverage in areas with a total population of 830 thousand.

In May 2021, the operator signed an agreement to install 50 thousand base stations in 27 Russian regions. Thus, a total of 100 thousand facilities will be built by 2023. In order to improve service quality along highways, the operator provided 100% coverage for the M11 Neva Russian federal highway running between Moscow and Saint Petersburg by installing around 100 5G-ready base stations.

In 2021, the operator continued its 5G deployment, launching a 5G trial network across all stations of the Kazan Metro, a highly complex transport system. Customers could experience the ultra-fast speeds of 5G by connecting to the network directly from their devices or via a Wi-Fi network.

1 Value for Money – value to money ratio used as an important criterion for evaluating different formats of project implementation. The concept helps to identify the cooperation format delivering the greatest benefit at the lowest cost.

The company partnered with the global leader Plintron to develop the MVNO¹ segment. Plintron's MVNA² platform enables partners to launch mobile services under their own brand quickly and at minimal cost. Towards the end of 2021, Rostelecom's mobile operator acquired an MVNE³ platform provider. Thus, the operator now has both MVNE and MVNA platforms to support any convenient virtual partnership scenarios. The deal will strengthen the market leadership of the company's MVNO factory, lower the entry barrier for this business, and improve partner serviceability. Through the acquisition of MVNE platform, the operator is consolidating its MVNO factory infrastructure within a single hub, focusing on larger regional and federal partners.

By adding new base stations, the operator maintains a strong focus on service quality in the Moscow metropolitan region. In particular, their number increased by 22% year-on-year in 2021, with LTE radio electronic equipment fleet growth of 39% year-on-year. The rapid pace of technical development came on the back of the continued growth in data usage in Moscow and the Moscow Region. The growing demand for internet services from megacity residents is also evidenced by an upward trend in data usage per metropolitan subscriber: up 20% in 2021.

Digital connections and retail traffic support

Amid the pandemic, our digital sales channels continued to grow, with their share reaching 16% by year-end 2021. These are primarily e-commerce channels, such as the AppSeller app⁴ and the virtual shop (E-shop), as well as remote customer identification tools based on the Goskey app and the eSIM technology.⁵ In August 2021, the company was the first in Russia to offer users remote SIM card registration with a non-qualified electronic signature in the Goskey app. We were also the first to offer an eSIM connection option with identification via the Unified Biometric System.

An explosive growth of digital connections is supported by the mobile app used by 16 million customers every month. Daily conversion can be as high as 2.8 million subscribers. Over the year, the number of app users grew by 25%, demonstrating the effectiveness of the company's drive to digitise its customer communication channels and expand its subscriber base.

1 Mobile Virtual Network Operator – an operator that provides communications services under its own brand using another operator's infrastructure.
2 Mobile Virtual Network Aggregator – an aggregator of virtual mobile networks. It is a provider that buys access to an MNO's network to sell it on to MVNOs. MVNA does not have direct customers as it sells access to MVNOs instead.
3 Mobile Virtual Network Enabler – IT infrastructure serving multiple virtual operators. MVNE's own platform allows scaling and customising product solutions to launch MVNOs based on these solutions at minimal cost in just four to six months.
4 The AppSeller application is intended for employees of the operator's dealers to help them quickly and easily register new SIM cards from a mobile device, making the contract signing procedure fully paperless.
5 An eSIM card, or embedded universal integrated circuit card, is a form of programmable SIM that is embedded directly into a device.

16%

Share of the mobile operator's digital sales channels

16 million customers

use the mobile operator's app on a monthly basis

39%

increase in the number of LTE stations in the Moscow region

The operator also continued to develop distribution channels on the country's largest marketplaces. Its partnership with AliExpress in the Moscow region helped the company to consolidate its presence in the online catalogues of the country's four largest marketplaces, including Ozon, AliExpress and Yandex.Market. In particular, the company continues to test various delivery methods as well as the mix of products and services it offers via the marketplaces. Thanks to its project with Yandex.Lavka, customers now get a new SIM card in an average of 15 minutes. The company was also the first on the Russian market to start selling SMS and data bundles on Ozon.ru.

As passenger traffic recovered, the operator installed SIM card vending machines in Moscow's four airports, and with the launch of a convenient self-registration option customers can now activate SIM cards quickly and reliably. To make connection easier, the operator also expanded its SIM card distribution network in the Moscow Metro by increasing the number of terminals to 54.

Offline retailing

The pandemic reduced customer traffic in the company's stores. Nevertheless, offline retail remains a premium sales channel, the brand's showcase space, and a gateway to the world of new technologies and collaborations. To drive traffic to its stores, the operator has launched projects to provide its customers with the best deals, match the interests of GenZers and introduce an element of gamification.

As a result, the following projects were successfully delivered by the operator across its retail chain in 2021:

- Swapping minutes for discounts on Xiaomi smartphones
- Pereplavka (Melting) environmental project to collect used phones for recycling in 600 stores across 64 regions
- Piloting of dedicated spaces for bloggers and TikTokers in Moscow and Saint Petersburg
- Hourly rentals of portable chargers (power banks), with a 15%-20% monthly growth in service usage
- Automated parcel lockers launched in partnership with SberLogistics in more than 300 mobile operator's outlets in 200 locations across Russia

Subscriber equipment and sales of subscriber devices

Amid a global logistics crisis, manufacturers of subscriber equipment are still facing shortages of components, resulting in higher device costs and supply disruptions. However, despite lower unit sales, sales revenue for 2021 was up 10.5% year-on-year.

In 2021, penetration rates of the subscriber base for smartphones – a key driver of equipment sales revenue – showed that the company met its targets.

Of all device users, 4G smartphone users are the biggest contributors to the growth in the operator's subscriber base, primarily due to the incentives rolled out by all players to target LTE smartphone users. By teaming up directly with Samsung and Xiaomi, the market leaders in subscriber equipment, the company delivered a 4% increase in sales of these devices in 2021. Samsung and Xiaomi smartphones accounted for 22% and 39% of the operator's total retail sales, respectively, in 2021.

5,5×

increase in the number of eSIM users on the network

64 regions

covered by the Pereplavka (Melting) environmental project to collect used phones for recycling

The operator was able to strengthen its position as a franchise retail equipment supplier over the year. The share of goods shipped from its warehouse in retail sales grew by an average of 30% year-on-year, stabilising at above 40% in smartphone sales. The operator's direct engagement with key vendors and prioritisation of supply amid shortages played a key role in achieving this growth.

The company actively engages subscriber device vendors and key technology solution providers in testing and preparations for the launch of a new communications standard in Russia. Sales of 5G-enabled smartphones have increased 16-fold year-on-year, but despite significant growth in 2021, these devices only account for 0.6% of total sales. All 5G-enabled devices supplied to the Russian market will be able to use the operator's infrastructure once the fifth-generation networks are commercially launched.

By leveraging direct partnerships with vendors, the operator is now running hardware and software testing and debugging of 4G devices as a routine procedure. As a result, the latest network features can be set up in subscriber equipment before their commercial launch, making sure that technologies such as VoLTE¹ and eSIM work right out of the box.

The company uses various promotional mechanics to drive sales with key vendors. The operator has delivered the following projects: offering a buyer a device complete with a SIM card and insurance policy, Movie Tariff Plan as a Gift for a Movie Smartphone, and Swap Minutes for Xiaomi. This approach allows our mobile business to stand out from its competitors in the information space, maintain its trendsetter status on the mobile market and attract marketing investments from vendors.

The advances in identification and self-registration technologies prompt the operator to develop new SIM card-based technology solutions, including virtual solutions. In 2021, the number of eSIM subscribers on the company's network grew 5.5 times. New connections accounted for the largest share of eSIM activations at 57% of the total. Penetration of devices supporting this technology more than doubled in the same period among the operator's customers.

1 Voice over LTE technology based on the IP Multimedia Subsystem. The technology is used to provide voice services with voice delivered as data stream over an LTE network.

Big data: revenue growth, new business launches

2021 was a year of successes in growing our big data analytics segment. External monetisation revenue increased by 45%. This revenue growth was driven by products for financial institutions and offerings for the advertising market.

Key achievements:

- Establishment of the Antifraud business line with products for the external market and internal customers
- First packaged software solutions for geo-analytics
- Strong year-on-year growth in a highly competitive environment

2021 revenue growth was led by the advertising business, with the operator’s revenue from external projects doubling year-on-year.

In 2021, the operator launched its first packaged big data solution: a platform to analyse regional tourist flow and guest profile. The company’s analytics portal will be of use to agencies and businesses looking to attract tourists, develop infrastructure or optimise transport flows: city and regional administrations, tourism and transport design offices, hotel and restaurant owners, and travel agencies. The platform features dozens of analytical reports, with more to be added on an ongoing basis. A customer can access the information they need themselves: estimate the total number of tourists in a region and tourist traffic trends, determine travel seasonality, rank the tourists’ home regions, and establish their length of stay and other relevant metrics.

The operator focused on developing big data products to combat phone scams (fraud). Models for identifying bank fraudsters and the phone numbers used for fraud and spam are popular and will remain relevant in 2022.

In 2021, the operator focused on projects to boost Rostelecom Group’s performance. Technology transfer to Rostelecom included the company’s developments from 2019 and 2020. In particular, the Smart Capex (Smart Investment) project approaches were used to rank areas.

In 2021, the operator expanded its partnerships with government customers. The company signed an agreement with Russia’s EMERCOM on information and expert and analytical partnership to team up on projects to develop communications standards and innovative technologies for protecting populations and areas from emergencies, and improve emergency alerting and communication. A pilot project to identify populations that can be affected by emergencies covered the Primorye and Krasnodar Territories, and the Rostov Region. These regions share a high risk of emergencies due to difficult terrain and challenging weather patterns.

2.2×

increase in advertising revenue from big data services

Supporting customers’ lifestyles

Developing its business through partnerships, the operator has integrated new offerings into its Bolshe (More) loyalty programme, a platform for launching LSE¹ activities.

The number of promo codes for discounts and special offers activated in 2021 increased by 21% year-on-year. As in the previous year, subscribers from the Moscow region were the most active users of the loyalty programme during the year, with more than 3 million activations.

Gamified offers (World of Warships, Yandex.Plus, and Storytel) were the most popular, followed by gifts from jewellery stores, with cashback on purchases coming third. In 2021, the more significant projects included the launch of the Selection privilege programme for high-value customers, collaboration with Yandex.Fuel and the Wishing you a Happy Monday campaign gifts.

In 2021, the operator’s subscribers were also engaged on social initiatives – they were encouraged to drop off their old phones for recycling in the company’s stores under the Pereplavka (Melting) project. In two years since launch, the project expanded from 11 to 64 Russian regions, targeting to cover as many as 600 of the operator’s stores. In total, our customers handed in around 14 thousand devices for recycling. The company also announced the project’s extension into 2022.

In 2021, the operator took part in the annual Night of Museums event for the fifth time. The operator’s customers in Moscow, Saint Petersburg and Nizhny Novgorod were able to take advantage of the special benefits offered by the event’s organisers. Extreme sports enthusiasts were invited to compete at the Rosafest x Gorilla Energy and Red Bull Jump&Freeze festivals sponsored by the company. The Urban Battle, a contest in street sports, was held in seven Russian cities in the summer. The operator also set up “drive-in cinema spaces” in car parks in eight Russian cities where anyone could park and watch a movie at 4G speed.

The operator continued helping the older generation master digital technologies through its Grannies Are No Strangers to Us campaign helping older people living alone embrace mobile data with the aid of volunteers. The company published the Mobile Internet Guide as a training manual, prepared a special package consisting of a large-screen smartphone with pre-installed apps, and launched a chatbot for volunteers on the VKontakte social media platform.

Although these projects have no direct impact on the company’s top line, they boost the company’s image attributes, including higher scores on the consideration metric, on which the operator leads the industry. Strong brand attributes drive customer acquisition and improve the company’s financial and operational performance.

1 Life Style Enabler

Business/government customer segment

B2B/G

Focus on new connectivity-driven services

+17% to around RUB 60 bn

Growth in revenue from broadband and VPN

+39%

Wi-Fi revenue growth

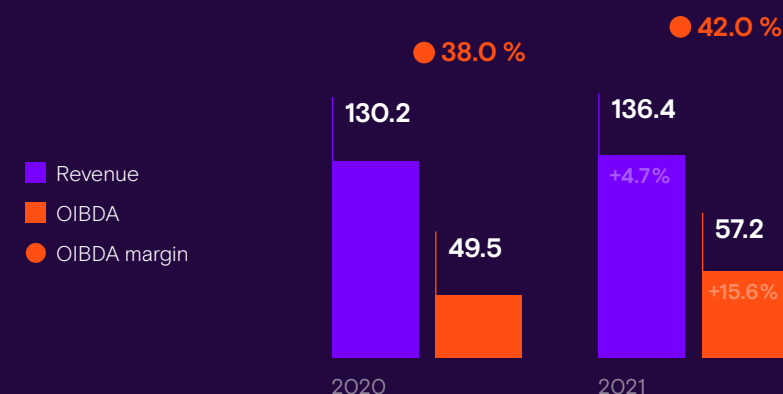
+22%

Growth in revenue from the Call Centre service

+45%

MVNO revenue growth

The segment's key financial highlights, bn RUB¹



Larger role of new services in the corporate segment

+37%

Virtual PBX subscriber growth

+24%

Virtual PBX revenue growth

+13%

Video surveillance revenue growth

+6%

Growth in revenue from TV for Business

+5%

SME customer growth

+11%

Total number of sales to SME customers

in the B2B TV service market

by number of subscribers

in the cloud video surveillance market

by revenue

in the 8-800 market

by revenue and subscriber base

No.1¹

in the Wi-Fi market

by number of hotspots

in the broadband market

by revenue and subscriber base

in the Virtual PBX service market

by number of customers

¹ Source: TMT Consulting.

Note: Year-on-year growth for 2021 is shown unless stated otherwise.

¹ Under the new segment- and cluster based model.

Customer service excellence

In 2021, the main thrust of Rostelecom customer service development in the B2B/B2G segment was an omnichannel approach and centralising processes.

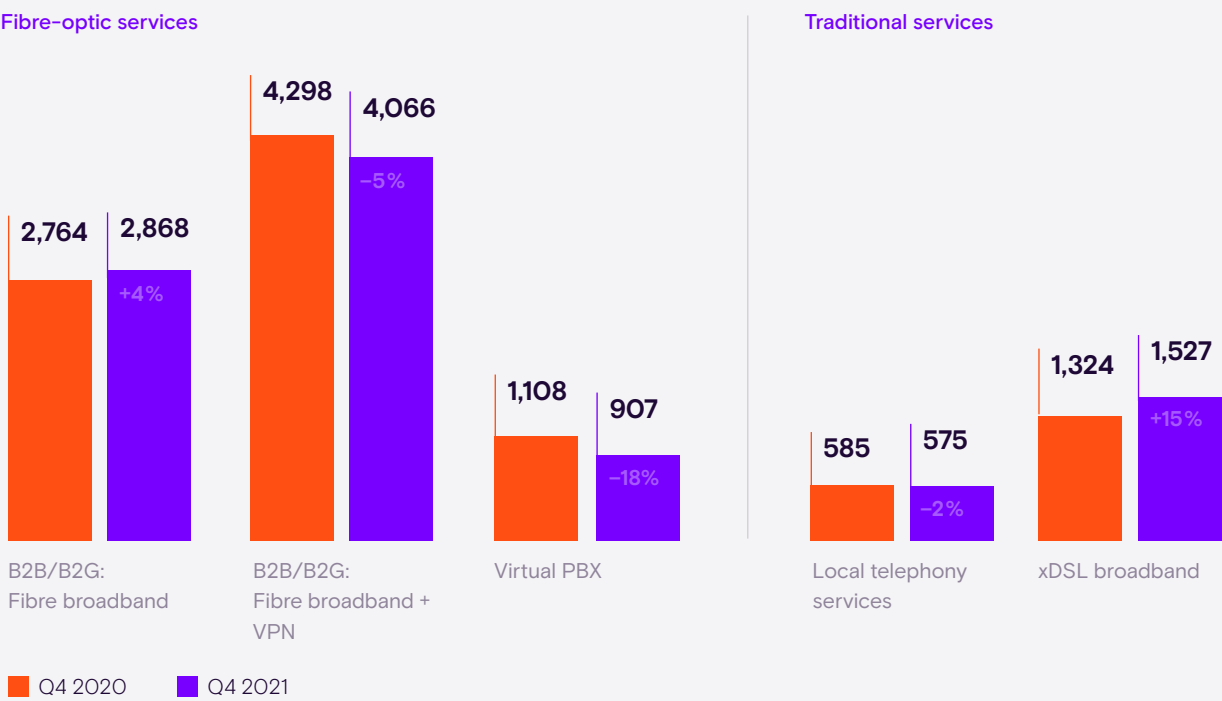
A platform was launched at the B2B call centre to handle customer text queries. The project optimises the site's workload and resources without compromising service quality and turnaround times. The call centre's high performance standards were confirmed by an external audit and certification to an international ISO standard.

Rostelecom used data science to create a system of predictive models to generate personalised offers for customers from small and medium-sized enterprises. Offers based on predictive models are better tailored to user needs, potentially increasing sales performance by 1.5 times. An individual profile is created for each customer, based on an analysis of a wide range of attributes and data from more than 50 public sources as well as the classification of data on existing users.

Customer base in the corporate and government segments, million subscribers



ARPU in the corporate and government segments, RUB



Connectivity business

Anchor services such as broadband internet access and pay TV continue to make a significant contribution to the Company's revenue growth. In 2021, the total number of business and government customers with fibre-optic connectivity grew by 10% year-on-year to 0.7 million, with ARPU up 4% year-on-year to RUB 2,868.

Developing the range of connectivity services

Wi-Fi

In 2021, Rostelecom continued to actively expand the functionality of its Wi-Fi service for business and government customers. Significant enhancements include authorisation via social networks, integration with Yandex.Audience, polling upon connection to a Wi-Fi network, and the Authorisation as a Service model. Reliability and expanded functionality contributed to the increased take-up of the service, which was widely used to provide Wi-Fi connectivity at a number of high-profile national events, such as the Eastern Economic Forum, the Single Voting Day, and the World Skills Russia finals. Notable use cases implemented in partnership with business customers include platform deployment at the headquarters of a leading bank using the customer's own infrastructure with more than 2,000 hotspots as well as the SPAR retail chain case. In 2021, the Company serviced more than 56 thousand hotspots, up 8% year-on-year, while Wi-Fi service revenue from business customers exceeded RUB 1 billion for the first time ever, up almost 40% year-on-year.

Virtual PBX

In 2021, the number of virtual telephony service customers grew by almost 40% to over 200 thousand. In 2020, new Virtual PBX services were added, including speech analytics and automated analysis of all recorded operator conversations by keywords, emotions and phrases. Other new features added include voice assistant, mobile number connectivity, ability to use another operator's number with Rostelecom's virtual PBX, and a call analysis tool.

The main purpose of the new service is to help companies respond faster to various issues in call handling and monitor customer service quality.

Major projects

In 2021, to consolidate its leadership in the B2B/B2G segment, Rostelecom implemented a number of significant projects in partnership with major companies and government agencies. Joint projects in digital operations and workplaces, integrated digital services and data transfer create a favourable environment for further improvement of technology and performance of the public and private sectors.

Polyus Aldan

Rostelecom and Polyus, Russia's largest gold mining company, launched a Private LTE network¹ at the Kuranakh ore field in Yakutia. This is the first LTE project in Russia with simultaneous installation of 11 base stations. Rostelecom ensured the fault tolerance of the network and system core, provided subscriber sets for mining equipment and a UPS system designed for required duration of operation in local climatic conditions.

Federal Treasury

In 2021, Rostelecom provided the Virtual PBX service to the Federal Treasury replacing its legacy telecommunications infrastructure in more than 1,800 offices across the country and connecting over 38,000 employees to the service. The service runs on Rostelecom's secure servers and hardware and is accessible via a simple and straightforward web-based user interface. Rostelecom provides users with landline numbers, a virtual multi-channel landline number or an 8 800 number.

The project uses Russian hardware and software. Rostelecom's Virtual Private Network service is used as the transmission medium. The service also enables setting up call centres and hotlines, call tracking and monitoring, recording and analysing calls, and creating a corporate network with abbreviated dialling.

RSKhB-Intekh

Rostelecom and RSKhB-Intekh (part of Rosselkhozbank Group) are implementing a project to deploy IaaS-based cloud IT infrastructure. By year-end 2021, the project set up 1,540 workstations for RSKhB-Intekh employees across its offices in Moscow, Ufa, Krasnodar, Volgograd, Penza, Novosibirsk, Bryansk, and Innopolis in Kazan as well as for coders working from home. Turnkey infrastructure has been built for RSKhB-Intekh: workstations, printers with consumables, with provision of local technical support, information security services, access to a cloud data centre (VDI/VDC) and communications channels with cryptographic protection.

1 A dedicated corporate wireless network designed exclusively for industrial processes.

Rosenergoatom

In 2021, Rostelecom provided primary and backup digital channel services to Rosenergoatom and AtomTechEnergo. The project includes scaling the existing L2VPN network for Rosenergoatom, establishing primary and backup communications channels between the customer’s data centre and nuclear power plants and connecting new channels to Rosenergoatom’s corporate data networks for seven AtomTechEnergo branches.

Russian Television and Radio Broadcasting Network

In 2021, Rostelecom arranged service traffic transmission for the Russian Television and Radio Broadcasting Network. Under the contract, satellite communications channels were replaced with terrestrial channels to carry the service traffic of the Russian Television and Radio Broadcasting Network at 2,076 broadcasting facilities with an increase of the bandwidth from 2 to 30 Mbps.

Innovative services in the B2B/B2G segment

The Company is successfully expanding and improving its product line for business and government users while increasing the share of innovative digital services.

In particular, a Hypothesis Testing Lab was established within Rostelecom’s B2B segment in 2021. The lab is tasked with developing new and improving existing products as well as testing new services before commercial launch. The lab aims to commercially launch only those services that are in high demand in the market.

In 2021, 16 new products were launched across the entire B2B segment, including security services, OTT¹ services, commercial real estate products, Smart Office, Fleet Tracking, and expanded virtual PBX functionality.

Smart Office

Smart Office is an indoor system of controlled devices and wireless sensors controlled by a service platform whereby a business customer can receive data on business operations from anywhere in the world via their customer account.

The system can be used for remote monitoring of unauthorised access, control of energy consumption and microclimate parameters, including goods storage and personnel comfort parameters, fire safety monitoring and automation of electrical appliances and lighting control using data feeds from internal sensors.

Video Surveillance

In 2021, Rostelecom launched Fleet Tracking, a new product targeting SME customers. This solution enables the remote tracking of a vehicle’s parameters and movements.

Another new service launched in 2021 was a solution to monitor household waste container sites using video analytics.

To prevent the spread of the coronavirus infection, Rostelecom launched its Mask Detection Video Analytics product enabling face mask detection with options to receive alerts and view event logging data for incidents in question.

B2B TV Services

2021 saw the implementation of the Ad Builder service, a tool for uploading and broadcasting customer’s own content and remote TV management. The service was launched to help businesses attract new customers and increase average ticket size.

1 Over the Top – video signal delivery from a content provider directly to a user device over data networks without direct contact with a telecom operator.

Services for operators

B2O

Boosting operator business performance

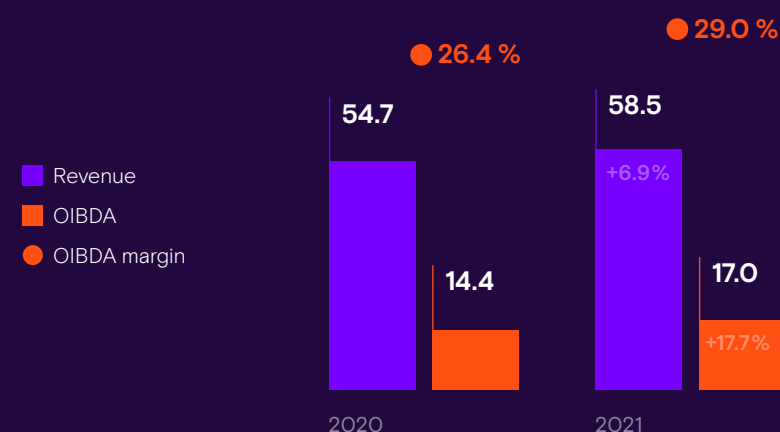
+18 %

OIBDA segment growth

>4,000

Channels for social infrastructure facilities provided under the Digital Economy programme

The segment's key financial highlights, bn RUB¹



O2O project

+14 %

year-on-year growth in project revenue

to **192.4** ^{+6,1 % YoY} thsd km

increase in the total length of fibre lines

to **103.5** ^{+45 % YoY} thsd

increase in the number of base stations maintained

Note: Year-on-year growth for 2021 is shown unless stated otherwise.

¹ Under the new segment- and cluster based model.

Infrastructure Operator to Operator project

In 2021, Infrastructure Operator to Operator (O2O), one of Rostelecom's priority projects, generated over RUB 2.8 billion in revenue, up 14% year-on-year. This above-expectations performance was driven by expanded fibre coverage (+6.1% year-on-year, or +11 thousand km) as well as the rapid growth in the number of base stations maintained by Rostelecom for mobile operators (+45% year-on-year, or +32.1 thousand stations). The Company also managed to significantly increase the project margins to above 30% by expanding its portfolio of highly profitable contracts.

Expanding transit backbone infrastructure

Rostelecom connects telecom operators' networks to its own backbone infrastructure in all regions at the local, zonal, and domestic and international long-distance levels, thus creating a unified national telecommunications network and providing access to communications services to its own customers and the connected operators' customers ranging from households to large corporations in any community across Russia.

Rostelecom provides carrier-grade services using its own backhaul network and IP protocol: dedicated channels, virtual private networks, transit of internet traffic, VoIP¹ transit, leases of integrated resources, etc.

In 2021, the Company continued to expand relationships with national and international telecom operators and deploy effective cooperation formats to provide services to end users of Rostelecom and connected operators. Several major international infrastructure projects were implemented with this purpose:

- A new Russia-Kazakhstan cross-border link (Ozinki, Saratov Region) was installed, and a gateway to the TNS Plus network (2x100 Gb) was provided
- A land link between Russia and Finland was built, where Rostelecom's network is connected to the network of the Finnish infrastructure operator Cinia Oy
- Rostelecom's backhaul network as well as the Azerbaijan-Russia and Russia-Ukraine cross-border links were upgraded to provide transit channels and IP transit services to customers in the Caucasus and the Middle East
- Construction of a new DWDM² system was completed to improve the Rostelecom network's connectivity between data centres in Moscow for the benefit of international customers
- Rostelecom's network was upgraded across the Knyaze-Volkonskoye-Vladivostok (10x10 Gb) and Nakhodka-Vladivostok (10x10 Gb) sections to provide services between Vladivostok and the China-Russia and Japan-Russia cross-border links
- Akamai content delivery network was connected to Rostelecom's network on a nationwide scale to provide IP transit services

¹ Voice over Internet Protocol, or IP telephony.

² Dense Wavelength Division Multiplexing – modern technology for carrying a large number of optical channels on the same fibre.

Increased cooperation with national and foreign partners

Rostelecom is consistently expanding cooperation with national and foreign partners. In particular, Rostelecom is implementing a project to build a mobile network in the 2,300 MHz band for shared use with its mobile operator to deliver services to subscribers, including at social infrastructure facilities. The 2,300-MHz network was already launched across 5,029 base stations under the project in 2021. At the same time, to prepare the network launch, Rostelecom has set up 466 communications channels linking mobile operator’s base stations at the facilities of the Russian Television and Radio Broadcasting Network.

Other major projects implemented or started in 2021:

- With **MegaFon**
 - A five-year strategic agreement on infrastructure partnership was signed, which will boost the usage of Rostelecom’s infrastructure services, including for the construction and maintenance of communications facilities construction. This partnership is expected to generate a total of RUB 2.4 billion in revenue for Rostelecom over five years
 - The Spectrum Lease project was implemented between Krasnoyarsk and Khabarovsk. Two portions of spectrum were provided to MegaFon under the project in 2021. Another four portions of spectrum will be provided between Krasnoyarsk and Khabarovsk in the future under the same contract. The contract term is 16 years, and the total revenue over the term is estimated at RUB 600 million
- A contract was signed with **ER-Telecom Holding** for spectrum lease on 17 sections of a backbone network for a total of over RUB 1.4 billion
- A project to sell additional bandwidth on the Okha-Petropavlovsk-Kamchatsky route was completed for a total of over RUB 300 million (with **MTS** and **MegaFon**)
- Rostelecom and **VimpelCom** agreed to team up on leasing out a Moscow-Tokyo communications channel and signed a contract for a 10 Gbps Vladivostok-Tokyo channel. The operator was provided with backbone lines in Siberia and the Far East on the routes Krasnoyarsk-Khabarovsk (300 Gbps), Irkutsk-Khabarovsk (60 Gbps), and Yakutsk-Khabarovsk (10 Gbps). Rostelecom’s total revenue from the project is expected to be in the range of RUB 100 million per year
- Effective cooperation with international operators was established: two channels were provided to **China Telecom** under a RUB 490 million long-term lease contract; IP transit was provided to Kyrgyzstan’s mobile market leader **Alfa Telecom** (the MegaCom brand), with an expected annual revenue of RUB 160 million
- 4,147 channels were provided for five telecom operators to connect social infrastructure facilities under the third phase of the **Digital Economy of the Russian Federation programme**

Development of new service businesses

In 2021, Rostelecom launched a new international call termination service in cooperation with all international and domestic long-distance operators and the Big Three operators.

The Company has developed and launched traffic routing monitoring and management systems into pilot commercial operation. The systems will be a common tool for monitoring and controlling route changes on the domestic long-distance network for all regional branches, with a 40% reduction in response times for routing plan change requests.

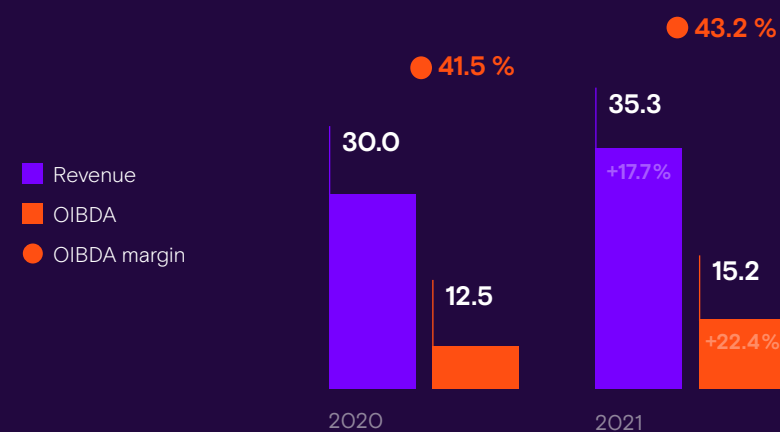
In 2021, the Company also completed a detailed analysis and obtained results of an NPS assessment for the B2O segment, which were used to inform the B2O strategy to 2025. The overall NPS for the segment increased by 12 points from the year prior, hitting 31.

In 2021, Rostelecom conducted rate of return analysis and assessed B2B-focused promotion viability for more than 50 products from the B2B and B2C segments, as well as the product ranges offered by its subsidiaries and affiliates. Five products have been selected for further analysis and piloting in this segment.

CLUSTER

Data Centres and Cloud Services

The segment's key financial highlights, bn RUB ¹



+21%

Growth in revenue from data centres (vs a 20% market growth)²

+88%

IaaS revenue growth (vs a 27% market growth)²

2.2×

Growth in private cloud revenue

No.1

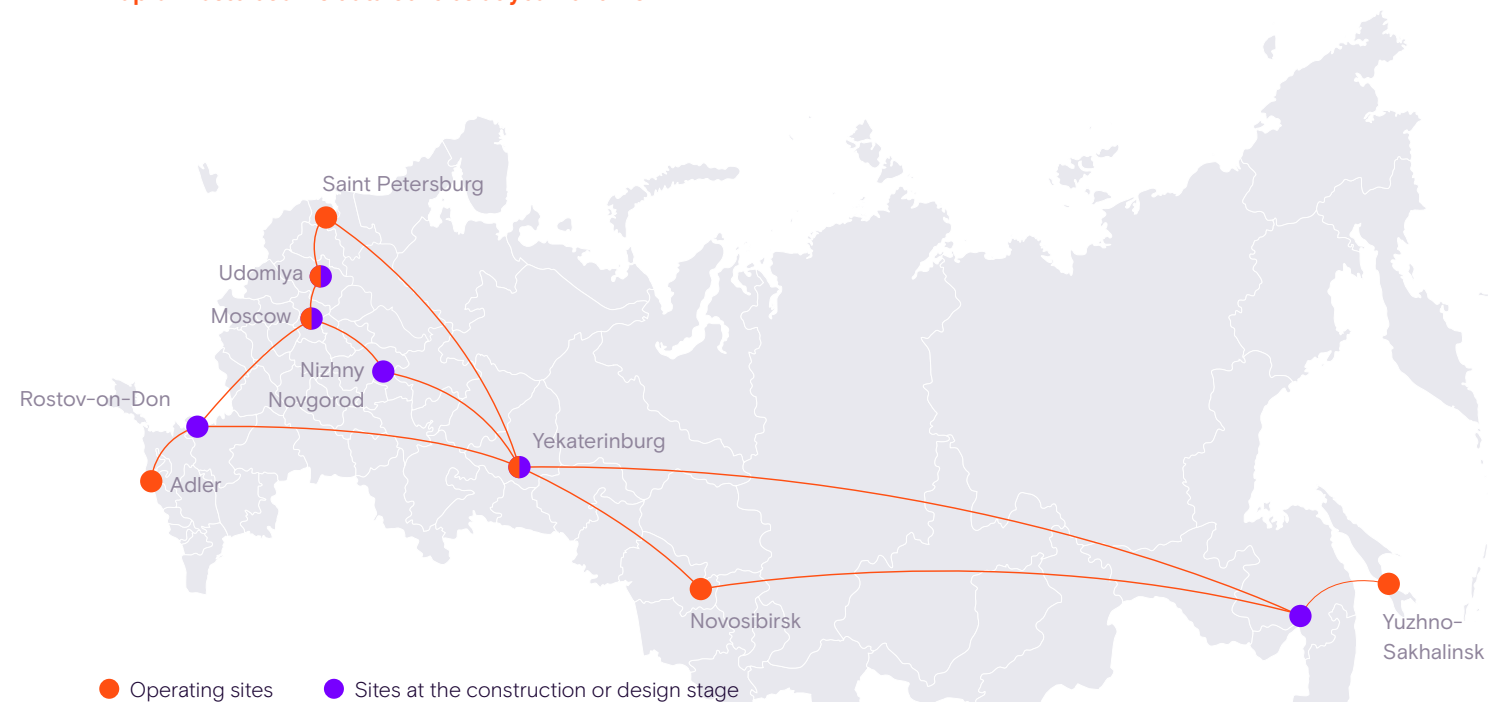
in the data centre and IaaS markets (28% and 19% shares)²

Note: Year-on-year growth for 2021 is shown unless stated otherwise.

¹ Under the new segment- and cluster based model.

² Source: iKS-Consulting

Map of Rostelecom's data centres at year-end 2021



Data centre network

By involving a major bank as an active minority investor, Rostelecom's data centre and cloud services subsidiary has been able to adjust its strategic plans to deliver projects that are more tailored to current project market needs. In 2021, the company acquired a large property in Moscow to support its medium-term growth plans in its key focus area of data centre capacity expansion and new capacity additions.

In 2021, Rostelecom added more than 500 rack units to its data centre network. NORD 6, a new 207-rack data centre in Moscow, and a 304-rack data centre in Novosibirsk were commissioned during the year.

The cluster revenue grew 18% year-on-year, with Rostelecom maintaining its leadership of the data centre market, boasting a total rack capacity of 13.7 thousand at year-end 2021.¹ By leveraging its well-developed sales system, Rostelecom was able to maintain a high utilisation rate of its data centres and a strong capacity growth momentum: current Company's rack utilisation rate stands at 99.8% in Moscow and 73% in other regions.

Moreover, much of the groundwork needed to maintain current growth rates in the coming years was laid in 2021. Rostelecom completed the construction of Moscow V, a new 2,000 rack flagship data centre (Tier IV) scheduled to be commissioned in 2022, and acquired a large industrial site in the south of Moscow with a potential to accommodate more than 6,000 racks.

Besides capacity additions, the Company is strongly focused on service quality. In 2021, CSI² for Rostelecom's co-location service (co-location of equipment in data centres) grew by 2% to 92%, while the market average score for similar services stood at 89%.³

¹ Including sites at regional branches and other Rostelecom subsidiaries and affiliates.

² Customer Satisfaction Index.

³ Source: iKS-Consulting

Cloud-based IaaS services

The leadership strategy provides for continued accelerated technological development and a focus on new, highly competitive, and high-margin niches.

The next step is to enhance capabilities and product portfolio in PaaS, DevOps, development of tailored complex information systems, and the development and production of specialist import-substituting hardware and hardware/software solutions, including those using Russian microprocessor platforms.

Rostelecom has become Russia's No. 1 IaaS provider by leveraging its business model of consistently expanding the range of services. We have been progressing just as rapidly in the segment of private and hybrid clouds for business and government customers, where we can highlight projects such as the Government Cloud, EGRN 2.0, as well as scaling of remote e-voting service (DEG) infrastructure, which involved more than 1.2 million residents of all Russian regions, and the preparation and technical support for the direct line with Russian President Vladimir Putin.

In 2021, we continued the development of public cloud services, achieving revenue growth of 36% year-on-year, with a total revenue from public cloud services at RUB 3.3 billion.

The Customer Satisfaction Index (CSI) for our public cloud services was 85% in 2021, exactly in line with the market average. That said, the Company's IaaS tariff offers are priced markedly below the market average.¹

A logical step in the delivery of the cloud service development strategy in 2021 was the consolidation of 100% ownership of Rostelecom's key private cloud provider.

Rostelecom also strives to expand its footprint in other major cloud market segments, PaaS and SaaS. To do this, we established a dedicated subsidiary, with the participation of major Russian IT market players such as YADRO and GS Invest.

The most important result of these strategic initiatives is Rostelecom's undisputed leadership in Russia's IaaS market with a 19% market share in 2021.²

Steps were also taken to further enhance the product portfolio and private³ cloud functionality. In 2021, TIONIX Virtual Security received a certificate of compliance from the Federal Service for Technical and Export Control (FSTEC Russia). We made a major upgrade to our proprietary software products, including the TIONIX Cloud Platform for virtualisation and the TIONIX VDI software for virtual desktop infrastructure management.

¹ Source: iKS-Consulting

² Source: iKS-Consulting

³ A private cloud is the opposite of a public cloud, where a pool of physical resources (a physical server) is leased to one tenant or organisation only.

Data centre infrastructure development

13.7 thousand

total racks at year-end 2021 (+4% year-on-year)

Growth potential

2 thousand racks

construction of a TIER IV data centre in Moscow is nearing completion

7 thousand racks

site in Moscow acquired to build four new data centres

Data centre construction and launch

Novosibirsk

304 racks

Moscow

207 racks (Tier III)

Udomlya

Phase 2 ready for commissioning

Key focus areas of the Virtual Data Centre service and other IaaS solutions enhancement in 2021:

- Active expansion of our cloud service infrastructure; commissioning of our new sites: Saint Petersburg, Novosibirsk 2, and a new module at Kurchatov 2
- Implementation of measures to enhance service functionality and reliability:
 - Migration to NSX-T¹ for the new VMware sites²
 - Launch of a remote desktop service
 - More convenient migration to the KVM/TIONIX cloud infrastructure through the Hystax Acura solution
 - Display of trends in monitoring charts
 - Customised backup scheduling on cloud.rt.ru
 - More convenient and efficient customer communication on cloud.rt.ru using an online chatbot assistant. Update of the help centre on help.cloud.rt.ru, including new video instructions for most frequent requests and update of the existing instructions
- Implementation of a Terraform-based Infrastructure-as-Code (IaC) management solution to increase automation and reduce virtual infrastructure configuration errors
- Optimisation of external IP address assignment to reduce the impact of their possible shortage; implementation of IPv6³ address assignment on the OpenStack platform
- Automation of request and service order receipt to integrate into the new CRM system⁴ Implementation of fraud protection
- Confirmation of compliance of DataLine's Cloud Disc and the S3 object storage with relevant personal data protection requirements. The company also confirmed its compliance with the Cloud Security Alliance (CSA) recommendations and received the status of UserGate Management Security Service Provider. Now it will be able to offer its customers domestic virtual universal security gateways under the cloud subscription model
- Certification of DataLine Cloud-152 for the operation of government information systems and its deployment in two Moscow data centres

Connectivity

Rostelecom offers its customers optimised routes for IP traffic, shorter network routes between servers, and faster service performance.

The Company operates the largest internet exchange network in Russia and CIS countries. Over 500 members are connected to its network, including operators based in Russia, the CIS and Baltic countries, content providers, research and educational networks, financial institutions, and government organisations. In 2021, together with Technical Centre of Internet and the Coordination Centre for TLD .RU/.PF we launched joint data escrow services.

Medialogistika, a platform for terrestrial broadcasting using cable, satellite and online networks, hit the 1,500 TV channel signals mark in 2021, winning the Best Content Distributor of the Golden Ray Award.

Rostelecom and the Coordination Centre for TLD .RU/PF launched a backup domain registration system to ensure uninterrupted operation of the domain addressing system.

Furthermore, our daughter com[any, which is a CDN market leader¹ and a cloud service provider for cyber protection and web resource acceleration, was ranked in the top 10 global leaders for DNS service uptime in 2021 while its DNS service was recognised as the fastest in Russia.²

As part of the platform enhancement effort in 2021, customers benefitted from an entire range of new feature improvements. In particular, the Edge Logic Rules service now provides for traffic management of host networks, VPN and proxy services, while our High-Performance Web and Website Acceleration customers now enjoy cache management in their personal accounts.

1 A unique solution providing the benefits of a public cloud in a private cloud.
2 VMware vSphere – a platform for enterprise IT infrastructure virtualisation.
3 Internet Protocol version 6 – a new version of the internet protocol (IP) designed to fix the problems in the previous version (IPv4).
4 Customer relationship management.

1 Source: iKS-Consulting
2 Source: DNSPerf, a DNS service benchmarking solution by PerfOps.

CLUSTER

Information security

Rostelecom's information security cluster is focused on three business areas: provision of commercial cybersecurity services, proprietary technology development, and system integration in cyber defence.

+12%

Growth in recurring revenue from proprietary products

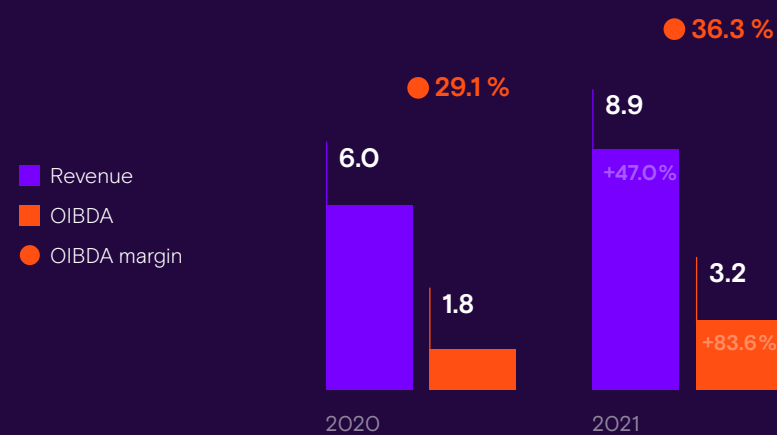
+22%

Growth in revenue from the Solar Dozor product

Note: Year-on-year growth for 2021 is shown unless stated otherwise.

¹ Under the new segment- and cluster based model.

The segment's key financial highlights, bn RUB ¹



Key proprietary products

Solar JSOC

Cyber attack response services

Solar MSS

Cloud-based information security infrastructure

Solar Dozor

Data leak prevention

Solar webProxy

Web resource access control and web traffic protection

Solar addVisor

Labour productivity improvement and organisational development

Solar inRights

Centralised IT system user rights management

Solar appScreener

Application security analysis

Rostelecom has retained its leadership in the information security services market, implementing highly relevant projects such as Russia's largest cyber attack monitoring and response centre, the National Cyber Polygon, and the cyber attack early warning system.

The cluster manages an investment portfolio of RUB 20 billion, allocated to develop proprietary technologies and expand the cluster's share in the information security market by acquiring high-potential companies and solutions.

New cybersecurity projects launched in 2021

Solar addVisor – boosts labour productivity and organisational development at businesses

Solar MSS Sandbox – provides protection from sophisticated cyber threats

Cryptographic protection of communications channels for the Virtual Data Centre customers

12%

Total growth in revenue from proprietary technology projects in 2021

The **Solar Dozor** product showed the biggest (22%) revenue growth in 2021. The largest public projects in 2021 were the agreements signed with Zenit Football Club and the energy company Unipro, which chose Solar Dozor over their existing solutions. Solar Dozor now controls over 2,300 employee workstations at Unipro. A similar project was implemented at ROSATOM's Central Archive of Nuclear Industry.

In 2021, Rostelecom introduced **Solar addVisor**, Russia's first employee productivity monitoring system, which helped the company expand into a new market segment. The system analyses the digital footprint of employees' workplace activities and enables better managerial decisions to increase labour productivity. This software product is geared towards managers of all levels and HR and organisational development specialists at large commercial and government organisations.

The **Solar appScreener** source code analyser was selected as the software analysis tool to analyse the information protection system of the Russian Federal Service for Technical and Export Control at the Testing and Certification Centre of the Institute of Engineering Physics Interregional Social Foundation. The use of Solar appScreener for regulatory compliance testing reflects its highest technological level and its leadership position in the Russian market for application source code analysers.

This product is rapidly expanding into the international market, with seven major contracts signed in 2021 in the Asia-Pacific region, including agreements with government organisations, and international sales at over 30% in total product revenue.

7

major contracts in the Asia-Pacific region

30%

increase in the number of Solar JSOC customers

In 2021, Rostelecom announced a large-scale transformation of its **Solar JSOC** service into an integrated cyber-attack response centre which now provides protection against most dangerous hacker groups. Solar JSOC remains Russia’s largest commercial centre for monitoring and responding to cyber threats and the market leader in its segment. Based on its successful track record in cyber attack response, Rostelecom has put together a new set of services for organisations where cyber security is of strategic importance to the country, including federal executive authorities and Russia’s critical information infrastructure assets. The expansion of expert services and solutions of Solar JSOC has propelled it to the next level, strengthening its edge over competition and enabling entry into new market segments.

Rostelecom also became a full member of the Forum of Incident Response and Security Teams (FIRST), the largest global cybersecurity incident response community. Due to its new status, the Company now has access to a global database of recent incidents, which provides Solar JSOC with a solid competitive edge in the cyber attack monitoring and response market. Starting from 2021, Rostelecom has been able to initiate blocking of phishing sites in the .ru, .pф, .moscow, .москва, and .su domain zones.

In 2021, the total number of Solar JSOC customers increased by 30%. Its major projects include the incident monitoring and response contracts with JSC IDGC of the Urals and JSC GLONASS. To handle requests from an increased customer base, a new Solar JSOC regional centre was opened in Rostov-on-Don.

In 2021, Rostelecom announced plans to transform its Solar MSS cybersecurity service ecosystem and launched a centre for expertise in Samara, which will provide regional government organisations and large and medium-sized businesses with cyber protection services. By moving expertise to regional offices, the company has unlocked an optimal approach to service pricing without compromising quality: Solar MSS services are now more affordable to a wide range of companies. Moreover, apart from removing the need for big upfront capital investments, the service-based model also delivers savings for customers in the range of 40% over five years.

Thus, **Solar MSS** has a solid potential for rapidly expanding its market share in Russian regions. The product is of particular use to government authorities, educational and healthcare facilities, financial institutions, industrial and energy enterprises, transport and logistics operators, as well as retail trade organisations.

To enhance technological development, the Solar MSS ecosystem was complemented by the Sandbox service for advanced cyber threat protection. Rostelecom also provided the Virtual Data Centre customers with cryptographic protection of communications channels. It allows customers to promptly obtain virtual computing infrastructure (IaaS) services to host information systems and applications.

System integration and National CyberRange

Our system integration business line reported 82% revenue growth in 2021. We delivered a number of projects for the L'Etoile chain, Tyvasviazinform telecom operator, Mir Business Bank, and Tatkabel.

Furthermore, the National CyberRange created as part of the Digital Economy of the Russian Federation targeted programme was officially piloted in 2021, with its core centres launched at the Siberian State University of Telecommunications and Information Science (SibSUTIS) and ITMO University in Saint Petersburg.

To provide practice-oriented training to students, the National CyberRange hosted the finals of the Olympics among universities of Russia’s North-West, as well as the first all-Russian inter-university cybersecurity drills involving teams from the country’s eight leading universities. In addition, cybersecurity drills were arranged for students of Far Eastern Federal University and ITMO University, and events within the VolgaCTF 2021 inter-university student information security competition were held.

The National CyberRange hosted cybersecurity drills for employees of the Bank of Russia, the Russian Ministry of Energy and key players in the electricity industry, as well as cross-industry drills organised together with TMK and Sinara Group.

In 2021, an extensive bug bounty programme was launched at the National CyberRange to test and improve the security of solutions used by public sector organisations, major businesses and critical information infrastructure facilities across Russia.

CLUSTER

Digital Regions

70^{thsd}

CCTV cameras connected during the year (total: 370 thousand)

~500

Traffic enforcement cameras set up during the year (total: 4.4 thousand)

29

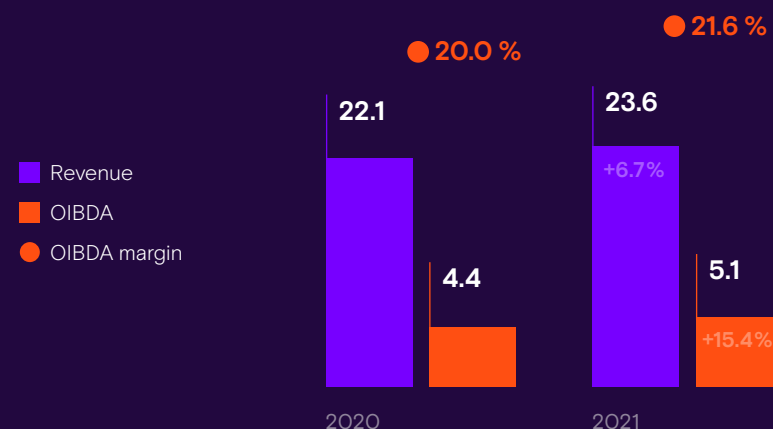
Weigh stations built during the year (total: 147)

Note: Year-on-year growth for 2021 is shown unless stated otherwise.

1 Under the new segment- and cluster based model.

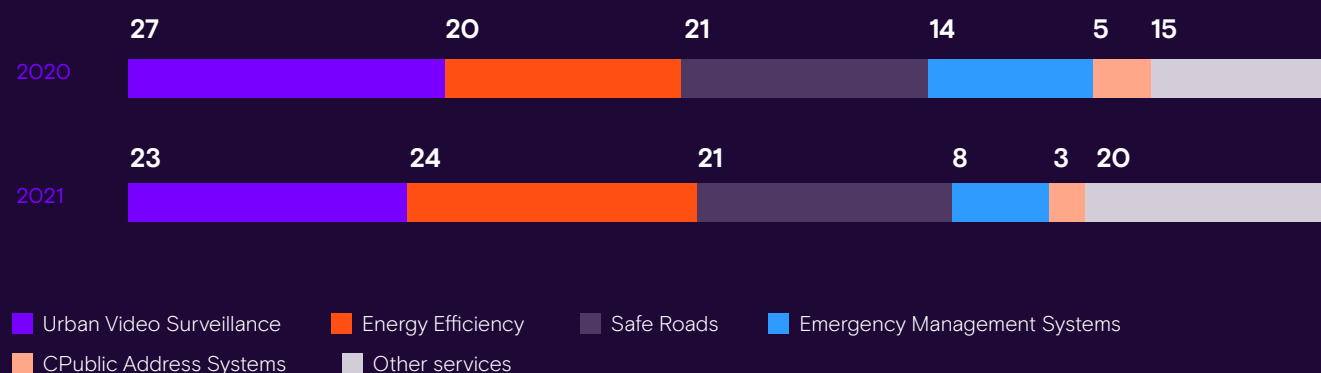
In 2021, the Digital Regions cluster strongly focused on key product segments, introducing cutting-edge digital solutions in Russian regions. The cluster's revenue grew by 7% to RUB 23.6 billion.

Key financial highlights of the segment, bn RUB¹



Structure of the Digital Regions cluster

Revenue mix, %



Video surveillance

More than 70 thousand new cameras were connected as part of the CCTV project, with a cumulative total of more than 370 thousand since the launch of the project. Five new Russian regions were connected in 2021, bringing the total number of regions connected to the platform to 39.

The Unified National Video Surveillance Platform is rapidly evolving, with more than 3,000 cameras connected to the platform across virtually all Russian regions.

Projects for photo and video recording of traffic violations and weight and dimension compliance

Traffic enforcement cameras were deployed across 59 Russian regions. Two new regions joined the programme in 2021. Also in 2021, 489 new traffic enforcement cameras were installed, bringing their total number to 4,362.

Weight and dimension compliance projects are currently running in 33 regions. In 2021, four more regions joined the programme and 29 new weigh stations were set up. The total number of weigh stations in operation reached 147.

Evolution of traffic enforcement cameras in Saint Petersburg

In 2021, Rostelecom signed two public contracts for traffic enforcement services. Under the contracts, installation and commissioning operations were carried out on the street and road network in Saint Petersburg to install traffic enforcement cameras on 171 linear road sections, 40 intersections and 10 approaches to intersections. A total of 240 cameras were installed. Traffic enforcement cameras are integrated with the automated traffic violation detection system and the system for monitoring the payment of fines, with video streamed automatically fed to the urban video surveillance system. The system's technical operation and maintenance are supported 24/7.

Expansion of Saint Petersburg's urban video surveillance system

In 2021, Rostelecom launched a new phase of expanding Saint Petersburg's video surveillance system. For the first time since the start of the project in 2016, smart intercoms with a video surveillance function were added to the list of devices installed across the city. The total number of installed intercoms exceeded 20 thousand, along with almost 3 thousand urban surveillance cameras.

Several hundred cameras were installed around the Gazprom Arena stadium, which hosted matches of the UEFA European Football Championship in the summer of 2021.

Currently, every city district is covered by video surveillance. The public contract involves not only the installation of cameras, but also their subsequent maintenance; video is continuously streamed to the customer's data centre.

Energy efficiency

In 2021, Rostelecom installed 89 thousand electricity meters as part of joint projects with electricity distribution grid companies. A total of more than 470 thousand meters are in operation today.

Another two projects were implemented in 2021 in two more Russian regions, with energy efficiency solutions now implemented across 19 regions.

The eSIM and NB-IoT¹ technologies were piloted in electricity metering as part of Rostelecom’s innovation efforts, and more than 30 contracts were signed within the Lighting business line.

Safe City

Rostelecom continues developing new and expanding existing applications of the Safe City hardware/software solution. To implement a scenario-based response function, the product is being deeply integrated with the Netris video surveillance platform to enable the use of video analysis tools in surveillance to ensure an effective response to threats to the urban environment.

In addition, the solution has been interfaced with public address systems and automated process control systems used in energy efficiency projects, which has helped build end-to-end processes to assist urban services in responding to disruptions in utility systems.

The Safe City solution is also integrated with System 112 via a universal data exchange protocol, securing end-to-end interaction between the single dispatch service and emergency services, as well as helping to debug response scenarios.

A fundamentally new information model of the system was implemented, making it possible to use Safe City in adjacent areas, in particular as part of a unified regional platform for environmental monitoring and safety control of industrial enterprises, and a dispatch platform for small towns.

1 Narrow Band Internet of Things – a cellular communications standard for telemetry devices exchanging low volumes of data.



CLUSTER

Digital Health

Rostelecom’s goal is to become a leader in driving the digital transformation of healthcare in Russia. The Company aims to become an integral part of the healthcare management system at all levels, from government departments to individual patients.

Digital transformation of the healthcare system

Rostelecom’s healthcare digitalisation solutions are featured across 49 Russian regions and include medical information systems, laboratory information management systems, a unified radiology information system, a central archive of medical images, an integrated emergency medical care information system, and a platform for telemedicine consultations and remote monitoring of patients with chronic diseases.

In accordance with a directive of the Russian Government, Rostelecom subsidiary was designated until the end of 2022 as the sole contractor under public contracts signed by the Russian Ministry of Health and its subordinate institutions on the creation, enhancement, implementation, and operation of subsystems of the Unified State Healthcare Information System.

In 2021, Rostelecom continued its efforts towards digital transformation of the healthcare system across Russian regions.

- Voice Assistant 122, an intelligent information system for voice communication between a robot assistant and a live person following a set script, was launched in five regions. The assistant relieves call centres and handles up to 50% of patient queries. The House Call script successfully processed up to 65% of calls while the Booking a Vaccination Appointment script handled up to 35% of cases without involving an operator.
- Artificial Intelligence (AI) projects were implemented in three Russian regions to improve early detection of diseases, including cancer, through automated diagnostic services based on medical images (fluorography, mammography, and CT scan of the lungs). The use of the AI technology during the COVID-19 pandemic helps detect signs of coronavirus such as pneumonia and other complications, and treat them effectively.

- The service for telemedicine consultations was launched in five regions, with 81 healthcare facilities connected. More than 17 thousand consultations were provided by 9 thousand doctors of different specialties as part of the service.
- The E-Prescription service was launched in five regions, with 139 healthcare facilities connected. More than 2,000 doctors received relevant training and 2,000 pharmacies joined the service. A total of more than 930 thousand prescriptions were issued.
- Two Russian regions successfully piloted a remote monitoring service for confirmed coronavirus cases, including during post-COVID-19 rehabilitation. The service uses voice assistants to collect data on the patient’s current condition, transmit the information to the consulting physician and, in case of a serious deterioration requiring a physician’s decision on emergency hospitalisation, arrange 24/7 telemedicine consultations with the doctor on duty.

Strategic partnerships

In 2021, Rostelecom Group and K-SkAI, a Skolkovo Foundation resident, signed an agreement on cooperation in artificial intelligence. The parties agreed on a technology partnership and carried out a seamless integration of Rostelecom’s Unified Digital Platform (UDP.MIS) and K-SkAI’s Webiomed predictive analytics and risk management platform. The integration enables early identification of risk factors and diseases, a comprehensive health assessment and prediction of possible complications, with personalised recommendations issued to patients and specialists.

At the end of 2021, RT MIS won a tender and received a grant worth RUB 119 million from the Russian Information Technology Development Foundation to develop the Unified Digital Platform for Emergency Medical Care solution by October 2023. The digital platform will automate the recording and planning of an organisation’s resources, receipt of incoming calls, operational resource management, and generation of reports, including for services provided. The platform will also monitor the quality of care provided and make the necessary adjustments.

In addition, in the reporting year one of Rostelecom’s subsidiaries won a tender and received a grant from the Russian Information Technology Development Foundation to develop the Central Archive of Medical Images software solution providing for the development and integration of an endoprosthesis module and a module for automated pathology highlighting on mammography images by October 2023. The central archive of images ensures the collection and centralised storage of, and access to, medical data. The system offers extensive possibilities to search for medical data based on a patient’s personal information and the procedure profile, as well as to transfer the data to workstations and Rostelecom systems. The contract’s value was at RUB 153 million.

CLUSTER

Public Sector Digital Services and Products

Rostelecom ensures the smooth operation of the e-government infrastructure providing citizens and organisations with digital access to public services.

E-Government

An updated version of the Public Services Portal (www.gosuslugi.ru) was launched in 2021. E-services steadily gain traction, with 1 billion visits to the Public Services Portal registered in 2021 while the number of service orders through the mobile app grew 2.3 times in 2021, reaching 188 million. The number of successful payments amounted to 111.6 million.

In Q4 2021, Rostelecom completed the acquisition of assets consolidating competencies in key areas of public administration such as finance and procurement, property and asset management, public services (automation of Multifunctional Public Service Centre activities), social care, and employment.

It is a strategic transaction, which has expanded Rostelecom's product line within its ecosystem of digital public products, extended the offerings of the Public Sector Digital Services and Products cluster to new segments of public administration, and enabled the implementation of relevant projects of any complexity.

In 2021, Rostelecom was selected as the sole contractor to create a unified digital platform (UDP) for the Russian Ministry of Labour and Social Protection.

Electoral process digitisation

In 2021, Rostelecom continued its project to create a remote e-voting service based on the Unified Portal of State and Municipal Services, as well as a mobile app with cryptographic protection tools to enable participation in elections at all levels regardless of the voter's location.

The key objectives achieved by the project:

- Creation of a tool for the remote exercise of voting rights
- Increased accessibility of voting and a higher number of people taking part in elections
- Higher confidence in the electoral system
- Fewer social contacts during the pandemic

In 2020, remote e-voting was used for the first time in the by-election of deputies of the Russian State Duma on 13 September 2020.

In 2021, six Russian regions (the city of Sevastopol as well as the Kursk, Murmansk, Nizhny Novgorod, Yaroslavl, and Rostov Regions) participated in remote e-voting. A total of 635,560 people voted and 1,669,583 voting ballots were issued, with the votes counted in only 15 minutes.

During the remote e-voting, Rostelecom specialists countered 19 DDoS attacks, the longest of which continued for five hours without affecting the availability of the service. During the voting period, the Company's contact centre received and processed 14,527 queries from voters.

In 2022-2024, Rostelecom plans to further enhance its remote e-voting system, including the use of Russian cryptographic algorithms for voter anonymisation (blind signature), improvements to the mobile app to protect users on the subscriber device side, and expanded functionality of the webcasting portal to provide additional tools for observers and voters to monitor the voting process.

Unified Biometric System

>220

businesses connected
to the UBS

17

major banks launched
services using the UBS and
the Unified Identification and
Authentication System

In line with Federal Law No. 149-FZ, On Information, Information Technology and Information Protection, dated 27 July 2006, the Unified Biometric System (UBS) created by Rostelecom has been in operation in Russia since 2018.

Rostelecom was appointed a system operator by the Russian Government’s Directive No. 293-r dated 22 February 2018. To date, the UBS covers over 220 business organisations that collect and use biometric personal data.

On 30 December 2021, the UBS was granted the status of a state information system and certified by the Russian Federal Security Service and Federal Service for Technical and Export Control (FSTEC) in line with Part 1.1 of Article 14.1 of Federal Law No. 149-FZ, On Information, Information Technology and Information Protection, dated 27 July 2006 (as amended by Federal Law No. 479-FZ, On Amendments to Certain Legislative Acts of the Russian Federation, dated 29 December 2020).

The platform’s security is based on its unique built-in mechanisms, such as the multimodal biometric authentication using voice and face. Combining algorithms from several national biometric vendors, such an approach encourages competition and drives the development of the biometrics and IT security markets in Russia. The AI-enabled, biometrics-based Multi Liveness, a tool for recognising people and detecting deepfakes, can tell a real person apart from a digitally generated voice and face with 100% accuracy. We were among the first in the world to use this combination of mechanisms to guarantee system security.

In 2021, Rostelecom continued to diversify its methods of collecting biometric personal data for the biometric sample database through the Multifunctional Public Service Centres and a secure mobile app.

The first industry to run the system was the banking industry. As at the end of 2021, 17 major banks launched remote account/deposit opening and lending services using the UBS and the Unified Identification and Authentication System.

On 2 March 2021, the Russian Government signed Resolution No. 301 authorising interim examinations in Bachelor’s, Specialist’s and Master’s programmes to be held on a digital learning platform. As early as in June 2021, Rostelecom presented leading universities with a new digital technology to hold exams remotely using the UBS. The technology to perform legally significant personal identification of students uses the UBS and the Biometrics application.

On 1 June 2021, amendments to the Federal Law On Communications came into force in Russia, authorising the use of the UBS to issue eSIMs remotely. In partnership with Rostelecom, its mobile operator was the first to offer eSIMs with the UBS-enabled identification. Issuing eSIMs with the help of biometrics was the first telecom service to use the UBS for remote identification, which makes it possible to activate a virtual SIM card within just a few minutes.



In 2021, Rostelecom also conducted the first technology testing of biometric access to sporting events held on the VTB Arena. The project uses a biometric access control system (BioACS) developed by a Rostelecom subsidiary. The solution improves security levels, shortens the turnstile passage time to one or two seconds and provides over 99.99% accuracy of facial recognition. The BioACS technology has also been implemented at various ministries and agencies, and at the Bank of Russia.

At the moment, active further steps are taken to prepare a technical and regulatory framework for the launch of new mass biometric services across various institutions and organisations, such as notary offices, the Supreme Court of the Russian Federation, transport, metro, airports, and so on.

2.5 Key strategic projects

Rostelecom's strategic priority is to strengthen its partnership with the government in developing the digital economy, supplying state-of-the-art solutions for digitising public administration processes, and providing services to the public and businesses across various sectors.

Major nationwide infrastructure projects are central to building a digital economy. Each such project makes a difference for millions of people and is a milestone in the transition towards a common digital space. Rostelecom is fully committed to these vital projects of national significance.

Priorities of partnerships with government authorities

1 Providing the infrastructure and communication channels

- Expanding the coverage of the core communications infrastructure
- Enhancing communications channels
- Enhancing the digital ID and UBS¹ technology and infrastructure

2 State projects and programmes

- Implementing national communications infrastructure initiatives (Digital Economy, Bridging the Digital Divide, connection of social infrastructure facilities)

3 Digitising key processes

- Enabling operations of public authorities (E-Government Infrastructure, Digital Region)
- Enabling communication of people and businesses with the government (single digital profile, expansion of the Public Services Portal functionality)

1 Unified Biometric System.

In order to implement federal projects, Rostelecom relies on its own backbone data network, cloud infrastructure and integrated IT solutions, including those developed in Russia. All projects are aligned with the adopted Strategy and aimed at the long-term goals of Rostelecom and all stakeholders.

In 2021, Rostelecom continued to be actively involved in projects aiming to build and develop Russia's digital economy as part of the Digital Economy of the Russian Federation national programme approved by the Russian Government in 2018. During the year, the Company particularly focused on the Information Infrastructure project.

Centre of Excellence activities under the Information Infrastructure project

150 experts

took part in the activities of the Centre of Excellence under the Information Infrastructure federal project

The Centre of Excellence within the Information Infrastructure federal project (the Centre of Excellence), set up at Rostelecom, continued to operate throughout 2021. Along with Rostelecom employees, over 150 experts representing the leading Russian organisations, including major telecom operators, banks and data centre operators, as well as federal executive authorities and state-owned corporations, actively participated in the work of the Centre of Excellence. In 2021, the Centre of Excellence collaborated with members of the themed working groups for communications networks, data centres and digital platforms to review more than 80 requests to change the project charter of the Information Infrastructure federal project, prepare 13 opinions and take part in 14 meetings of the Information Infrastructure working group.

In 2021, the Centre of Excellence developed road maps for measures to encourage operators' investments in communications networks development through advanced technologies as well as plans to develop 5G and the Internet of Things.

These efforts involved defining further frequency conversion activities jointly with the government, including in the 700 MHz band. Experts from the Centre of Excellence prepared proposals for improving Russia's position in international digital economy development ratings and took part in drafting the strategy of the Digital Economy autonomous non-profit organisation to 2024.

Bridging the Digital Divide

13,916

communities are equipped with access points

Rostelecom is the only operator implementing a project to address the digital divide under a ten-year public contract with the Federal Communications Agency. The Bridging the Digital Divide project remains a key strategic project for Rostelecom. It aims to provide access to affordable communications services for people living in rural areas, particularly in remote and hard-to-reach areas, including border communities.

In 2021, Rostelecom completed the first phase of the project. Access points were installed in 13,916 communities. The Company also built 122 thousand km of fibre.

At the same time, Rostelecom launched the project’s second phase to set up mobile radio telephony networks across localities with a population of between 100 and 500 people. In 2021, Rostelecom set up such communications networks in 1,201 communities.

Better communications services in small communities improve the quality of life for citizens and give a strong impetus to the modernisation of the infrastructure, business, and local communities.

Internet access for social infrastructure facilities

44

Russian regions had their social infrastructure facilities connected to the internet by Rostelecom

Rostelecom is the contractor for the project to provide internet connectivity to social infrastructure facilities in 44 regions of the Russian Federation under the Information Infrastructure federal project, implemented as part of the Digital Economy of the Russian Federation national programme. Facilities connected to the internet included primary care centres and rural health posts, educational organisations, state and local government authorities, polling places, fire stations and fire brigades, police stations, and facilities of the National Guard of the Russian Federation.

In 2021, Rostelecom completed a project to connect social infrastructure facilities to the internet, covering 31 thousand organisations. A total of 38.5 thousand km of fibre were laid to connect them to the communications network, including 19.9 thousand km in 2021. Some of these social infrastructure facilities were connected via satellites in line with respective public contracts.

During 2019–2021, connected social infrastructure facilities were provided with data services with bandwidths of up to 100 Mbps, depending on the facility’s category as outlined in the respective public contract.

The implementation of the project generated demand for Russian-produced fibre optic cables and telecommunications equipment.

Development of a data centre ecosystem

PSDSP

DR

DH

One of Rostelecom’s subsidiaries acts as a centre of excellence for building an ecosystem of data centres, cloud services, and connectivity services. The project was designed to provide a reliable digital infrastructure and a full range of related services of any complexity to corporate and government customers, regardless of their geographical location.

Rostelecom is tasked with expanding a fault-tolerant IT infrastructure for the benefit of the government and commercial customers, and delivering related cloud services.

The project for building a data centre ecosystem will enable us to:

- manage cloud services, create and operate cloud databases, and implement remote-working tools
- improve the quality and accessibility of data centre services
- support secure remote management of corporate services
- set up workstations using advanced IT technologies to enable server virtualisation and administration, and to ensure fault tolerance
- ensure agencies make the best use of IT resources
- meet the government agencies’ need for a computing infrastructure
- place equipment and store information in a more reliable and advanced data centre infrastructure.

Rostelecom has built and operates the IT infrastructure in the Single Governmental Cluster (IQ Quarter) and the combined data centre, supporting the migration of users while ensuring a high level of information security, providing computing capacity, and ensuring the fault tolerance and resilience of all E-Government services.

>40

information systems of 7 federal executive bodies were hosted in the Government Cloud

Rostelecom continues to implement the digital transformation of prosecuting authorities, including the integration of automated workstations across all relevant offices. In addition, the Company is a service provider in an experiment launched by the Russian Ministry of Digital Development, Communications and Mass Media to move the IT infrastructure of the Russian Social Insurance Fund, Ministry of Labour and Social Protection, Ministry of Justice, Federal Environmental, Industrial and Nuclear Supervision Service of Russia (Rostekhnadzor), Federal Agency for State Property Management (Rosimushchestvo), State Courier Service, and the Federal Archival Agency to the unified national cloud platform. Based on the positive interim results of the experiment, the Russian Government decided to extend it and connect new agencies to the unified national cloud platform going forward.

Developing the unified national cloud platform



In accordance with a resolution of the Russian Government, from 30 August 2019 to 30 December 2022, an experiment is conducted to move information systems and data assets of federal executive authorities, the Central Election Commission of the Russian Federation and state extra-budgetary funds to the Government Cloud, a unified national cloud platform, and provide such federal executive authorities and state extra-budgetary funds with automated workstations and software. The project was implemented to improve the efficiency of using the IT and communications infrastructure set up to deliver state and municipal electronic services.

As part of the project, Rostelecom is migrating information systems and data assets of federal executive authorities and state extra-budgetary funds to the Government Cloud, and providing federal executive authorities and state extra-budgetary funds with automated workstations and software.

By early 2021, seven pilot participants completed the migration of their information systems and data assets to the Government Cloud infrastructure. Another 13 pilot participants and other data assets of existing participants were moved to the Government Cloud without additional government funding.

As a result, the number of pilot participants has grown from 7 to 26 federal executive authorities and state extra-budgetary funds, including the Central Election Commission of the Russian Federation. A new approach to the structure and pricing of public contracts has been successfully implemented, providing, among other things, for a wide range of services such as protection against DDoS attacks, basic configuration functionality, support for virtual machines, and many more.

The following figures clearly demonstrate the performance of the Government Cloud in 2021:

- Average service availability was 99.99% (above the mandatory requirement)
- Over 40 information systems of seven federal executive bodies were hosted, with more than 10 thousand employees connected
- The service quality rate is 100% (as per the formula set out in the public contract)
- Three infrastructure platforms (VMware, TIONIX Cloud Platform, Digital Energy) were deployed
- Over 17 thousand virtual CPUs were made available to users
- Over 1.5 PB of data were migrated to the Government Cloud
- Technical solutions from Russian hardware and software manufacturers are used, with the percentage of import substitution in computing infrastructure as high as 74.21%
- A system for dynamic reallocation of computing resources was implemented

>1.5 PB
of data migrated
to the Government Cloud

74%

Share of computing
infrastructure import
substitution in the
Government Cloud

In order to develop the Government Cloud and the industry as a whole, Rostelecom prepared proposals for draft amendments to federal laws (No. 126-FZ On Communications and No. 149-FZ On Information, Information Technology and Information Protection), in particular proposals regarding the definitions for terms such as data centres, cloud technologies, cloud services, and cloud computing.

Rostelecom's proposals regarding an action plan to further promote the development of the IT industry by building domestic cloud services and data centre infrastructure were also accepted.

Rostelecom continues the digital transformation of the Russian prosecuting authorities. The project provides services for building and developing an advanced digital infrastructure for the Russian prosecuting authorities meeting global standards for operational reliability and information security.

As at the end of 2021, a secure information and telecommunications infrastructure was put in place, covering 3,225 prosecuting authorities and over 50 thousand users. IT infrastructure availability was over 98%.

As part of this infrastructure building project, the Company:

- set up three support lines within the ServiceDesk centralised system
- built a system for protection against external and internal attacks
- provided a multifunctional service based on state-of-the-art equipment (about 41 thousand phone sets, 106 video conferencing servers, and 13.5 thousand printers and scanners)
- set up a remote communications and conferencing system.

In 2022, the Company plans to migrate new participants to the Government Cloud, including regional executive authorities, and to create an environment to support the operation of the Government Cloud outside the pilot project. As the project evolves, the authorities will be able to streamline their use of necessary IT resources, meet their computing infrastructure needs as well as place their equipment and store their information within more reliable and advanced data centre infrastructure.

Developing 5G mobile network in Russia

PSDSP

DR

The roadmap for 5G Mobile Networks high-tech area development until 2024 was developed as part of implementing an agreement of intent between the Russian Government, Rostelecom and Rostec.

5G deployment opens up new opportunities for process digitisation in virtually every sector of the economy. Rostelecom is set to engage other market players in facilitating the development of infrastructure and market for digital services.

Rostelecom is responsible for the following main aspects of the roadmap:

- Securing radio frequency resources for deploying 5G networks
- Setting up the required communications infrastructure
- Building an ecosystem and developing a market for 5G-enabled digital services

Plans and key targets within the roadmap:

- At least 10 cities with a population of 1 million or more covered by 5G networks by 2024, using Russian equipment
- Over 50 million subscribers using 5G networks by 2030
- Allocation of radio frequency bands for pilot and commercial 5G networks

Promotion of 5G-enabled digital and mobile services is a promising area of Rostelecom's development. The funding all Russian operators are expected to provide for 5G network infrastructure development and relevant spectrum allocation until 2024 totals some RUB 160.0 billion. In particular, Rostelecom plans to allocate RUB 3 billion of its own and borrowed funds to set up and operate industrial testing grounds as part of this initiative.

3^{bn}
RUB

Rostelecom's planned expenses for setting up and operating industrial testing grounds as part of its 5G deployment

Developing information security products and cybersecurity educational programmes

PSDSP

DR

IS

In accordance with [Russian Government's Decree No. 713-r](#) dated 22 March 2021, Rostelecom was designated as the sole contractor to provide resilient IT infrastructure in educational institutions until 31 December 2022.

As part of the unified digital education environment development effort and the Digital Economy of the Russian Federation programme, Rostelecom is building out digital infrastructure at schools across Russia. The project aims to provide schools with Wi-Fi wireless connectivity (Wi-Fi hotspots), video surveillance systems with analytics and image storage tools, and data centre resources. Depending on the needs of each specific organisation, digital infrastructure may be upgraded or built from scratch. Video surveillance systems will monitor school entrances and detect individuals potentially posing a threat to children, such as people on the police wanted list. That said, the system will not perform identification of children. The equipment supplied for the project will be Russian-made.

2,134

schools were provided access to broadband (Wi-Fi) services by Rostelecom

In 2021, Rostelecom brought Wi-Fi access and video surveillance systems to 2,134 schools across 16 Russian regions, with 8,330 schools to be provided with local IT infrastructure before the end of 2022.

Call centre to keep citizens informed about vital social and economic issues

PSDSP

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The centre created by Rostelecom to keep citizens updated on vital social and economic issues, including measures to curb the spread of COVID-19 continued its operation in 2021.

Key project objectives:

- Keep citizens informed about vital social and economic issues
- Support a 24/7 COVID-19 hotline using the federal number 8 800 200 0112
- Help citizens arrange vaccination appointments

In 2021, the call centre handled over 1.8 million calls, mainly concerning symptoms, prevention, treatment, and the overall COVID-19 infection rates in Russia, as well as vaccination.

2.6 Efficiency improvement

Rostelecom has continued to drive internal efficiencies as its strategic priority, with the key focus areas comprising Rostelecom's production system (RPS), operational excellence programme (OEP), and real estate portfolio optimisation.

Rostelecom's production system

Rostelecom's production system (RPS) is an essential lever to drive our operational efficiency and business profitability without leveraging additional resources.

In 2021, we continued to implement five federal RPS projects: **Connecting B2B/B2G/B2O Customers to VPN Services, Automation of B2B sales and connections programme, Design and Construction of Access Networks, RPS Model Key,¹ and Optimisation of the Business Process "Sale and Connection of B2C Services"**.

We also launched three new initiatives: Agile Business Process Development, Paperless Office, and B2B Centre of Excellence Normalisation.

The total economic benefits of the solutions implemented through our RPS projects and local initiatives totalled RUB 509.5 million.

Connecting B2B/B2G/B2O Customers to VPN Services

The project aims to build a stable and predictable VPN connection process for B2B/B2G/B2O customers that matches the customers' needs as much as possible while optimising connection costs for the Company.

Key programme results:

In 2021, we developed and implemented solutions to set up a federal check list for customer and third-party engagements. We also redesigned the processes around mass order and service transactions for back-office administrator roles, formalising and automating the stage between service request processing and service connection, and updated solutions for order status checking and tracking tool.

During the project, we implemented 20 information technology upgrade initiatives. A training course on VPN was developed for the B2B, B2G, and B2O segments. The project allowed Rostelecom to achieve its targets for timely delivery of services to customers.

¹ The RPS Model Key project, launched in 2020, aims to improve the business process for selling, connecting and maintaining Rostelecom's services such as Smart Intercom, Video Surveillance, Smart Gate Bar, Telemetry, and Smart ACS.

RPS in numbers

Training and development

40 thousand

employees have taken basic RPS training

>6 thousand

specialists and managers have been trained in RPS tools

>1 thousand

RPS project members have been certified for RPS technology knowledge

Best Practice Portal

109

solutions were posted on the portal in 2021

1,771

times the posted solutions were deployed and used

Ideas Portal

716

employee ideas were submitted in 2021

248

ideas, or 35% of total ideas submitted, were implemented

Automation of B2B sales and connections programme

The programme aims to:

- reduce the connection time for customers from nine to three days
- cut the process operating costs by 40%
- increase sales volumes for new products by 12%.

Diagnostics and timing of the end-to-end business process of selling and connecting the Broadband, Video Surveillance and Virtual PBX services were carried out in 2021.

Key programme results:

- Development, stabilisation and implementation of the basic process of selling and connecting the Broadband and Video Surveillance services in four MRFs (Centre, Volga, South, and Ural)
- Development and deployment of e-contracting for B2B
- Re-engineering of the process of selling and connecting the Virtual PBX service

The economic benefit for 2021 was RUB 73 million, with revenue up by RUB 33 million, while operating costs and salary expenses were cut by RUB 40 million.

RPS Model Key

The project aims to build stable and predictable sales, connection and maintenance processes for the Key services, meeting customer demands and the region-specific RPS model criteria.

The project covers five services: Smart Intercom, Video Surveillance, Smart Gate Bar, Telemetry, and Smart ACS.¹

As part of the project, rules for the business process Sale and Connection of Rostelecom Key Service for legal entities and individuals, and the Procedure for Technical Support of the Rostelecom Key Service were developed in 2021.

Design and construction of access networks

The project aims to build a business process to forecast and construct access networks, ensuring that Rostelecom’s infrastructure construction costs and timelines are reduced for the benefit of the B2C and B2B segments without compromising construction quality.

In 2021, we set up “hot” warehouses to build our “quick” construction capabilities for the benefit of the B2C segment, and developed and rolled out SLAs² for each construction stage of the mass segment projects.

Optimisation of the Business Process “Sale and Connection of B2C Services”

The project aims to optimise and harmonise the connections part of the Sale and Connection of B2C Services business process.

In 2021, as part of the project, we developed a transit service sale and connection process, and a company-wide installer guide, adapting them for use out in the regions. We also made a list of upgrades to enable the full migration to the transit business process, complete with descriptions.

Agile Business Process Development

The project aims to reduce service request processing and service connection times for operators by simplifying process designs for various types of services depending on the order items.

In 2021, we selected pilot regions, defined order items criteria to develop the agile processes designated as first priority, and gathered analytical data.

Paperless Office

Running through 2023, the project aims to create a working environment in which the use of paper is eliminated or minimised.

The project targets a seven-fold reduction in the levels of paper use and paper document flow costs at the Company by the end of 2023 from a 2021 baseline.

The paperless office will help simplify and accelerate document flow, deliver cost savings on paper, consumables and maintenance, and contribute to environmental protection.

In 2021, we selected pilot regions to trial approaches to replacing paper document flow with electronic document flow for the most widely used document types. We conducted an analysis of paper document flow in pilot regions by unit and document type, and established project metrics.

B2B Centre of Excellence Normalisation

The project aims to enable seamless migration from the existing organisational model of macroregional and regional branches to unified centres of excellence (UCE) by January 2022 without shedding the functionalities that are important to customers and businesses.

- In 2021, Rostelecom:
- audited UCE functional requirements in 64 Russian regions and at 7 centralised sites
 - put together a summary file with functionality data
 - verified the achievement of functional metric targets by our employees
 - identified non-core functional metrics and developed a plan to reassign them to the relevant units
 - estimated the potential for streamlining business processes and automating certain functions.

1 Access Control System.
2 Service Level Agreement.

Operational excellence programme

The long-term operational excellence programme sets a new level of project implementation beyond the Company’s current operations. In 2021, we laid the foundation for a long-term structural change defined in Rostelecom’s updated strategy.

In particular, the Company developed methodologies for calculating the target headcounts of support units to increase labour productivity and improve sales economics, as well as for making more efficient use of access network use in small communities. The entire methodology accounting framework is based on updated driver indicators and industry best practices, which already delivered a positive free cash flow impact in 2021.

At the same time, sales funnel expansion, project commercialisation acceleration, and achievement of the benchmark for equipment levels remain the Company’s key projects in this area for 2022.

The Company also places the highest priority on SLA harmonisation for the following projects:

- Non-core asset management, including real estate
- Streamlining copper infrastructure maintenance costs while reducing outsourcing costs
- Monitoring the progress of units in migrating to the target management model and achieving targeted benefits

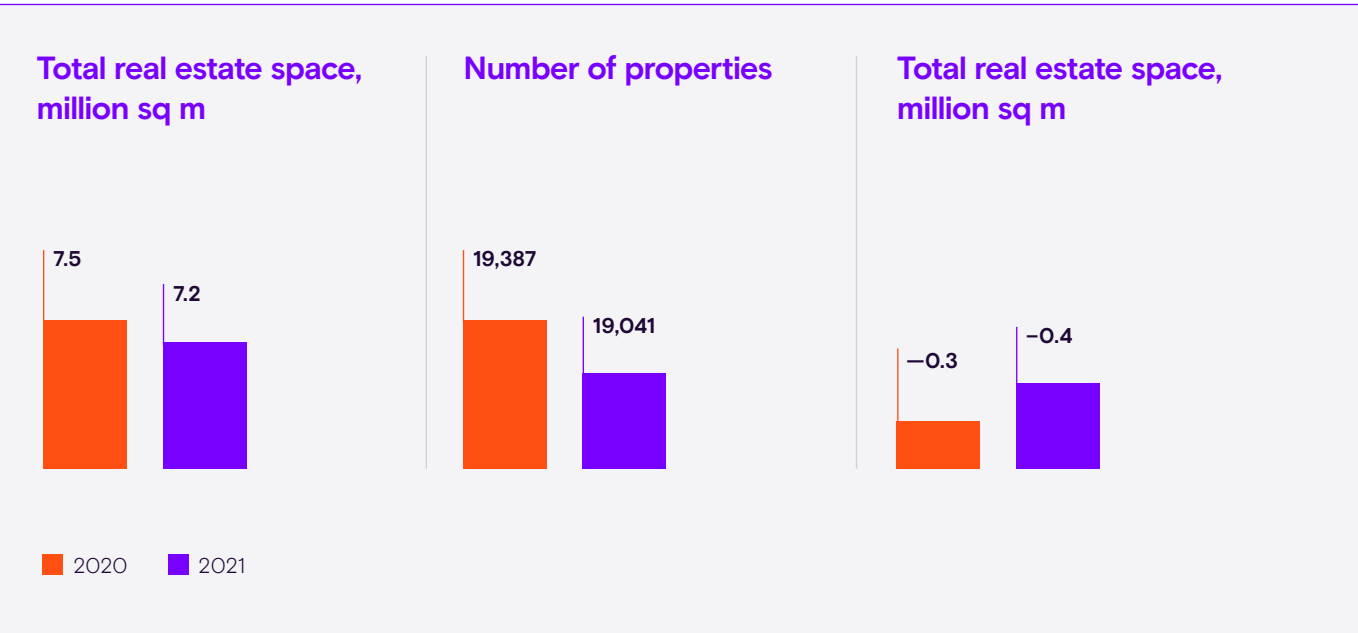
Real estate portfolio management

-5%

Real estate portfolio optimisation

Rostelecom continues to optimise its real estate portfolio to maximise profit and maintain an optimal level of real estate ownership.

In 2021, the total space of assets within our real estate portfolio decreased by 5%, or 386 thousand sq m.



2.7 Financial results

Key financial highlights

In 2021, along with active business growth in mature and new fast-growing segments, Rostelecom consistently improved operational efficiency, including by transforming its management model and driving cost reduction in internal processes. Strategic and structural changes enabled the Company to achieve its key financial and operational targets while ensuring higher margins and cash flow for the business, as well as a lower relative debt burden.

The Company’s revenue for 2021 was up 6% year-on-year to RUB 580.1 billion.

OIBDA grew by 13% year-on-year to RUB 218.8 billion, and OIBDA margin was 37.7% in 2021, up 2.2 p.p. year-on-year.

Rostelecom’s net profit rose by 26% to RUB 31.8 billion in 2021.

Driven by an increase in operating cash flow, the Company implemented some investment projects ahead of schedule and stayed within the target corridor for the CAPEX/revenue ratio. In 2021, CAPEX excluding government-sponsored programmes increased by 11% year-on-year to RUB 118.7 billion and amounted to 20.5% of revenue.

Free cash flow for 2021 increased by 43% to RUB 32.5 billion.

Net debt¹ including lease liabilities (LL) increased by 8% over the year to RUB 505.2 billion. The Company’s LTM Net Debt (including LL)/OIBDA ratio decreased from 2.4x to 2.3x.

The main contributors to the Company’s revenue growth in 2021 were the mobile business, digital clusters (including the Public Sector Digital Services and Products, and Information Security clusters), and the B2B/B2G segment. Services in the Company’s key markets for fixed broadband and pay TV maintained a positive trend.

¹ Here and below, net debt is calculated as long-term and short-term loans and borrowings (a) plus long-term and short-term lease liabilities (LL), (b) less cash and cash equivalents, and (c) less other financial assets.

+6% up to 580.1 bn RUB

REVENUE growth

+13% up to 218.8 bn RUB

OIBDA growth

+26% up to 31.8 bn RUB

NET PROFIT growth

+43% up to 32.5 bn RUB

FCF growth

2021 financial highlights

Metric	2021	2020	Change 2021/2020, %
Revenue, m RUB	580,092	546,889	6%
OIBDA, m RUB	218,814	194,050	13%
% of revenue	37.7%	35.5%	–
Operating profit, m RUB	73,707	68,965	7%
% of revenue	12.7%	12.6%	–
Net profit, m RUB	31,832	25,363	26%
% of revenue	5.5%	4.6%	–
CAPEX (excluding government-sponsored programmes) ¹ , m RUB	118,740	107,139	11%
% of revenue	20.5%	19.6%	–
Net debt (including LL), m RUB	505,197	466,035	8%
Net debt (including LL)/OIBDA	2.3	2.4	–
Free cash flow, m RUB	32,499	22,659	9,840

1 CAPEX is calculated based on the Statement of Cash Flows as cash paid for purchased property, plant and equipment, and intangible assets.

Revenue mix

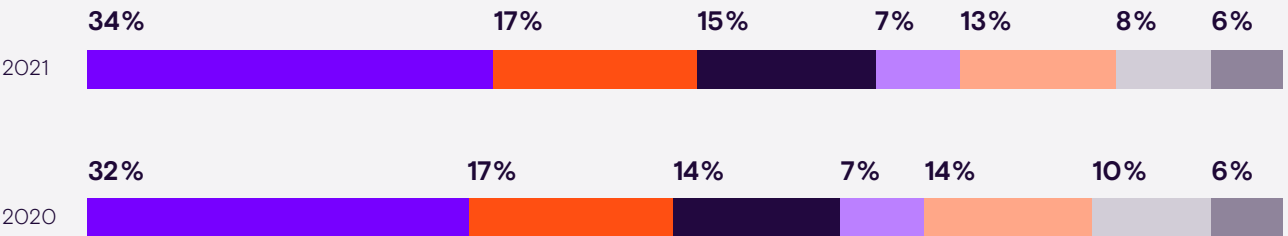
In 2021, Rostelecom’s revenue grew by 6% year-on-year to RUB 580.1 billion.

The revenue increase was due to the positive impact of the following factors:

- A 10% increase in mobile revenue driven by a higher volume of mobile data consumption and standard voice services
- A 14% growth in revenue from digital services driven by the development of platform solutions for the digital government and video surveillance services, and promotion of data centre services and cloud solutions
- An 11% growth in broadband revenue due to reporting of revenue from Internet connection contracts, as well as to an increase in the number of fibre customers and higher ARPU

Revenue by type of service, m RUB

Type of service	2021	2020	Change 2021/2020, %
Mobile services	194,345	176,958	10%
Fixed broadband	99,947	90,376	11%
Digital services	88,399	77,298	14%
TV	39,913	38,004	5%
Wholesale services	74,075	74,762	(1%)
Telephony	48,862	54,620	(11%)
Other services	34,551	34,871	(1%)
Total	580,092	546,889	6%



Revenue by segment and cluster, m RUB

	2021	2020	Change 2021/2020, %
Segments	333,277	323,187	3%
B2C ¹	138,430	138,290	0.1%
B2B/B2G ²	136,360	130,185	5%
B2O ³	58,487	54,712	7%
Digital clusters	89,569	75,656	18%
Data centres and cloud services	35,276	29,981	18%
Digital regions	23,568	22,082	7%
Information security	8,856	6,024	47%
Other	21,869	17,569	24%
Mobile business	205,283	185,765	11%
Other	14,917	17,380	(14%)
Eliminations and adjustments	(62,954)	(55,099)	—
Total	580,092	546,889	6%

1 Retail customers.
2 Business customers and public sector.
3 Operators.

Operating profit analysis

In 2021, Rostelecom’s operating expenses grew by 6% year-on-year to RUB 506.4 billion.

Operating expenses trends were influenced by:

- a 17% increase (of RUB 20.4 billion) in depreciation charges and impairment losses on non-current assets, due to factors including higher depreciation charges associated with new property, plant and equipment, intangible assets and leases
- a 10% increase (of RUB 10.1 billion) in other operating expenses, including expenses associated with making additional provisions and with costs of promoting the Company’s services
- an 8% increase (of RUB 3.1 billion) in material, repair and maintenance costs, due in particular to higher utility costs
- a 73% decrease (of RUB 5.3 billion) in the impairment loss of financial assets measured at amortised cost, due to factors including the recovery of provisions for certain assets
- a 51% increase (of RUB 3.1 billion) in the gain on disposal of property, plant and equipment, and intangible assets mainly due to better results from the sale of real estate.

Operating expenses breakdown, m RUB

Metric	2021	2020	Change 2021/2020, %
Personnel costs	(137,209)	(136,389)	1%
Depreciation charges and impairment losses on non-current assets	(140,059)	(119,702)	17%
Interconnection charges	(96,816)	(95,635)	1%
Materials, utilities, repairs and maintenance	(43,426)	(40,302)	8%
Gain on disposal of property, plant and equipment, and intangible assets	9,051	5,992	51%
Impairment loss of financial assets measured at amortised cost	(1,911)	(7,165)	(73%)
Other operating income	20,736	21,883	(5%)
Other operating expenses	(116,751)	(106,606)	10%
Total	(506,385)	(477,924)	6%

Rostelecom’s operating profit in 2021 rose by 7% to RUB 73.7 billion.

OIBDA

OIBDA increased by 13% year-on-year in 2021 to RUB 218.8 billion.

OIBDA dynamics were driven by revenue growth and the above factors affecting operating expenses. OIBDA margin for 12M 2021 increased by 2.2 p.p. year-on-year to 37.7%. The main contributors to OIBDA growth in 2021 were the mobile business and the B2B/B2G segment.

OIBDA by segment and cluster, m RUB

Metric	2021	2020	Change 2021/2020, %
Segments	110,952	97,515	14%
B2C	36,734	33,556	9%
B2B/B2G	57,231	49,522	16%
B2O	16,987	14,437	18%
Digital clusters	25,438	20,586	24%
Data centres and cloud services	15,245	12,450	22%
Digital regions	5,094	4,415	15%
Information security	3,216	1,752	84%
Other	1,883	1,969	(4%)
Mobile business	88,082	75,051	17%
Other	1,699	6,024	(72%)
Eliminations and adjustments	(7,357)	(5,126)	
Total	218,814	194,050	13%

OIBDA calculation, m RUB

Metric	2021	2020	Change 2021/2020, %
Operating profit	73,707	68,965	7%
Add: depreciation	(140,059)	(119,702)	17%
Add: non-cash expense under the long-term incentive programme	(3,744)	(4,205)	(11%)
Add: expense under the private pension fund programme	(1,304)	(1,178)	11%
OIBDA	218,814	194,050	13%
OIBDA, % of revenue	37.7%	35.5%	2.2 p.p.

+2.2^{up to 37,7%}
p.p.

OIBDA margin growth

+24%

OIBDA OF DIGITAL CLUSTERS growth

+17%

OIBDA OF MOBILE BUSINESS growth

+14%

OIBDA SEGMENTS growth

Net profit analysis

In 2021, Rostelecom’s profit before tax increased by 20% to RUB 40.8 billion.

The dynamics of profit before tax during the reporting year were driven by an increase in operating profit and the absence of foreign exchange losses.

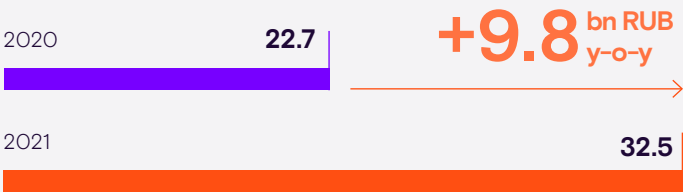
Income tax for 12M 2021 amounted to RUB 9 billion vs RUB 8.7 billion a year earlier. Income tax dynamics in 2021 were driven by changes in profit before tax, as well as by non-deductible expenses.

Rostelecom’s net profit in 2021 rose by 26% to RUB 31.8 billion.

Free cash flow

In 2021, the Company’s free cash flow reached RUB 32.5 billion, an increase of RUB 9.8 billion, or 43%, year-on-year. The positive free cash flow dynamics were influenced by OIBDA growth as well as the movement in working capital resulting mainly from an increase in advance payments for projects to develop platform solutions for the government (E-Government), which, among other things, accelerated the investment programme at the end of 2021.

Free cash flow, bn RUB

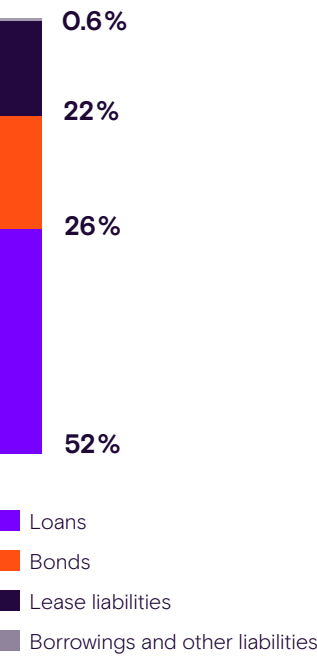


Debt

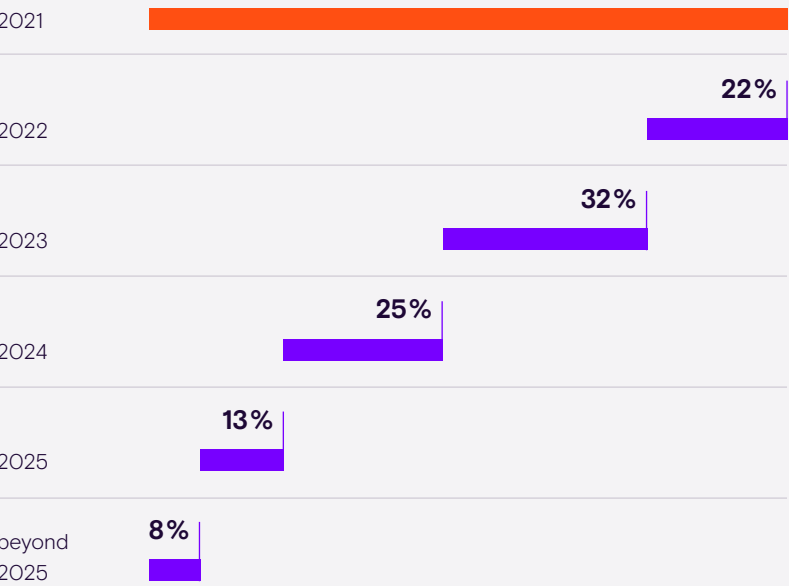
As at 31 December 2021, Rostelecom’s total debt (including lease liabilities) increased by 12% to RUB 568.7 billion due to an increase in lease liabilities following a review of the capitalisation schedule under lease agreements. As at the above date, rouble-denominated liabilities accounted for 100% of the Company’s total debt.

The Group’s net debt (including LL) as at 31 December 2021 increased by 8% compared to the beginning of the year, totalling RUB 505.2 billion. The Company’s Net Debt (including LL)/OIBDA LTM¹ ratio decreased from 2.4x to 2.3x.

Debt by type of liabilities



Loans and borrowings maturity



Overall, Rostelecom demonstrated a robust increase in key financial metrics in 2021, meeting its targets.

1 Last 12 months.

2.8 Capital investment

In November 2021, the Board of Directors approved the Company's 2022 budget¹, including the capital investment programme².

Capital expenditure areas	2019 ³	2020	2021	2022	Major projects
Network infrastructure [backbone and regional network segments], %	9	8	8	6	IP/MPLS network expansion, construction of FOCL projects, upgrades to last-mile infrastructure
Network infrastructure [mobile], %	28	31	31	30	Development and upgrades of mobile networks, improvement of service quality, expansion of service offerings, regulatory compliance, and the enhancement of IT infrastructure, billing, and a monobrand sales channel
IT infrastructure, %	10	9	10	10	IT development and deployment, IT equipment replacement
Other [compliance, etc.], %	11	8	7	15	Regulatory compliance, development of socially significant services (Biometrics, Trusted Mobile Environment, etc.)
B2C [SAC, installations, etc.], %	24	22	17	16	Service development, enhancing service levels, construction of communications networks for residential customers
B2B/G [last mile, etc.], %	11	9	8	5	Service development, enhancing service levels, construction of communications networks for business and government customers
B2O [network equipment for projects], %	2	3	3	2	Service development, retrofitting the backbone network
Digital clusters, %	6	10	15	16	Data centres and cloud services, industry-specific services, e-services for state agencies, and cybersecurity solutions
Actual/planned capital investment (CAPEX) excluding government-sponsored programmes, RUB m (according to the cash flow statement)	105,657	107,139	118,740	130,000–140,000	

1 Approved by the Board of Directors on 30 November 2021. Minutes No. O5 dated 30 November 2021.
2 Information on major projects implemented in 2021 within the capital investment programme is available in Appendix 1 Additional Information on PJSC Rostelecom to this Annual Report.
3 Figures for 2019 have been revised to reflect the consolidation of the mobile subsidiary.

The most significant CAPEX projects in 2021–2022:

Projects to expand the existing network infrastructure	<ul style="list-style-type: none">Expansion of the IP/MPLS data networkDevelopment of access networksConstruction of the Kingisepp–Kaliningrad submarine FOCLConstruction of the Petropavlovsk–Kamchatsky–Anadyr submarine FOCLUpgrades to last-mile infrastructure
Projects to develop mobile business	<ul style="list-style-type: none">Projects to improve service quality and develop the mobile networkUpgrades to voice switching nodesUpgrades to the backhaul networkInternet of ThingsPrivate LTE networks (pLTE)IT infrastructure and billing developmentDevelopment of a monobrand sales channel
Projects to develop the IT infrastructure	<ul style="list-style-type: none">Rollout and development of a CRM system in the B2C segmentBASIS programme
Other infrastructure projects, compliance	<ul style="list-style-type: none">Biometric systemRostelecom's Innovative Laboratory information systemTrusted Mobile EnvironmentImplementation of the Yarovaya package requirements
Projects to develop the B2C segment	<ul style="list-style-type: none">Gaming platformOmniChat and chatbot
Projects to develop the B2B/G segment (business and government)	<ul style="list-style-type: none">Expansion of the Virtual PBX service footprintFederal Wi-FiAutomation of sales and connectionsSetting up communications services for business and government customers
Projects to develop the B2O segment (telecom operators)	<ul style="list-style-type: none">Infrastructure Operator to Operators project – O2OChannels for operators within the Digital Economy programme in the B2O segmentRetrofitting Rostelecom's backbone network for international operators

Projects to develop digital clusters

- Expansion of services (including E-Government Infrastructure, the Single Governmental Cluster for federal executive authorities, backup data centres of the Unified State Healthcare Information System, National Cloud Platform, and a data mart of the Unified State Register of Taxpayers)
- Computing infrastructure for the information systems of the General Prosecutor's Office of the Russian Federation (hosting)
- Construction of a server room at the 7 Butlerova St. data centre in Moscow
- Remote e-voting services (DEG 2.0)
- Construction of data centres (including a data centre in Yekaterinburg, design and construction of utility engineering infrastructure for Rostelecom's data centre at the Kalinin NPP, site acquisition, construction of a 2200-rack data centre at 22 Ostapovsky Proezd (M-4), construction of a 1000-rack data centre at 37 Korovinskoye Highway (NORD-5/6), construction of two independent Moscow-Kalininsky Data Centre FOCLs)
- Development and enhancement of Digital Health cluster products
- Further development of a traffic enforcement system in Saint Petersburg
- Expansion of Saint Petersburg's urban video surveillance system



2021 Infrastructure expansion

Technology platform upgrade

In 2021, Rostelecom continued improving its IT systems and infrastructure. The technology platform upgrade implies an extensive expansion of fibre networks and upgrade and/or replacement of copper networks with more advanced ones, as well as centralisation of the IT landscape to reduce maintenance costs and improve the overall network manageability.

Network infrastructure expansion

Rostelecom provides transmission services for any data format via cable, radio relay, or satellite links. Our digital network is based on the DWDM¹ technology and covers virtually all of Russia.

In 2021, we designed, built and launched additional networks to expand our network infrastructure capabilities. We leveraged them to implement a number of large-scale projects.

- Construction of the 1,109 km Baltic communication line through Russian territorial waters and exclusive economic zones in the waters of Finland and Sweden
- The All-Russian Population Census, with over 1,500 TB of data transmitted over Rostelecom's network
- Video surveillance at 45,091 territorial election commissions and polling places, with new FOCLs laid to 982 of them, to ensure information exchange on Single Voting Day
- Digital Education project: R&D at 7,899 project sites and construction and installation works at 1,969 sites
- 4,321 communication channels and 6 call centres to ensure uninterrupted communication during the Direct Line with Vladimir Putin, with 263 operators engaged in information processing
- Connecting 12,650 social infrastructure facilities to the data network, laying 20,181 km of fibre
- Bridging the Digital Divide project: construction of 18,713 km of fibre and commissioning of 1,483 access points under the first phase, construction of 1,828 km of FOCL and commissioning of 1,201 base stations under the second phase
- Online broadcasting of the Unified State Examination at 5,905 exam sites with security specialists ensuring proactive management of the telecommunications network for uninterrupted broadcasting, and implementation of a mechanism for prompt response to network incidents

¹ Dense Wavelength Division Multiplexing – modern technology for carrying a large number of optical channels on the same fibre.

Network infrastructure

The high quality and reliability of our services are secured through:

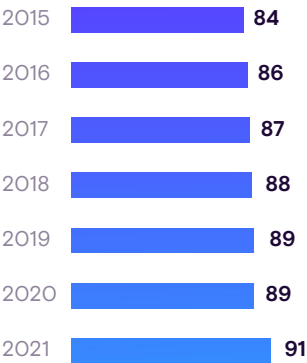
- redundancy of communications equipment and lines
- route separation
- setting up cross-border links and gateways for several independent foreign operators in each relevant international market to minimise traffic loss risks and consequences of outages.

Rostelecom's network infrastructure includes the following elements.

Backbone network	Moscow–Novorossiysk, Moscow–Saint Petersburg and Moscow–Khabarovsk fibre lines are designed to accommodate 80 optic lines with a capacity of up to 100 Gbps each.
Regional data network	Communications lines, mainly with a capacity of 10 Gbps and 100 Gbps, connecting large population centres and linked to the backbone network.
International networks	Our international fibre lines provide connections to Azerbaijan, Belarus, Georgia, Kazakhstan, China, Latvia, Lithuania, Mongolia, Poland, Ukraine, Finland, Sweden, Estonia and Japan.
Access networks (FTTB, GPON)	Rostelecom develops its access networks based on advanced GPON (gigabit-capable passive optical network) and FTTB (fibre-to-the-building) technologies that can carry the signal to a specific building and farther to a customer's apartment or office.
International points of presence	Our international points of presence (POPs) are located in Stockholm, Frankfurt on Main, Tokyo and Hong Kong. A high-speed transit route is maintained to provide connectivity between Europe and Asia through Russia.

Voice ICT network

Local telephone network digitisation, %



Our voice ICT network provides for telephony services, traffic transit, conference calls, Integrated Services Digital Network (ISDN) and intelligent communications network (ICN) services, virtual PBX services and signalling traffic transit.

In 2021, Rostelecom completed the construction of most combined DLDTN/IZTN/ESISLN/ECPN¹ nodes based on vIMS infrastructure located in each Russian region covered by Rostelecom’s network. These nodes are regional sites within the ICT platform we use to standardise our technical solutions and optimise our network infrastructure in line with Rostelecom’s common network development principles. To date, 60 DLDTN/IZTN/ESISLN/ ECPN nodes have been commissioned based on vIMS architecture.

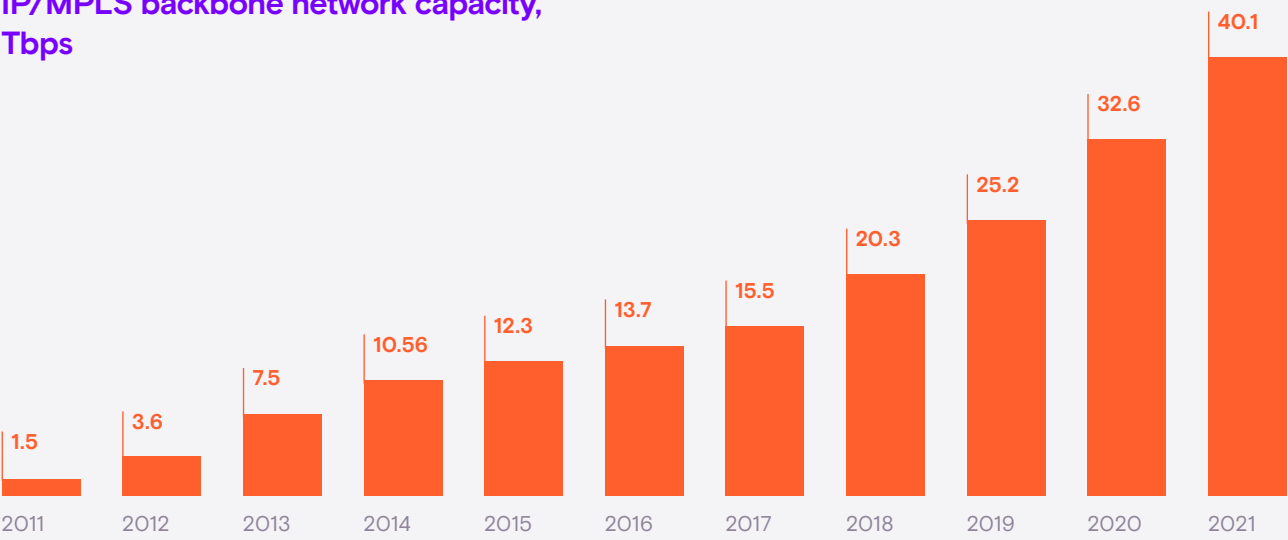
Data network

In 2021, we continued expanding our IP/MPLS backbone network, increasing its capacity by 7,500 Gbps to 40.1 Tbps.

Rostelecom’s IP/MPLS² data network comprises backbone and regional data networks, and supports the delivery of a range of services, including:

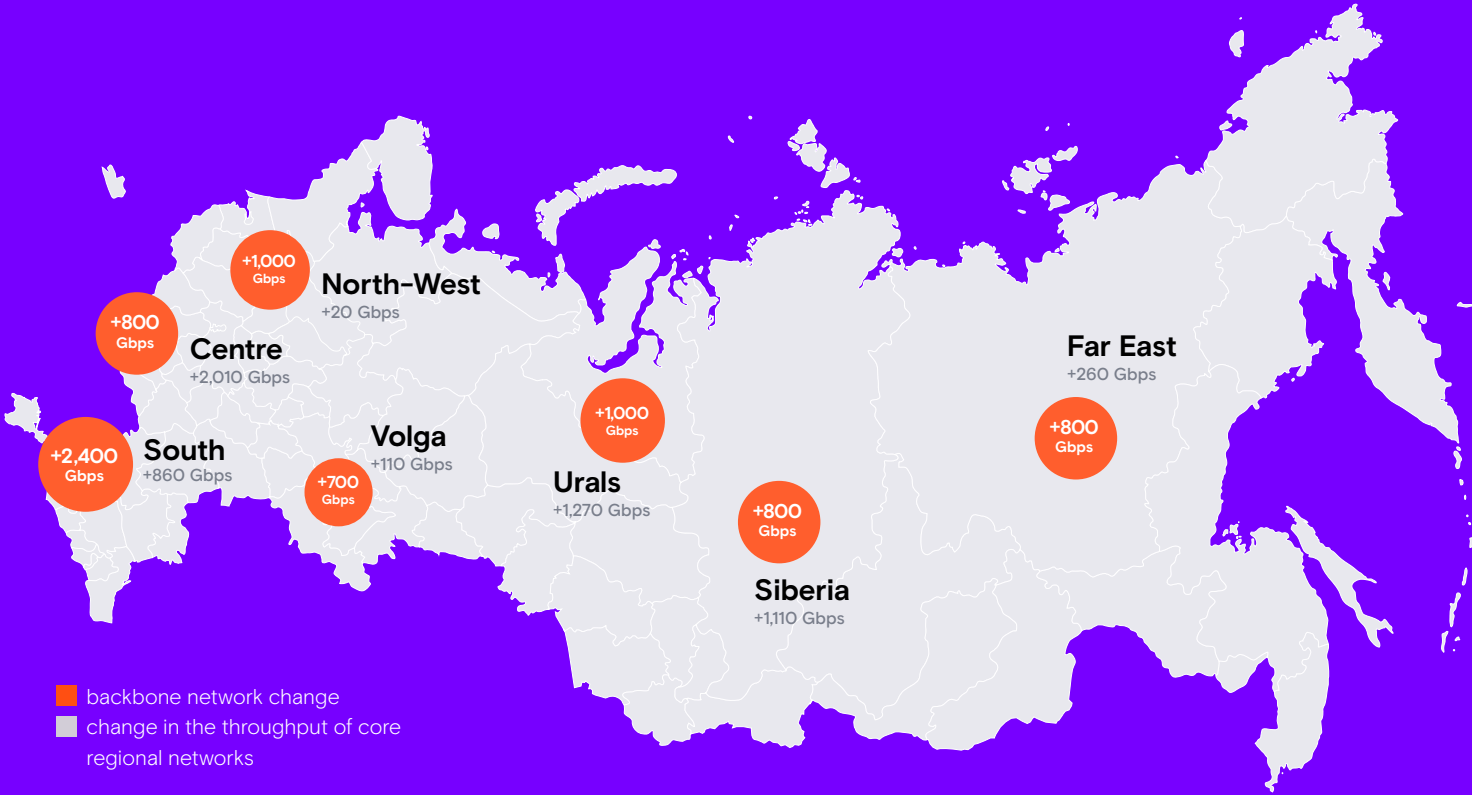
- broadband access, IPTV, and TV content management
- interconnection and internet traffic transit
- virtual private networks
- data centre services.

IP/MPLS backbone network capacity, Tbps



1 Domestic long-distance transit node / inter-zone transit node / end system and intermediate system local node / emergency call processing node.
2 Multiprotocol Label Switching – technology that enables fast packet switching in multiprotocol networks through labelling.

Backbone network



+7,500 Gbps

Expansion of the backbone data transmission network during the year

+5,640 Gbps

Growth in regional core network capacity in 2021

Mobile network

>330

mobile base stations installed in small towns

23.2^m sqm

total area covered by the mobile communication network of infrastructure projects in Moscow

The investment programme for technical development of the network allowed Rostelecom’s mobile operator to maintain perceived service and mobile data quality at high levels. The operator upgraded the voice segment of its core network in 24 regions and reduced the proportion of problematic spots.

In 2021, the operator participated in the second phase of Rostelecom’s Bridging the Digital Divide project. Over the year, the company installed more than 330 base stations in small communities with of populations between 100 and 500 people. The Company also uses the 2,300–2,400 MHz radio frequency band, which enables high mobile data speeds.

This year, to support further 5G development, Rostelecom and its mobile operator deployed Russia’s first industrial 5G testing site at the Botkin Hospital in Moscow, a flagship in the city’s healthcare system. Testing of 5G-based equipment will expedite the launch of innovative technologies in healthcare and cutting-edge technology services. Using 5G speeds, the Botkin Hospital will be able to collect, process and transmit large amounts of data.

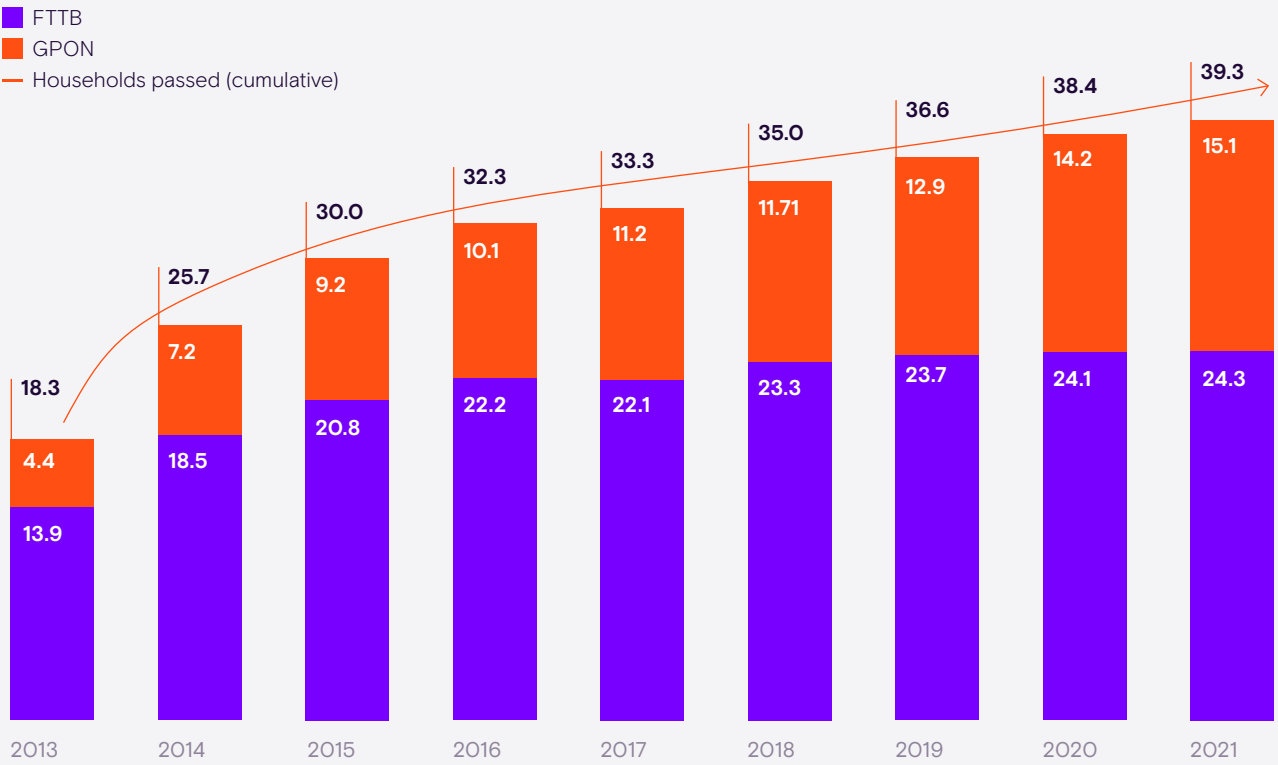
The list of significant projects includes the Moscow Metro as an important strategic location where the operator continues to improve network quality. In the reporting year, the network was expanded to the tunnels on the Serpukhovsko-Timiryazevskaya line, in addition to the Arbatsko-Pokrovskaya, Sokolnicheskaya, Koltsevaya and Zamoskvoretskaya lines covered earlier. By the end of 2021, our network was available along 420 km of the Moscow Metro lines, with the number of base stations in the metro up 19% year-on-year. The opening of the Big Circle Line gave impetus to active construction of new base stations along the new line. In 2021, the operator provided high-quality connectivity to all new stations on the Big Circle Line. The company has already started covering tunnels between stations and plans to enable stable mobile data services along the entire line in 2022.

The company focuses on improving the signal in residential, mixed-use and commercial buildings. Over the past year, our network coverage of infrastructure facilities in Moscow exceeded 23 million sq m. An important development in boosting the cell signal in residential premises was cooperation with MR Group. Modern buildings often block the radio signal from base stations outside, so the operator, jointly with the ISK system integrator, resolved to provide a ready-made infrastructure for residential communication equipment in line with an innovative standard. The Seliger City residential project became the first facility with network infrastructure designed to include sites for communications equipment.

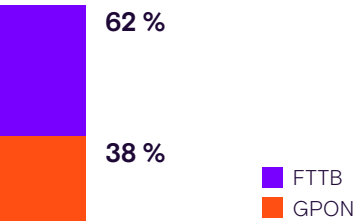
Access networks

In 2021, Rostelecom continued to upgrade its access networks to provide customers with high-quality digital services through advanced fibre technology.

Household coverage by technology, million households



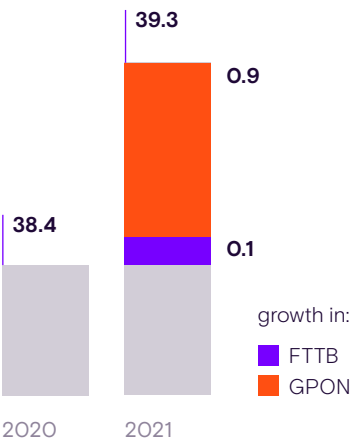
Households by access technology as at 31 December 2021



In 2021, as part of its campaign to improve overall resilience by providing targeted technical support in buildings where equipment is installed, the Company implemented the Ambrosia project to replace obsolete equipment. Under the project, 4,035 access and aggregation switches were replaced to reduce the number of customer queries.

To reduce the total cost of network ownership, improve the overall resilience, and boost end-user data speeds, 842 analogue telephone exchanges were decommissioned in the reporting year. Subscribers were migrated to voice gateway solutions and switched from copper to fibre technology. In particular, the Company implemented 9 copper-to-fibre transition projects and installed 11 telecom access nodes.

Household coverage,
million households



Submarine cables

Submarine cables provide connectivity between Russia and other markets. Rostelecom has an indefeasible right of use in the Fibre-Optic Link Around the Globe international submarine links between the UK-Middle East-Japan and South-East Asia-Middle East-Western Europe.

As the owner of core capacities in international submarine fibre links, Rostelecom holds a 67% stake in the Georgia-Russia link and a 50% stake in the Russia-Japan link.

In 2021, Rostelecom completed the construction of the submarine fibre-optic communication line (SFOCL) Kingisepp-Kaliningrad in the Baltic Sea as part of the Access to Communications Services Across Russia initiative.

In 2021, the SFOCL had a total length of 1,109 km, including 1,064 km of submarine and 45 km of land infrastructure, with 4 and 16 core fibre cables, respectively, and a capacity of 100 Gbps, expandable to 8 Tbps. The new SFOCL will provide the region with access to all services without relying on landlines laid through other countries.

1,109 km
length of SFOCL between
Kingisepp and Kaliningrad

In 2021, Rostelecom continued its MOST programme to release redundant property, designed to upgrade our last mile infrastructure through replacing copper networks with fibre access solutions. The project maximises our disposal proceeds while cutting operating expenses on network infrastructure maintenance through releasing redundant property and reducing property maintenance costs. Under the programme, in 2021 Rostelecom completed 65 projects, installed 519 telecom access nodes and migrated 255,277 telephone ports to VoIP.

Since 2014, Rostelecom has been successfully operating its Hermes platform, designed to automate access network design and construction processes. According to Hermes data, 14.5 thousand km of fibre were constructed in 2021 to connect B2B customers.

We expanded our access networks, with 39.3 million households passed by fibre as at the end of 2021, up by almost 1 million from 2020, including 111 thousand connected to FTTB and over 868 thousand to GPON.

Satellite communications

Rostelecom’s backbone satellite network complements its terrestrial digital network by connecting hard-to-reach locations with no access to land fibre. In a number of areas, satellite communications also serve to back up land infrastructure.

Utilisation of our satellite communications network in areas along our backbone lines has been gradually decreasing as we continue commissioning submarine fibre to connect Magadan and Petropavlovsk-Kamchatsky.

TV infrastructure expansion

In 2021, Rostelecom continued to develop its interactive TV infrastructure, including upgrading IPTV and OTT platforms, further developing the Wink video service and introducing other new products.

The upgrades of the interactive TV infrastructure completed during the year have enabled us to increase our IPTV and OTT subscriber base while preventing equipment failures. The Wink platform was expanded with 87 new servers.

87
new Wink platform
servers

During the year, Rostelecom rapidly upgraded the server hardware on the most heavily-used Wink nodes, Freeview and VoD, thus almost doubling the server efficiency and enhancing the service reliability. In addition, 16 Freeview nodes were upgraded and 17 new servers were installed, boosting the cumulative service peak traffic to 3 Tbps.

To expand the Wink film library, a data storage system was installed to store up to 4 PB of original content. The Company also optimised the service traffic by deploying an mCDN system with a total capacity of 640 Gbps.

As part of the TV content exchange network development, in 2021, Rostelecom completed a project for the Russian Television and Radio Broadcasting Company to deliver the TV signal to 45 cities.

IT cluster development

In 2021, we continued our efforts to improve the efficiency of information systems and speed up interaction across all business units.

The Company paid particular attention to integration services to reduce time-to-market for new products, platforms and services, and was actively involved in creating and deploying import-substituting products.

Key IT initiatives and development areas in 2021

Upgrade of the single integration platform

To enhance integration, the Company further improved its videoconferencing systems (TrueConf and IVA).

A new version of the TrueConf software product included over 100 critical updates and improvements. The technology was used to hold over 23 thousand conferences attended by more than 300 thousand users.

For the IVA service, Rostelecom specialists developed an engine to enable conferences hosting over 200 people on the screen and involving more than 700 participants. The technology was used to hold over 24 thousand conferences involving about 190 thousand users.

To improve customer premises equipment, the Company launched a project to migrate employees to remote VDI-based workstations (powered by TIONIX), covering 10 thousand workstations.

Ensuring high engagement levels

In 2021, the Company implemented a set of organisational measures and improvements to the Architectural Design Portal to enhance interaction and user experience.

Implementing a process approach to interaction in IT divisions and making updates as needed helped turn the Architectural Design Portal into the master system for managing company-wide information systems as well as the information source for reporting prepared by the operational, architectural, import substitution, testing, and other divisions.

BASIS programme

The programme to support internal business processes made strong headway in 2021, with target business processes in the B2B/B2G segment designed and implemented to be launched in Novosibirsk, for the first time in Russia. We developed groundbreaking CRM software to power the B2B/B2G segment at the federal level, potentially expandable to the B2O segment.

The product sales to small and medium-sized businesses piloted in a number of Russian regions.

Single Reporting and Master Data Management Framework

In 2021, the platform components were included in the unified register of domestic software. Potential customers can now make use of counterparty check services providing address and business data. The Company deployed a unique suite of tools for storing, processing and managing corporate data at organisations of any scale, enabling data streaming and batch processing, data storage and analytics, company-wide management of reference documents and business terms, and component deployment, configuration and monitoring, as well as providing a single point of access to data.

These solutions were brought to market jointly with B2B/B2G product teams and cloud service providers.

Developing platforms

Platform development efforts included deploying computing nodes in 13 data centres across all federal districts, bringing the total computing capacity to 14 thousand vCPUs and 133 TB vRAM. The capacity additions comprised 3,500 virtual machines and 338 information systems.

As part of the import substitution programme, we switched to Russian-made server hardware and TIONIX software, included in the unified register of domestic software of the Russian Ministry of Digital Development, Communications and Mass Media.

Developing IT management models

The existing Karma Framework management model, based on self-organisation of working teams, now includes a workshop and updated infrastructure management software. Workshop recordings are now available on Wink. In addition, a mobile app was developed to manage Rostelecom projects. The Company also continued to actively promote Agile and DevOps methodologies for projects and teams.

2021 Risk management

Risk management system

Rostelecom has in place a risk management system for effective modelling, assessment and mitigation of risks, structured in full compliance with the requirements of domestic and international regulators. The Company monitors and adopts best practices in risk management, regularly updating its relevant internal documents and focusing on continued automation and digitisation of its risk management system to enable further development.

Rostelecom’s risk management system (RMS) emphasises effective management decision making regarding risks and uncertainties and on capturing identified opportunities to achieve strategic goals.

Rostelecom’s key internal documents regulating risk management:

- PJSC Rostelecom’s Charter
- Risk Management Policy
- Regulations on the Board of Directors
- Regulations on the Audit Committee of the Board of Directors
- Regulations on the Integrated Risk Management System
- Regulations on the Risk Management Committee of the Management Board
- Risk Management Procedure

Risk management is based on a system of concise and measurable corporate goals set by the Board and management. The Board of Directors approves Rostelecom’s Risk Management Programme every year and monitors its execution on a quarterly basis. Quarterly progress reports on risk management and relevant matters are reviewed at the meetings of the Management Board’s Risk Management Committee, which approve follow-up risk management initiatives.

The Risk Management Programme includes:

- simulation modelling of actual/plan variance ranges for business plan items
- a list of strategic and corporate risks and corresponding potential risk scenarios
- key strategic and corporate risk indicators and thresholds
- strategic and corporate risk management activities.

At least once a year, the Company’s internal audit function conducts an independent evaluation of the risk management system’s effectiveness and performance over the previous period.

The 2021 performance evaluation of the risk management system suggests that the system is effective, scoring well above average. The Risk Management Programme takes into account the Company’s strategic focus, legal requirements, and external changes. Risk management objectives were achieved through regular monitoring of the system’s performance by the Risk Management Committee of the Management Board and updating the Risk Management Programme during the reporting period.

In 2021, risk management focus was shifted to business continuity, components shortage crisis, and import substitution risks.

This was due to factors such as:

- COVID-19 pandemic: lower production volumes and growth rates, economic crisis, changes in logistics flows, and longer delivery times
- US sanctions policy against China: insufficient technology-driven production, panic moods in the markets for electronics components for equipment manufacturers, and rising metal costs
- delivery of major public contracts: the need to provide multiple telecom equipment items within short timeframes, and supplies of Telecommunication Equipment of Russian Origin for public projects
- changing laws on setting equipment quotas.

The Company analysed these factors and adopted a set of measures to minimise their negative impacts should they materialise.

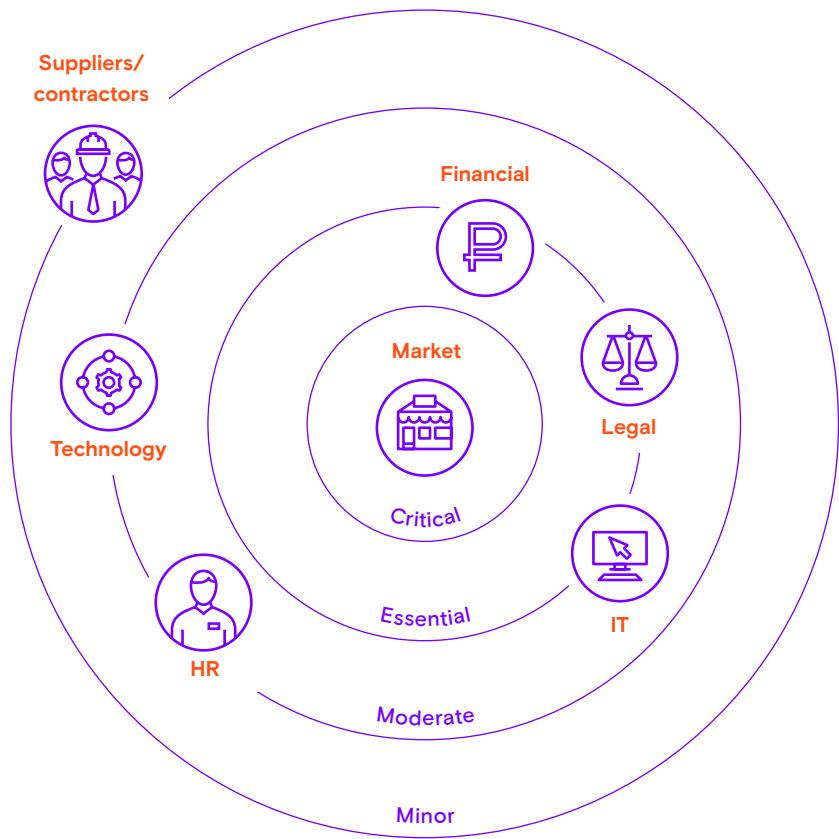
In 2022, the Company plans to further develop its risk management system through the following activities:

- Improving compliance with Russian and global standards, the effectiveness of the risk management system, and the integration methods to embed risk management tools into the Company’s operations
- Developing a training course available to all employees at Rostelecom’s Corporate Online University to raise awareness and ensure clear understanding and implementation of risk management measures
- Driving the further rollout of the risk management system at subsidiaries and affiliates
- Enhancing the management of operational risks, including business continuity risk

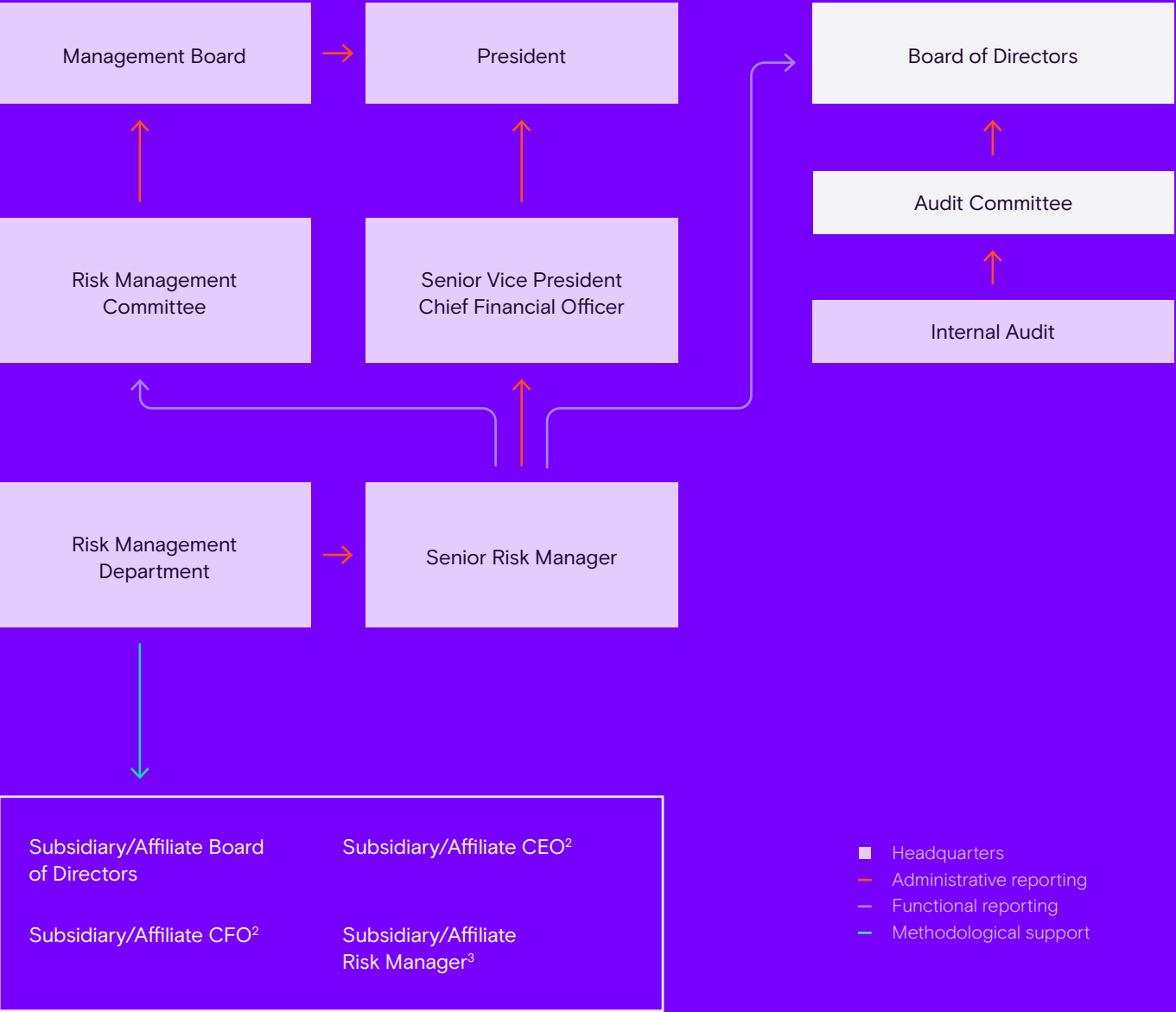
Risk management actors

Actor	Roles and responsibilities
Board of Directors	Defines the operating principles and improvement areas of the risk management system; carries out overall monitoring of risk management performance
Audit Committee	Oversees the operation of, and identifies gaps in, the risk management system; makes recommendations to the Board of Directors
The Company's management	Manages key risks and regularly monitors the risk management system
Internal Audit and Internal Control units	Assess risk management performance and advise on improvements
Senior Risk Manager and Risk Management units	Build, monitor, and maintain the risk management system
Business units and employees	Manage risks within their areas of responsibility

Risks of the Rostelecom Group



Risk management interactions within Rostelecom Group¹



¹ The Company's management is involved in the activities of the Risk Management Committee as risk owners and risk mitigation owners. The Committee has 11 members (President, Senior VPs, and VPs). The President of PJSC Rostelecom is the Committee Chairman.
² Subject to changes depending on the organisational structure of a specific subsidiary or affiliate.
³ If applicable.

Integration of risk management with the Company's cross-functional processes

Risk management is linked to strategic planning, budgeting, and the implementation of investment projects and products, as well as to other cross-functional processes at the Company.

Strategic planning

When developing strategic plans, risks affecting the achievement of strategic goals are identified and analysed, and simulation modelling is carried out.

Budgeting

Analysis and acknowledgement of risks associated with non-achievement of key financial KPIs, and their simulation modelling.

Investment planning for projects and products

Analysis and acknowledgement of project and product risks associated with non-achievement of target NPV and other indicators, and their simulation modelling followed by the development of risk mitigation measures.

Procurement procedures

Detailed review and acknowledgement of risks when selecting suppliers and contractors, followed by the monitoring of key indicators on an interactive dashboard.

Training

Training programmes are run on a regular basis for employees involved in risk management. The Corporate Online University has the Risk Management System training course available to all Rostelecom employees.

Sustainability risk management

Apart from managing the aforementioned risks, Rostelecom strives to consider sustainability risks in conducting its business.

HSE risks

To minimise these risks, Rostelecom approved an HSE and fire safety policy, which outlines the key objectives, principles, and focus areas to create safe working conditions, keep all employees safe and healthy and ensure industrial, fire and environmental safety. In 2020–2021, due to the COVID-19 pandemic, special attention was paid to the health and safety of employees: Rostelecom provided all the necessary personal protective equipment, carried out regular disinfection of production facilities, and moved most office staff to work from home. These risks are monitored in line with the Company's business plan.

Anti-corruption risks

The Company identifies corruption risk as a key hypothesis in controlling the risk of legal violations, penalties, and financial and reputational damage. The Risk Management Programme enables monitoring of indicators related to identified affiliate relationships, completion of anti-corruption training, and submission of declarations by employees in positions exposed to a higher corruption risk.

Risk of skilled personnel shortage

The Risk Management Programme covers the risk of shortages in key personnel. The rationale for including this risk is the creation of a single IT landscape and platforms for launching new digital and converged products, as well as improving customer relations. The HR strategy 2025 focuses on ramping up digital skills and capabilities and digital literacy. In line with the Company's strategic priorities for employee development in 2021–2025, the 2021 Risk Management Programme tracked the metrics for training and advanced training completion and certification rates across digital skills programmes. The Company also monitors the turnover rate of the Group's employees aged under 30.

Risks and mitigation

The Company forecasts no changes in risk manageability levels in 2022.

Risks in 2021	Risk owners	Mitigation in 2021	Risk significance	Manageability in 2021	Impact on financial and economic performance	Risks in 2022	Mitigation plans for 2022
Market							
The risks associated with increased competition in the market and potential loss of competitive advantage in new products; these risks are the most critical ones for the Company.	<ul style="list-style-type: none">• Senior Vice President for Corporate and Government Segments• Vice President for Digital B2C Business• Senior Vice President for Mass Segment Business• Vice President for Carrier Business and Sales• Senior Vice President – Chief Financial Officer	<ul style="list-style-type: none">• Measures to improve customer loyalty• Development of new services through product teams• Optimisation of TTM for new products	Critical	Medium	Revenue, segment OIBDA	Loss of competitive advantage in new products	<ul style="list-style-type: none">• Measures to improve customer loyalty• Development of new services through product teams• Optimisation of TTM for new products
Financial							
Insufficient funds to invest in business growth	Senior Vice President – Chief Financial Officer	<ul style="list-style-type: none">• Prioritising projects depending on applicable risk factors by project type• Considering risk criteria in project planning models• Regular audits• Improving approval, procurement, and project control processes• Introducing credit limits, additional collateral for integration products and additional restrictions for hire purchase of equipment• Monitoring of the environment and, where appropriate, additional hedging of the loan portfolio	Significant	Medium	FCF, OIBDA	Insufficient funds to invest in business growth	<ul style="list-style-type: none">• Prioritising projects depending on applicable risk factors by project type• Considering risk criteria in project planning models• Regular audits• Improving approval, procurement, and project control processes• Introducing credit limits, additional collateral for integration products and additional restrictions for hire purchase of equipment• Monitoring of the environment and, where appropriate, additional hedging of the loan portfolio
Financial (credit and accounting) risk					FCF, OIBDA, CAPEX, net profit	Financial (credit and accounting) risk	
Legal							
Risks of losses/damage to business reputation due to a breach of contract terms, non-compliance with Russian and applicable international laws or internal documents, as a result of sanctions and/or other enforcement actions by supervision and control bodies, legal errors in doing business, flaws in the legal framework	Vice President for Legal Affairs	<ul style="list-style-type: none">• Monitoring regulatory changes• Training employees on the Anti-corruption Policy• Cooperating with market partners; participating in industry working groups• Assessment of network modernisation costs required to provide services under new regulations• Import substitution programme	Significant	Low	Revenue, OIBDA, CAPEX	Risks of losses/damage to business reputation due to a breach of contract terms, non-compliance with Russian and applicable international laws or internal documents, as a result of sanctions and/or other enforcement actions by supervision and control bodies, legal errors in doing business, flaws in the legal framework	<ul style="list-style-type: none">• Monitoring regulatory changes• Training employees on the Anti-corruption Policy• Cooperating with market partners; participating in industry working groups• Assessment of network modernisation costs required to provide services under new regulations• Import substitution programme

Risks in 2021	Risk owners	Mitigation in 2021	Risk significance	Manageability in 2021	Impact on financial and economic performance	Risks in 2022	Mitigation plans for 2022
IT							
On the horizon of three to five years, the Company's most important risk will be violation of the integrity, confidentiality and availability of assets/data in protected information systems due to an increase in the proportion of attacks against the Company's data assets and customers	<ul style="list-style-type: none">• Senior Vice President for Technical Infrastructure• Vice President	<ul style="list-style-type: none">• Implementing projects for cybersecurity and information protection of the network and internal services• Prioritising improvements to internal IT systems• Acknowledging risks related to critical internal and external services provided by the Company when running planning procedures• Monitoring and controlling the weakest elements of the security system to eliminate vulnerabilities at all levels and maintain confidentiality of data assets	Significant	High	Revenue, OIBDA	Violation of the integrity, confidentiality and availability of assets/data in protected information systems Violation of the confidentiality, integrity and availability of information on the Company's corporate data assets	<ul style="list-style-type: none">• Implementing projects for cybersecurity and information protection of the network and internal services• Prioritising improvements to internal IT systems• Acknowledging risks related to critical internal and external services provided by the Company when running planning procedures
HR							
Key personnel shortages	Senior Vice President for Organisational Development and Human Resources	<ul style="list-style-type: none">• Enhancing employer brand• Leveraging modern talent search and recruitment tools• Developing and using retention tools• Introducing new training tools• Building a talent pool	Moderate	High	Revenue, OIBDA	Key personnel shortages	<ul style="list-style-type: none">• Enhancing employer brand• Leveraging modern talent search and recruitment tools• Developing and using retention tools• Introducing new training tools
Technology							
Business interruptions due to key infrastructure failures The risk of increased incident rates will remain as new technology to filter traffic and restrict access to banned sites is deployed under the "sovereign internet" law	Senior Vice President for Technical Infrastructure	Access network upgrade projects to reduce maintenance costs and failures, developing network failure monitoring systems	Moderate	High	CAPEX, OIBDA	Business interruptions due to key infrastructure failures	Access network upgrade projects to reduce maintenance costs and failures, developing network failure monitoring systems
Suppliers/contractors							
The risk of disruptions to the supply chains of key suppliers and contractors remains relevant in the near term as negative sanctions policies remain in place	<ul style="list-style-type: none">• Chief Procurement Officer• Senior Vice President – Chief Financial Officer	<ul style="list-style-type: none">• Improving approval, procurement, and project control processes• Work with equipment suppliers to expand the range of equipment integrated with Rostelecom's services	Insignificant	High	Revenue	Disruptions to the supply chains of major suppliers and contractors	<ul style="list-style-type: none">• Improving approval, procurement, and project control processes• Work with equipment suppliers to expand the range of equipment integrated with Rostelecom's services

2021 ESG report: environmental, social and governance factors

Our ESG priorities

- Environment
- Effective environmental control and management system
 - Energy efficiency
 - Waste management
 - Reducing emissions
 - Responsible consumption

- Social impact
- Employee training and development
 - Ensuring workplace safety
 - Supporting employees and increasing engagement
 - Philanthropy
 - Digital services for better quality of life

- Corporate governance
- High corporate governance standards
 - Fair remuneration
 - Shareholder rights
 - Anti-corruption
 - High procurement standards

Sustainable Development Goals prioritised by Rostelecom

First priority goals



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



8 DECENT WORK AND ECONOMIC GROWTH



4 QUALITY EDUCATION



11 SUSTAINABLE CITIES AND COMMUNITIES



10 REDUCED INEQUALITIES

Goal 9
Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation

Goal 8
Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Goal 4
Ensure inclusive and equitable quality education and promote lifelong opportunities for all

Goal 11
Make cities and communities inclusive, safe, resilient and sustainable

Goal 10
Reduce inequality within and among countries

Second priority goals



17 PARTNERSHIPS FOR THE GOALS



16 PEACE, JUSTICE AND STRONG INSTITUTIONS



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



15 LIFE ON LAND

Goal 17
Strengthen the means of implementation and revitalise the global partnership for sustainable development

Goal 16
Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Goal 12
Ensure sustainable consumption and production patterns

Goal 13
Climate action

Goal 15
Life on land

Sustainable Development Goals

Rostelecom is committed to sustainable development. The Company creates long-term economic, environmental and social value for both current and future generations. Rostelecom not only operates in a way that drives business growth and shareholder value creation but also makes a significant contribution to the sustainable development of Russia, its society and the telecommunications industry.

Rostelecom is integrating the United Nations Sustainable Development Goals (UN SDGs) into the management of the Company's operations and considers them when designing sustainability projects.

High sustainability and governance standards are central to Rostelecom's growth strategy and culture, and key to long-term value creation.

Rostelecom Group's sustainability activities aim to:

- support the implementation of a digital strategy to transform Russia's economy
- bridge the digital divide for all sectors of Russia's society
- contribute to social and economic development across the Group's footprint
- promote the industry's technological advancement and innovation
- modernise technological infrastructure and support technical upgrades
- develop intellectual and human capital
- create jobs and contribute to an improved quality of life.

The Company launches projects to address all of the above areas, as well as promotes digital products delivering environmental or social impact.

Rostelecom has set up a dedicated [ESG Information](#) section on its website, highlighting the Company's key ESG metrics, documents and policies. ESG presentations and ESG data summaries are also published under this section.

Indices and ratings

 FTSE4Good	Rostelecom has been consistently included in the FTSE4Good Index series since 2017.
	Rostelecom is also included in the two sustainability indices of the Moscow Exchange and the Russian Union of Industrialists and Entrepreneurs (RSPF): the Responsibility and Transparency Index and the Sustainable Development Vector Index.
	In early 2021, our gender equality efforts earned global recognition as Rostelecom was included in Bloomberg's 2022 Gender-Equality Index – for the third year in a row.
	Rostelecom has been providing annual climate change reports to the international Carbon Disclosure Project (CDP) since 2015. In 2021, following a review of its report, the CDP affirmed Rostelecom's environmental rating at "C". ¹
	In 2021, Rostelecom's Final ESG Score in the S&P Global Ratings ESG Evaluation report was 40 ¹ , up 10 points from the year before, with particularly high scores on human capital development and environmental policy.
	In 2021, Rostelecom topped the ESG ranking by the National Rating Agency in the non-financial sector.
	In 2021, Rostelecom ranked among the top three largest telecommunications companies in Russia in the social performance rating. The agency included 45 companies with the best ESG disclosure practices in its fourth annual ranking. The agency also upgraded Rostelecom's sustainability reporting rating to Resg1, the highest level of social disclosure in the company's public reports.
	In November 2021, Rostelecom was rated the best Russian company for ESG disclosure among providers of integrated telecommunications services by the independent European rating agency RAEX-Europe. The agency's current ranking includes 155 Russian companies from 24 various industries.
	Rostelecom made it to the top of the 2021 Corporate Philanthropy Leaders ranking in a competition held by the Donors Forum with the support of Russia's Federation Council, Ministry of Science and Higher Education, Ministry of Culture, and Ministry of Economic Development among other partners. The Company was named the best in Group A – Best Practice.

1 Based on 2020 data.

Environmental protection



As Russia's largest provider of digital services and solutions, Rostelecom is fully aware of its responsibility to society for protecting the environment.

The Company is committed to using natural resources sustainably, pursuing a range of environmental initiatives, and develops and offers digital solutions for customers to help them with their environmental management tasks.

Environmental protection and safety management

Rostelecom's environmental protection activities and environmental safety efforts are part of the Group's wider occupational health and safety agenda.

Rostelecom's environmental protection management is driven by:

- Environmental Policy
- HSE and Fire Safety Policy.

These policies have been implemented across the Group subsidiaries and affiliates. Rostelecom's environmental management system fully complies with governmental regulations as well as international best practices and standards on the telecommunications market.

In 2021, Rostelecom redesigned its Environmental Management System:

- The number of management levels was reduced from three to two
- Two new units responsible for environmental matters were set up
- Internal documents were harmonised

The Company also successfully passed an external audit, with the certificate of conformity to GOST R ISO 14001-2016 renewed for one year.

Environmental operational control

Environmental operational control is an important part of the Company's environmental safety measures. The Regulations on Environmental Operational Control in place define the composition, structure, organisation, and operational procedure for the system. In 2021, Rostelecom updated the Regulations to reflect the new structure of the Environmental Management System.

In the reporting year, the Company completed 394 internal audits (328 on-site and 66 desk audits), with 562 facilities audited and 321 gaps identified and closed.

Rostelecom organises specialised training for employees responsible for making decisions that could have adverse environmental impact. In 2021, this training covered 292 such employees.

Total environmental expenditures and investments, RUB million

Focus area	2016	2017	2018	2019	2020	2021
Waste management	93.6	83.5	99.8	100.6	108.7	106.0
Soil, surface water and groundwater pollution control	3.3	5.6	5.9	6.5	7.0	3.8
Air pollution control and climate change mitigation	2.3	2.4	5.8	5.7	9.8	8.4
Area improvements and urban greening	2.2	1.6	2.1	2.5	5.2	2.9
Employee training	1.5	2.4	1.6	1.6	1.9	0.9
Payments to the state budget for environmental pollution	33.8	19.6	11.2	8.4	7.1	2.6
Other focus areas	36.2	30.4	33.1	37.0	34.5	39.2
Total environmental expenditures	172.9	145.5	159.5	162.4	174.0	163.9

Waste management

Rostelecom has developed and deploys a service to monitor waste container sites. The IT solution enables monitoring of waste sites and detection of unauthorised waste sites.

Waste management is a top priority for Rostelecom. More than 99% of the Company’s waste is low-hazard and almost non-hazardous (categories 4 and 5). The Company transfers all waste containing useful components and suitable for processing and reuse to specialised organisations.

In 2021, the total mass of waste generated by Rostelecom increased by 4.6% from 2020. The growth in the household waste generation was due to the return of employees to the office after a long period of remote work. The increase in the amount of category 2 waste was due to a significant number of backup batteries retired at the Company’s data centres.

Waste generation by hazard categories¹, tonnes

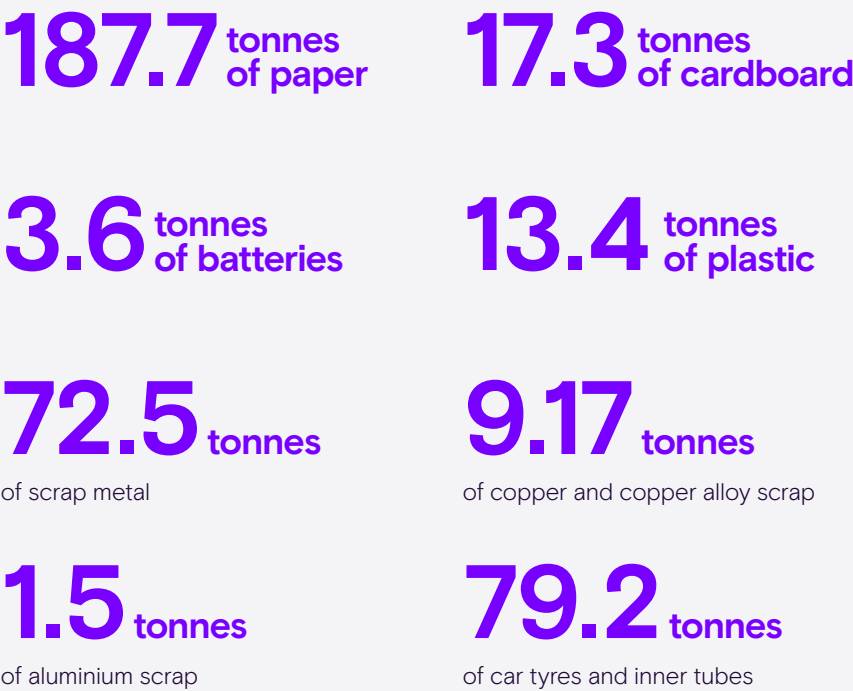
Hazard categories	2018	2019	2020	2021
1	40.27	40.05	35.43	25.06
2	28.52	15.77	21.22	64.67
3	39.27	33.4	26.38	23.53
4	20,616	21,502	21,281	26,353
5	13,386	12,524	10,474	6,843
Total	34,109	34,115	31,838	33,310

Responsible consumption

Green Office

- Rostelecom adheres to the Green Office principles:
- Using automated power and water meters
 - Doing separate waste collection
 - Using environmentally safe consumables
 - Using electronic document management and videoconferencing solutions

In 2021, the Company handed over for recycling:



The amount of paper waste across the Company was reduced in the reporting period as a result of extensive workflow digitisation and reduced paper consumption.

Promoting responsible waste management

Rostelecom’s mobile operator subsidiary promotes responsible waste management in local communities and collects telephones and batteries for recycling at its stores. The collected waste is sent for eco-friendly recycling.

1 The indicators shown in the table for 2018 refer to PJSC Rostelecom; those for 2019 and 2020 additionally include the most significant subsidiaries and affiliates of the Group.

Key environmental indicators¹

	Unit	2017	2018	2019	2020	2021
Greenhouse gas emissions (GHG)						
Direct GHG emissions (Scope 1)	t of CO ₂ equivalent	187,173	181,429	184,436	180,943	173,249
Indirect GHG emissions (Scope 2)	t of CO ₂ equivalent	994,849	973,255	1,473,334	1,338,665	1,462,888
Total GHG emissions (Scope 1 & 2)	t of CO ₂ equivalent	1,182,022	1,154,684	1,657,770	1,519,598	1,636,137
Indirect GHG emissions (Scope 3)	t of CO ₂ equivalent	86,234	85,812	80,115	69,303	70,326

Fuel and energy consumption						
Electricity	thousand kWh	1,397,559	1,344,116	3,042,452	2,817,344	3,224,728
Heat	Gcal	1,377,361	1,298,568	1,234,700	1,006,877	1,052,086
Natural gas	thousand cu m	30,540	27,208	23,499	21,694	22,969
Liquefied gas	l	1,123,053	1,087,580	866,569	1,155,501	1,418,601
Coal	t	10,011	10,695	10,846	7,375	5,815
Firewood	cu m	9,861	9,238	7,367	6,100	6,077
Fuel briquettes (pellets)	t	475	503	231	260	291
Diesel fuel	l	8,535,517	7,956,848	8,279,680	7,895,918	7,768,314
Gasoline	l	24,447,230	28,644,554	37,758,724	37,584,170	37,175,201
Renewable energy (combustion of biomass)	kWh	25,560	24,197	18,558	15,662	15,745
Electricity consumption per sq m of total floor space	thousand kWh/sq m	0.167	0.166	0.343	0.325	0.366
Heat consumption per sq m of total floor space	Gcal/sq m	0.165	0.160	0.139	0.117	0.119
Total energy consumption by data centres	thousand kWh	n/a	238,869	282,544	310,017	391,935
Average power usage effectiveness at data centres		n/a	1.86	1.67	1.76	1.544

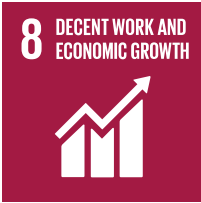
	Unit	2017	2018	2019	2020	2021
Water consumption						
Total water withdrawal	million cu m	2.801	2.496	2.368	1.824	1.938
Groundwater	million cu m	0.376	0.230	0.206	0.175	0.168
Municipal or other water utilities	million cu m	2.425	2.267	2.162	1.649	1.770

Waste management						
Total waste generated	t	34,607	34,109	34,114	31,838	33,310
Total waste landfilled	t	30,281	30,617	30,591	28,888	31,024
Total waste used/recycled	t	4,326	3,493	3,523	2,950	2,225
Total waste used for own purposes	t	–	–	–	72	60.5

Emissions of air pollutants						
Carbon oxide	t	904	857	769	843	814
Nitrogen dioxide	t	117	131	141	217	214
Sulphur dioxide	t	106	116	103	101	96
Nitrogen oxide	t	22	23	24	38	37
Soot	t	147	179	160	164	181
Total	t	1,296	1,306	1,197	1,363	1,342

¹ The indicators shown in the table for 2016–2018 refer to PJSC Rostelecom; those for 2019 and 2020 additionally include the most significant subsidiaries and affiliates of the Group. Water and heat consumption data do not include figures for the subsidiary mobile operator.

Social impact



Employees

According to HeadHunter, Rostelecom ranked among the top 10 employers in Russia in 2021. Ranking eighth overall among 100 participants, the Company was named the best employer in the telecommunications industry.

In 2021, Rostelecom improved its position in the Largest Companies category of the employer ranking by four places. Moreover, the Company came second in the Most Advanced HR Processes subranking and first among telecom companies in a survey among job seekers.

Rostelecom’s subsidiary mobile operator was another telecom company that also made it to the top 10.

People are Rostelecom’s key asset. The Company provides its employees with a wide range of training programmes and drives operating process efficiency by improving working conditions, running social support programmes and embedding technology into workflows. Our ways of working are built on mutual trust, respect and accountability, with the basic principles of cooperation and collaboration set out in PJSC Rostelecom’s Code of Ethics.

In 2021, Rostelecom transformed its organisational structure and reduced the number of management levels to accelerate decision making. The average headcount was 126.8 thousand as at the year-end.

Human capital development is one of the key pillars of Rostelecom’s strategy. In 2021, in a remote-working environment, remote learning volumes were up 66% year-on-year. An average employee takes eight courses at the Corporate Online University, with the average training time per employee at 31.5 hours in 2021.

The Company’s 2021–2025 Long-Term Development Programme has labour productivity index as a its key performance indicator¹, standing at 118% in 2021.

In 2021, Rostelecom’s labour costs increased by 1% year-on-year to RUB 99.5 billion.

Employee support programmes

Rostelecom provides optimal working conditions and support for its people, with the following employee support mechanisms in place at the Company.

Collective bargaining agreements

The Company has a Collective Bargaining Agreement for 2019–2021, containing a flexible system of benefits and social guarantees, with the corporate Cafeteria Plan offering benefits that match every employee’s individual needs. 100% of Rostelecom employees are covered by the Collective Bargaining Agreement.

Corporate pension scheme

A total of 31,540 employees are members of the corporate pension scheme offered by Alliance, Rostelecom’s subsidiary pension fund (43% of eligible employees).

Voluntary health insurance (VHI) programme

The total number of people insured under the voluntary health insurance (VHI) programme at Rostelecom was 105,999 at the end of 2021, with the insurance coverage under the VHI contract totalling RUB 40 million.

Despite the fact that COVID-19 infection is not an insured event under the VHI programme, during 2021, Rostelecom arranged for more than 15 thousand COVID-19 tests for employees, and more than 350 employees received specialist consultations on COVID-19 through our Telemedicine platform. For all COVID-19 patients, the Company has arranged specialist consultations and helped to obtain other medical services as necessary. For very severe cases, Rostelecom arranged for transportation to Moscow, transferring the ill employees to for-profit hospitals authorised to handle COVID-19 cases. The Company has arranged a COVID-19 vaccination for more than 1,500 employees who had difficulty in obtaining this service under their compulsory health insurance policies.

The Housing Programme

As part of its social support for employees, the Company continues to operate the Housing Programme, through which 1,017 Rostelecom employees received interest-free loans or reimbursement of interest on mortgage loans taken by employees earlier for a total of RUB 287 million in 2021. A total of 7,599 employees have received assistance to purchase housing for a total of RUB 2.2 billion over the period of the Housing Programme.

Equal opportunities

Rostelecom is strongly focused on protecting the rights of its employees, in particular to equality and diversity.

At the beginning of 2022, for the third consecutive year, Rostelecom was included in the Bloomberg Gender-Equality Index 2021 covering 418 companies from 45 countries.

¹ Calculated in line with the Methodology for Calculating Labour Productivity Indicators of an Enterprise, Industry or a Constituent Entity of the Russian Federation (approved by Order No. 748 of the Russian Ministry of Economic Development of Russia dated 28 February 2018).

Employee training and development at PJSC Rostelecom¹

Rostelecom sets itself ambitious growth goals that can only be achieved with a team of high-skilled professionals. The Company’s training system enables every employee to develop and fulfil their professional and personal potential by performing their tasks for the business.

In 2021, the Company centralised its training functions within a single HR centre of excellence. The new unit will enable more effective employee training and development.

The Knowledge Management Department has made improvements to the Corporate Online University platform. To create an optimal and comfortable environment, Rostelecom continued to experiment with various training formats and digital tools, from chatbots and dialogue simulators to AI-driven individual skills assessments.

In 2021, 82% of Rostelecom employees were covered by training. The amount of training grew by 33% overall, with the amount of remote learning up by 66%. The Company invested RUB 478.5 million in employee training, up 8% year-on-year.

The average number of training hours per employee was 31.5 hours in 2021, with the total number of training hours at 3,303,921 and the training costs per employee at RUB 5,500.

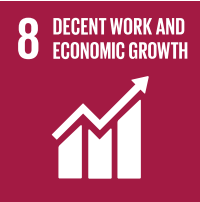
In 2021, Rostelecom’s Corporate Online University became the main training platform for employees. Over the year, Rostelecom added 369 new online courses and programmes to the platform’s catalogue, an increase of 9% from 2020. The online course completion rate reached 89%. The volume of optional in-house training was more than 600 thousand person-courses per year, a twofold increase from 2020.

Employee training at PJSC Rostelecom in 2017–2021

Metric	2017	2018	2019	2020	2021
Employee training costs, m RUB	464	496	575	443	479
Annual training costs per employee, RUB thousand	3.5	4.6	5.5	5.0	5.5
The average number of training hours per employee	38.1	21.0	31.1	31.3	31.5

¹ Information in the Employee Training and Development at PJSC Rostelecom section refers to PJSC Rostelecom only, excluding subsidiaries and affiliates.

Ensuring workplace safety



Rostelecom is putting a top priority on the health and safety of its people and contractor employees, investing in building a strong safety culture. These efforts are guided by the HSE and Fire Safety Policy in place at PJSC Rostelecom and Group subsidiaries. Over the past two years, the Company has also been consistently implementing the principles of the global Vision Zero ambition to achieve a zero injury rate.

Approach to providing safe working conditions

Occupational health and safety management system (OHSMS) is an integral part of Rostelecom Group operations management at all levels. The Health and Safety Department at PJSC Rostelecom’s Headquarters is charged with overall coordination of OHSMS activities. The Occupational Health and Industrial Safety Policy is implemented at macroregional branches, subsidiaries and affiliates by health and safety functions and subdepartments responsible for ensuring legal compliance, injury prevention and workplace safety culture.

Each Group subsidiary has internal standards on health and safety based on PJSC Rostelecom’s internal standards.

The Company sets itself the following strategic goals to deliver strong performance in health and safety:

- Safeguard employee life and health at work, minimise work-related hazards and prevent fatalities and disabling injuries
- Reduce the risk of work-related injuries, accidents and incidents at hazardous facilities, and fires to an acceptable level
- Maintain a healthy environment for employees and local communities over the long term
- Build a positive image of the Company by ensuring safe working conditions and protect the environment

During 2021, the Health and Safety Department worked to implement four OHSMS-related regulations across regional branches:

- Regulations on identifying systemic causes of incidents and developing measures to minimise incidents
- Regulations on occupational risk identification, assessment and management
- Regulations on organisational measures to ensure work safety and safe work at height
- Regulations on the provision of protective clothing, protective footwear and other personal protective equipment to employees

Vision Zero and risk management

Rostelecom is deploying methods to identify and prevent systemic causes of risks and accidents. Since 2019, the Company has been implementing the principles of Vision Zero, a global initiative for zero accidents, in three areas – occupational safety, occupational health and employee well-being.

In 2021, the Group maintained its strong focus on Vision Zero Golden Rule 2: “Identify Hazards – Control Risks!” Rostelecom reviews the performance of occupational risk assessment commissions and takes necessary measures to manage risks.

In the first half of 2021, the Company held trainings in occupational risk management for technical directors and lower-level managers of several regional branches. Following the training, each regional branch developed a 2021 Implementation Roadmap for the Occupational Risk Assessment Procedure.

OHSMS performance evaluation

At the level of the Group’s business units, subsidiaries and affiliates, OHSMS performance is evaluated by health and safety teams. Macroregional branches use a tiered control system to review the OHSMS performance, involving Rostelecom managers and trade union representatives responsible for OHS matters. Furthermore, the Health and Safety Department of Rostelecom’s Headquarters runs annual inspections of branches to look into OHS practices.

In 2021, the Health and Safety Department completed eight inspections of the OHS system, identifying 25% fewer gaps than in 2020. For each of the identified gaps, corrective actions were developed to address them.

Over 10 branches were audited using tiered control in 2021. The use of inoperative tools and inadequate control by supervisors over work preparation and execution were the most frequently identified OHS gaps. The inspection results have helped Rostelecom to further improve its OHSMS performance.

Occupational health and safety management by contractors

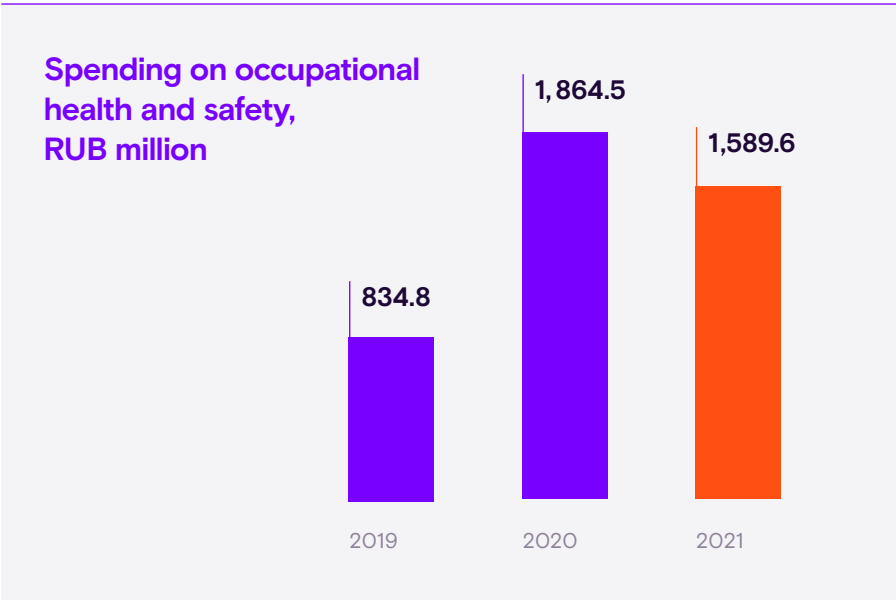
Rostelecom applies the same OHS rules and standards to all workers.

Some of its works are contracted out. At PJSC Rostelecom, contractor employees and secondees are required to comply with the Instruction on the Procedure for Issuing Work Permits to External Personnel and PJSC Rostelecom Secondees at PJSC Rostelecom’s Facilities as well as the Guidelines for Occupational Health and Safety Compliance Verification Conducted to Issue Work Permits to External Personnel and PJSC Rostelecom Secondees at PJSC Rostelecom’s Facilities.

Workplace injury prevention

Rostelecom creates safe and comfortable working conditions, annually conducting the relevant training, medical examinations, workplace assessments, and other activities to ensure the safety of employees doing hazardous work (installation, operation and maintenance of towers, base stations, etc.).

In 2021, amid the COVID-19 pandemic, Rostelecom continued to invest in personal protective equipment, with allocations for PPE purchases exceeding RUB 1 billion.



Safety amid the COVID-19 pandemic

The COVID-19 pandemic has increased the Group's focus on employee health and safe working conditions. 40% of employees were shifted to remote working since March 2020 as a preventive measure. Currently, more than 50 thousand employees are working from home. To facilitate this shift to remote work, the Group has launched a special portal at remote.rt.ru.

Remote work was enabled by the Company's proprietary software solutions, such as the Tionix Virtual Desktop (VDI) modules, located at Rostelecom's data centres. Thermometers, disposable masks and gloves, and hand sanitiser were deployed at every entrance and every floor across the Group's office spaces to protect employees at workplaces. Employees also periodically took PCR tests for the coronavirus.

Field crew members were regularly provided with personal protective equipment – disposable overalls and gloves, safety goggles and face masks, shoe covers, and hand sanitiser and moisturisers. The Company has created walk-through videos, clearly explaining how to properly use PPE, apply hand sanitiser as well as safely dispose of PPE items.

A Rostelecom subsidiary has launched a suite of free online courses on topics relevant during self-isolation, from setting up a remote workplace and managing teams remotely to tips on dealing with stress and anxiety.

All measures taken to curb the spread of COVID-19 were aligned with the recommendations of the Russian Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing (Rospotrebnadzor), including due consideration for the local requirements by the administrations of relevant regions of the Russian Federation.

Occupational health and safety training

Rostelecom makes constant efforts to improve employee knowledge and skills in occupational health and safety.

>90 thousand

of Rostelecom employees were trained in occupational health and safety during 2021

In 2021, technical leaders and specialists from the Company's two regional branches completed training in occupational risk assessment.

Employees involved in tower installation and maintenance were trained in mandatory electrical safety and safe work at height and took additional training in optional first-aid and safe work within confined spaces.

Rate of work-related injuries

Rate of work-related injuries at PJSC Rostelecom stood at 0.33 in 2021. The total number of accidents dropped by almost 12.5% year-on-year, reflecting the active promotion of a safety culture at the Company's sites.

During the year, there were 35 work-related injuries, down 12.5% from 2020 (40 injuries).

In 2021, Rostelecom automated its accident reporting, with report now updated on a daily basis. The results of accident prevention measures are reviewed every quarter, every six months and at year end. In 2021, all employee injuries were followed by investigation, identification of causes and corrective actions.

HR management achievements

Each of Rostelecom's 127 thousand employees makes contribution to the Company's overall success. The Company creates an internal environment enabling employees to maximise their job performance and make informed decisions.

The Company set up a training system that relies on the corporate online university, the institute of in-house trainers and the corporate remote learning system as its core elements.

Rostelecom has in place a mentorship and onboarding programme for new hires. There are also a well-developed career planning programme and the Talent Pool programme to insource talent for the majority of vacant positions. Using advanced crowdsourcing platforms, every employee can participate in a joint search for solutions and submit their own ideas to streamline business processes.

The Company is interested in attracting top young talent and has specialised departments at some of Russia's top educational institutions. Rostelecom provides annual internships for university students with a view to subsequent employment.

The Group employees benefit from company-subsidised corporate mobile plans, children's recreation and health resort treatment programmes, and the housing programme.

Rostelecom was one of Russia's first employers to start providing systematic outplacement assistance. The Company's employee outplacement plan provides support at all stages, including search for a new job at other units if there are vacancies, or even at other companies.

Key social indicators, 2017–2021¹

	Unit	2017	2018	2019	2020	2021
Average headcount						
Group	people	133,685	128,584	135,178	136,679	126,812
PJSC Rostelecom	people	112,595	107,984	105,754	105,450	95,150
Consolidated subsidiaries and affiliates	people	21,090	20,600	29,424	31,229	31,662
Payments to employees						
Wages, salaries, other benefits and payroll taxes	m RUB	93,381	97,350	119,822	136,389	137,209
Salary expenses	m RUB	67,238	69,812	85,019	98,555	99,523
Share-based remuneration	m RUB	2,016	3,162	3,449	3,641	3,247
Social taxes	m RUB	19,287	19,866	23,708	26,411	25,751
Gain/(loss) on defined benefit plans	m RUB	–223	–198	1,273	1,074	1,202
Other personnel costs	m RUB	5,063	4,708	6,373	6,708	7,486
Average salary	RUB thousand per month	36.5	41.4	46.2	53.5	53.7
Additional indicators for employees						
Headcount at the end of the reporting period (including employees on parental leave and excluding part-time employees and employees under independent contractor agreements) including:		140,874	138,230	149,065	146,801	129,773
part-time employees	people, end of period	14,240	14,774	16,291	13,612 ²	13,447
temporary employees (on fixed-term contracts)	people, end of period	11,476	11,520	12,084	12,840 ²	11,082
Employees under independent contractor agreements	people, end of period	6,347	12,200	27,723	47,301 ²	42,556
Change in the workforce						
Dismissed employees	people	18,444	22,154	20,850	20,940 ²	25,789
Employee turnover	%	14.2	17.6	15.7	16.4 ²	20.8
New employee hires	people	27,978	32,265	37,109	28,090 ²	24,202
of them women	people	16,731	17,069	16,171	12,792	10,866
Proportion of women among new employee hires	%	59.8	52.9	43.6	41.5	44.9

1 The 2017–2020 indicators presented in the table include data for PJSC Rostelecom and the Group's most significant subsidiaries and affiliates. Headcount-wise, this perimeter covers 98% of the entire Group.

2 The methodology of calculation has been changed.

	Unit	2017	2018	2019	2020	2021
Equality						
Number of female employees	people, end of period	64.5	60.1	65.5	62.3	54.4
Proportion of female employees	%	46	44	44	42	44
Proportion of women in management positions	%	28.1	29.1	30.0	32.4	35.1
Gender wage gap (based on total income)	%	20.6	20.2	18.2	17.2	25.1
Employees with disabilities	people, end of period	1,832	1,698	1,774	1,219	1,367
Proportion of employees with disabilities	%	1.3	1.2	1.2	0.8	1
Rate of work-related injuries						
Number of injuries	people	63	55	47	40	35
including fatalities	people	1	1	3	0	3
Number of accidents	incidents	116	71	95	40	35
Rate of work-related injuries per 1,000 employees	incidents	0.82	0.51	0.44	0.38	0.33
Lost time accident days	days	9,851	7,390	6,962	3,000	3,251
Additional indicators:						
Coverage perimeter for additional indicators (by average headcount percentage)	%	97	98	98	98	98
Philanthropy						
Member fees, charitable giving, payments to trade unions	m RUB	697	767	874	951	992
including charity expenses	m RUB	170	192	201	211	177

Society

Rostelecom makes annual significant contributions towards societal development across all Russian regions.

The Group entities support social projects and programmes in all regions and ensure digital equality and affordable communications not only in cities, but also in the remotest and smallest communities. In our projects, we take a holistic approach to addressing social and environmental issues.

Digital equality



The Digital Equality integrated social programme is a sustainability initiative run at the federal level to improve the quality of life for millions of Russian citizens by bridging digital divides and making communications services more accessible and affordable for all socially vulnerable groups.



ABC of the Internet computer literacy project for senior citizens. The project offers training in basic computer and internet skills for senior citizens, so that they can benefit from a wide range of digital public services and stay socially active. A total of 43,106 senior citizens and people with disabilities were trained under the ABC of the Internet computer literacy project in 2021.

GROWTH, a distance learning and socialisation project for children in orphanages and boarding schools, as well as children deprived of parental care. The project promotes development, education, socialisation, and employment among children in orphanages and boarding schools, as well as children deprived of parental care. In 2021, Rostelecom provided access to quality tailored education over the internet for 312 children from 35 child care institutions.

Learn the Internet – Manage It! digital literacy project for Russian internet users. This interactive educational project helps children learn how digital technology works, become advanced internet users and develop safe internet surfing skills. The project includes a gaming portal, a mobile application with tests, a quiz, an internet dictionary, online tournaments, and an annual nationwide online championship for school students. In 2021, over 16 thousand school and university students under 18 participated in the online championship.

Social Impact Award Russia, an international programme supporting early-stage social entrepreneurs. Together with the Impact Hub Moscow centre for support of social enterprises, Rostelecom selects the winners of the Russian stage of the Social Impact Award competition, an international programme supporting young social entrepreneurs. For the ninth year in a row, Rostelecom announced a special category within the contest – Internet for a Better World. The category covers the authors of the projects that use internet technology to create a product or a key tool to promote their ideas. In 2021, a total of 189 applications were submitted, with 44 projects from 27 Russian cities making it to the finals. The finalists joined a 3-month business incubation programme.

Our more important social initiatives include: the ABC of the Internet, Growth, Learn the Internet – Manage It!, and the Social Impact Award.

Philanthropy and volunteering



The Group places a particular emphasis on charitable giving and employee volunteering, viewing them as an integral part of our corporate social responsibility. In 2021, 3,800 volunteers were involved in Rostelecom’s projects, such as blood donations, sports and environmental initiatives, as well as helping children in orphanages and people in difficult life situations.

Rostelecom’s federal volunteering projects include the employee volunteering project competition, the Run and Help sports charitable project and the Polden (Midday) educational project.

The employee volunteering project competition is held for Rostelecom employee volunteers in the education, health, sports, care, environment, and spiritual heritage categories. Finalists are selected by an expert panel comprising Company employees as well as representatives of non-profit organisations and charitable foundations. The winners are awarded project grants. Between 2018 and 2021, about 420 employees submitted more than 130 applications to enter the competition, with 38 volunteering projects announced winners.

Run and Help, a national charitable sports project. The project’s purpose is to collect donations for the Life Line Charity Foundation to treat children with rare diseases. Every 100 thousand km run cumulatively by its employees is converted by Rostelecom into RUB 1 million, which is then donated to the foundation. Between 2018 and 2021, 2,500 Company employees and 500 volunteers took part in the project, raising a total of RUB 7 million.

Polden (Midday), an educational project for children from orphanages. PJSC Rostelecom and Future Games, an inter-regional public organisation for educational and creative entertainment, have been running an interactive educational programme for children in orphanages and boarding schools, providing social adaption courses and career guidance with a focus on the telecom industry. The programme is designed to equip children with the skills and competencies necessary for successful socialisation. In 2013–2021, a total of 586 educational activities involved more than 380 children from 10 orphanages, and 15 gaming modules were developed.

In 2021, Rostelecom delivered 316 significant social projects, including 121 educational projects. Charity expenses in the reporting period totalled RUB 177 million.

Charity projects
by Rostelecom's
mobile operator

Rostelecom's mobile business subsidiary focuses its charity efforts on supporting social entrepreneurship. The company has been providing financial, organisational and consulting support to the Navstrechu Peremenam (Towards Change) charitable foundation since 2012, involving more than 600 of its employees in the foundation's programmes in total.

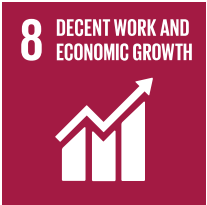
The company and the foundation's priority joint project is the Towards Impact Start-Ups business incubator, offering business trainings for participants and start-up financing for its finalists. In 2021, 174 applications were submitted for the project, with six finalists receiving grants totalling RUB 5.1 million.

Another joint programme, Towards Impact Investments, helps sustainable impact projects attract investment and promotes the concept of impact investments in Russia. In 2021, 22 projects were selected from more than 100 applications for the programme, with four of them eventually entering into negotiations with potential investors.

The mobile operator
also runs its own projects:

- **Grannies Are No Strangers to Us**, a campaign to train volunteers helping older people embrace mobile data
- **Pereplavka (Melting)**, an environmental project to collect mobile phones for recycling. Launched in 2019, the project has accepted a total of 14 thousand devices for recycling

Business projects with social impact



Rostelecom makes a positive impact on society not only through its dedicated projects and charitable programmes but also in the course of its normal core operating activities.

Infrastructure

Another important focus area is Bridging the Digital Divide project, which aims at bringing affordable telecom services to people in remote areas. Internet access points are to be installed under the project in almost 14 thousand rural communities across Russia with a total population of about 4 million people. By the end of 2021, access points had been installed in 13,916 communities, with 122 thousand km of fibre laid.

Under a government contract, Rostelecom also provides internet access infrastructure to 30 thousand social infrastructure facilities (schools, police stations, healthcare facilities, etc.).

For more details on Bridging the Digital Divide projects and the connection of social infrastructure facilities, see the Key Strategic Projects section of this Annual Report.

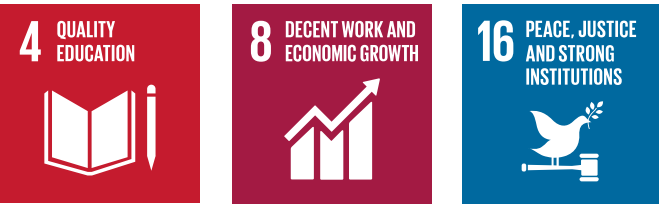
Digital services

Rostelecom is digitising a wide range of services, making them more accessible for people and providing easy solutions to a range of problems and tasks:

- Obtaining **public services** via digital channels is easy with the Company's portal gosuslugi.ru (developed as part of the E-Government project). The portal allows citizens to get the necessary certificates and documents from authorities, book appointments, pay utility bills, etc. – all from the comfort of their own homes.
- Rostelecom's **Medicine** platform digital services are now available in 52 regions across the country. During 2021, 17 thousand telemedicine consultations were conducted using the Company's platform, and 930 thousand prescriptions were filled in electronically. This solution makes it easier for people to access healthcare services.
- As part of its efforts to digitalise **education**, Rostelecom annually provides video surveillance and online broadcasting for the Unified State Examination (USE), and also develops the Rostelecom Lyceum online educational platform, which combines the entire school curriculum from the 1st to 11th grade, and development courses. In 2021, Rostelecom set up Wi-Fi and video surveillance systems in 2,134 schools in 16 Russian regions.
- As part of the **Digital Region / Smart City** project, Rostelecom has installed about 4,000 photo and video traffic enforcement cameras in 57 regions of Russia. The Company is developing the System 112 (COVID-19) hotline, while also rolling out a smart video surveillance platform in 14 regions across Russia. This range of solutions ensures the safety of people, including on the road, resulting in fewer accidents and more lives saved.
- In 2021, the call centre continued to **inform people about vital social and economic issues**, processing over 1.8 million calls in 2021.

For more details on these projects, see the Operating Review section of this Annual Report.

Corporate governance: anti-corruption and procurement



Rostelecom has an efficient corporate governance system. During the annual improvement of the system, the requirements of Russian legislation and the international best practices are taken into account. For more details on the Company’s governing bodies and their remuneration, see the Corporate Governance section of this Annual Report.

Compliance and anti-corruption efforts

Rostelecom is committed to the principles of openness, transparency and integrity. The Company and all its employees are required to comply with anti-corruption laws as well as the principles of ethical business conduct.

Key regulations on anti-corruption compliance procedures:

- Anti-corruption Policy¹
- Code of Ethics²
- Code of Corporate Conduct
- Code of Supplier Business Ethics
- Regulations on the Conflict of Interest Management
- Regulations on Giving and Receiving Gifts
- Regulations on Donations and Charitable Giving
- Regulations on Addressing Reports Submitted via the Ethics Hotline

The procedures ensuring compliance with anti-corruption laws are set out in the Company’s business process regulations. Similar documents and compliance processes are implemented at subsidiaries and affiliates in which PJSC Rostelecom’s effective interest is above 50%.

Key anti-corruption focus areas in 2021³

- Employee training
- Feedback channels
- Conflict of interest management
- Subsidiary relations

No confirmed cases of corruption or bribery were reported across the Group in 2021.

1 For more details on Rostelecom’s Anti-corruption Policy, see the Company’s website at www.company.rt.ru/en/ir/corporate_governance/docs/.
2 For more details on Rostelecom’s Code of Ethics, see the Company’s website at www.company.rt.ru/en/ir/corporate_governance/docs/.
3 For more details on Rostelecom’s other anti-corruption focus areas, see Appendix 2, Governing and Control Bodies, to this Annual Report.

Council for Business Transparency

Rostelecom cooperates with the government and non-governmental organisations on anti-corruption and has a Council for Business Transparency in place. The Council held two meetings in 2021, attended by representatives of the Russian Ministry of Digital Development, Communications and Mass Media and the Chamber of Commerce and Industry, as well as by members of the media and anti-corruption non-governmental organisations.

The Council reviewed matters related to the implementation of anti-corruption measures and procurement transparency, as well as statistics on received reports, including those on suspected corruption.

Asset Protection Department (compliance)

Key roles

- Improving corporate culture in terms of anti-corruption, prevention of embezzlement and conflicts of interest, and compliance with ethical standards
- Analysing and monitoring the activities of the Company and its subsidiaries and affiliates related to asset protection
- Maintaining a whistleblowing hotline and an anti-corruption portal

Key 2021 results

12 thousand

employees successfully completed compliance training

- For the second year in a row, Rostelecom topped the national Anti-corruption Ranking of Russian Business, receiving the highest rating class, A1, from RSPP experts⁴.
- Developed and implemented the Company’s 2021 compliance programme
- Fine-tuned the system to improve the processing of conflict of interest declarations
- Updated a number of internal documents, including PJSC Rostelecom’s Internal Labour Regulations as regards holding employees accountable for non-compliance with anti-corruption requirements
- Compliance training was successfully taken by about 12 thousand employees
- Continued to roll out anti-corruption programmes at new subsidiaries and affiliates (19 companies) in which Rostelecom’s cumulative interest is above 50%

4 <https://media.rspp.ru/document/1/8/e/8e772aa62f5acdeec97734ac8a77d522.pdf#page=30>.

Dedicated officials responsible for countering money laundering, the financing of terrorism, and the financing of the proliferation of weapons of mass destruction

Key roles	Mitigating the risk of the Company being involved in money laundering and the financing of terrorism
Key 2021 results	In 2021, following the remote monitoring of the internal control system for countering money laundering, the financing of terrorism, and the financing of the proliferation of weapons of mass destruction, the Federal Financial Monitoring Service (Rosfinmonitoring) and the Federal Service for Supervision of Communications, Information Technology and Mass Media (Roskomnadzor) assigned PJSC Rostelecom the lowest, “green” level of risk of being involved in money laundering and the financing of terrorism. Based on that scoring, Roskomnadzor has not included Rostelecom in the annual inspection schedule, which substantially reduces the risk of regulatory penalties in 2022.

Interactions with counterparties

The Company is committed to engage only those counterparties that demonstrate legal compliance and comply with anti-corruption laws in their operations. To develop business relations with counterparties supporting Rostelecom’s Anti-corruption Policy and demonstrating zero tolerance for corruption, the Company approved its Code of Supplier Business Ethics and an anti-corruption clause, which allows the Company and its subsidiaries to terminate a contract where the counterparty was found to have breached the commitment to refrain from any actions prohibited by anti-corruption laws. The clause is included in all expenditure contracts exceeding RUB 500,000.

To raise the awareness of business partners about anti-corruption legal requirements and Rostelecom’s ethical business standards, the Company developed an interactive distance learning course for contractors and suppliers in 2021, to be launched in 2022.

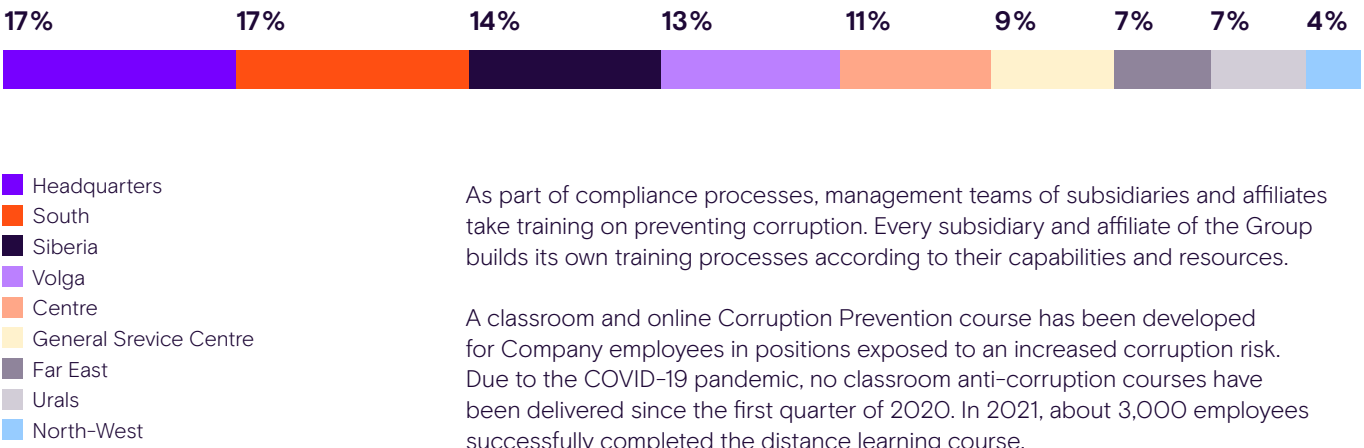
Employee training

All Rostelecom employees are made aware of anti-corruption policies and procedures when they are hired. When anti-corruption procedures are amended, updated documents are sent out to all employees who have workstations with access to the Company’s electronic document management system.

Rostelecom holds regular anti-corruption trainings for its employees. All new employees take a mandatory online induction course on the key principles set out in the Code of Ethics.

In 2021, about 12 thousand employees took online training on the Code of Ethics and on anti-corruption measures.

Employees who took anti-corruption training in 2021, by Company unit, %



As part of compliance processes, management teams of subsidiaries and affiliates take training on preventing corruption. Every subsidiary and affiliate of the Group builds its own training processes according to their capabilities and resources.

A classroom and online Corruption Prevention course has been developed for Company employees in positions exposed to an increased corruption risk. Due to the COVID-19 pandemic, no classroom anti-corruption courses have been delivered since the first quarter of 2020. In 2021, about 3,000 employees successfully completed the distance learning course.

Feedback channels

In line with Rostelecom’s strategy of digital coverage of anti-corruption efforts, a dedicated anti-corruption portal (www.nocorruption.rt.ru, in Russian) is in place and is constantly evolving. The portal comprises Rostelecom’s anti-corruption internal regulations, compliance tests for employees and suppliers, materials on corruption prevention, and information on all feedback channels that can be used to report instances of corruption.

Since 2020, the reports received via Rostelecom’s whistleblowing hotline and anti-corruption portal have been recorded, processed and addressed automatically by the Reports module of the automated Compliance Control system. The system uploads reports received via the feedback channels, enables users to track response deadlines and provide timely feedback to whistleblowers, monitor the performance of the units responsible for handling reports, and generate reporting documents.

In order to protect anonymous whistleblowers, in 2021, we completed an upgrade of the anti-corruption portal’s functionality to enable reporting without revealing the whistleblower’s name and e-mail. Whistleblowers can receive feedback on the status or outcome of their report from employees of the compliance team using the PIN generated by the system when the report is recorded.

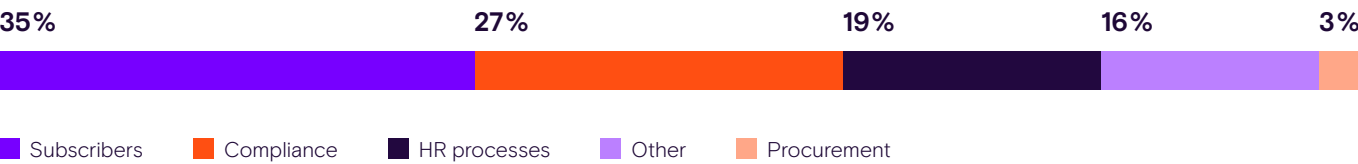
The Company guarantees confidentiality for those reporting suspected corruption. Whistleblowers reporting violations in good faith are protected by the Company against any form of retaliation or discrimination.

Anti-corruption portal (in Russian):
www.nocorruption.rt.ru

Whistleblowing hotline:
8-800-1-811-811

Ethics hotline:
ethics@rostelecom.ru

Topics of reports received via the whistleblowing hotline and anti-corruption portal in 2021, %



Conflict of interest management

Since 2018, Rostelecom has been using an automated Compliance Control system to resolve conflicts of interest. Rostelecom employees with a conflict of interest, as well as employees in positions exposed to an increased corruption risk, regularly complete electronic declarations. Using pre-determined criteria, the system automatically identifies employees who should submit declarations, and monitors timely completion of declarations by these employees, thus eliminating the human factor from mandatory disclosures.

In 2021, we continued addressing the risks of employees not filing a declaration or having affiliation with business partners. These risks are included in Rostelecom’s Risk Management Programme.

Anti-corruption efforts development at PJSC Rostelecom’s subsidiaries and affiliates

In 2021, Rostelecom continued to roll out anti-corruption programmes at new subsidiaries and affiliates (19 companies) in which the Company’s cumulative interest is above 50%.

For these subsidiaries and affiliates, Rostelecom develops roadmaps for rolling out anti-corruption programmes, including:

- adjustments to Rostelecom’s standard anti-corruption regulations
- assessment of corruption risks
- implementation of controls
- management of conflicts of interest
- anti-corruption training
- handling reports received via feedback channels.

The expenditure contracts signed by subsidiaries and affiliates also contain an anti-corruption clause, which allows them to terminate a contract where the counterparty was found to have breached the commitment to refrain from any actions prohibited by anti-corruption laws.

Measures to counter the legalisation of proceeds of crime, the financing of terrorism, and the financing of the proliferation of weapons of mass destruction

PJSC Rostelecom fully implements internal controls to counter the legalisation (laundering) of proceeds of crime, the financing of terrorism, and the financing of the proliferation of weapons of mass destruction.

2021 saw rollouts of major legislative changes aimed at preventing foreign or international non-governmental organisations whose activities are declared undesirable from entering Russia. In particular, telecom operators were obliged to control transactions involving receipt or spending of funds by a non-profit organisation, regardless of the amount.

Rostelecom is currently the leader among telecom operators in this matter, primarily due to the daily monitoring of financial transactions by non-profit organisations from its subscriber base.

Supply chain management

~541^{bn} RUB

Procurement volume of PJSC Rostelecom and its key subsidiaries and affiliates in 2021

Rostelecom responsibly manages its supply chain, enhancing its stability and effectiveness. Rostelecom’s suppliers are located across all Russian regions, and in selecting, engaging and evaluating our suppliers, the Company considers the economic, social and environmental implications of these interactions.

In 2021, Rostelecom won the Guaranteed Transparency award, the top category of the National Procurement Transparency Rating. The Corporate Transparency Ranking is compiled to continuously monitor the environment and trends in the national procurement market.

Procurement activities at Rostelecom are governed by

- Constitution of the Russian Federation
- Civil Code of the Russian Federation
- Federal Law No. 223-FZ, On Procurement of Goods, Works and Services by Certain Types of Legal Entities, dated 18 July 2011 (as amended and supplemented)
- Federal Law No. 135-FZ, On Protection of Competition, dated 26 July 2006
- other federal laws and regulations of the Russian Federation
- directives of the President and the Government of the Russian Federation
- PJSC Rostelecom’s Regulations on Procurement.

Rostelecom provides support to small and medium-sized enterprises (SMEs). The Company has an SME Partnership Programme in place.

The aggregate value of contracts signed by PJSC Rostelecom¹ with SMEs in 2021 amounted to RUB 136 billion, with the share of such contracts at 59%.

¹ Excluding subsidiaries and affiliates. The indicator takes into account the exemptions under the Russian Government Resolution No. 1352, On Specifics of Participation of Small and Medium-Sized Enterprises in Procurement of Goods, Works and Services by Certain Types of Legal Entities, dated 11 December 2014.

CORPORATE GOVERNANCE



31 Corporate governance system

Good corporate governance is an essential tool for defining the Company’s goals and the means to achieve them, as well as ensuring that shareholders have effective control over the Company’s activities. Rostelecom’s structured corporate governance framework meets international and Russian best practice standards – the three-tier corporate governance model demonstrates its effectiveness, defines the three lines of defence to ensure the safety and efficient use of funds provided by shareholders – and is aimed at reducing risks that cannot be assessed by investors.

Principles

- Balance between the interests of shareholders, management, and stakeholders
- Equal treatment of all shareholders and protection of their rights
- Accountability of the Board of Directors, the President and the Management Board to shareholders
- Informational and financial transparency

Priority

- Focus on stakeholder interests and relations
- Compliance with business conduct and ethics
- Timely and accurate information disclosure
- Corporate social responsibility

Enhancement focus

- Continuous improvement of internal controls and audit
- Continuous improvement of corporate governance practices
- Development of electronic services that enable shareholders to exercise their rights effectively
- Improvement of the IT system that automates the Management Board and committees’ processes

PJSC Rostelecom’s corporate governance structure

- Governing bodies
- Control bodies
- Elects/appoints
- Reports to

In accordance with its Charter, Rostelecom is governed by:

- the General Shareholders’ Meeting (GSM);
- the Board of Directors (elected by the General Shareholders’ Meeting to guide the Company’s strategic management);
- the President and the Management Board (appointed by the Board of Directors to manage the Company’s day-to-day operations).



1 Dedicated officials responsible for the implementation of internal controls to counter the legalisation (laundering) of proceeds of crime, the financing of terrorism, and the financing of the proliferation of weapons of mass destruction.

2 For more details, see the Corporate Governance: Anti-corruption and Procurement section, page 220.

Key policies

PJSC Rostelecom has in place 22 policies and internal regulations governing its corporate governance framework. Six of them were revised in 2021.

Key corporate governance policies of PJSC Rostelecom¹

Document name	Last effective date
Charter	28 June 2021
Regulations on the General Shareholders’ Meeting	14 June 2019
Regulations on the Audit Commission	18 June 2018
Regulations on the Board of Directors	18 June 2018
Regulations on the President	18 June 2018
Regulations on the Management Board	18 June 2018
Corporate Governance Code	27 December 2007
Code of Ethics	15 October 2019
Anti-corruption Policy	6 December 2019
Internal Audit Policy	26 April 2019
Regulations on Internal Audit	25 June 2021
Regulations on Addressing Reports Submitted via the Ethics Hotline	29 June 2020
Risk Management Policy	25 June 2021
Regulations on the Integrated Risk Management System	18 June 2021
Internal Control Management Policy	23 August 2019
Procedure for Implementing, Maintaining and Developing the Internal Control System	4 March 2021
Environmental Policy	2 April 2019
Information Disclosure Policy	30 September 2015
Dividend Policy	19 April 2021
Policy of Access to Insider Information	19 June 2020
Regulations on Receiving, Reviewing, and Retaining Complaints and Claims Related to Accounting, Accounting Internal Control Procedures, Fraud, Audit Examinations and the Code of Ethics Compliance	2 October 2008
Regulations on the Corporate Secretary and the Corporate Secretary’s Office	13 September 2019

¹ Please, see: https://www.company.rt.ru/ir/disclosure/internal_docs/.

Management of subsidiaries and affiliates

Rostelecom Group comprises PJSC Rostelecom, its subsidiaries and affiliates. As at 31 December 2021, the Group included 217 subsidiaries and affiliates (see the full list in Appendix 5 to this Annual Report)¹.

The Company views its subsidiaries and affiliates as a major growth point for its business, dedicating digital clusters for new strategic initiatives, which comprise several subsidiaries or affiliates operating in interrelated areas. The creation of key digital clusters continued in 2021: Data Centres and Cloud, Information Security, Digital Regions, Public Sector Digital Services and Products, and Digital Health. A cluster management methodology was developed and approved, and the ownership structure of subsidiaries and affiliates assigned to the clusters was optimised. Rostelecom interacts with the parent company of each cluster, which is responsible for engaging with, and managing, other companies within the business segment. Rostelecom meanwhile continues to oversee and monitor these companies.

Approaches to corporate governance based on interest in subsidiaries and affiliates

Minority interest	Interest <50%	Interest >50%
Participation in general shareholders’ meetings, protection of Rostelecom rights as a shareholder	Governance aligned with the shareholders’ agreement in place to ensure: <ul style="list-style-type: none">• nominations by Rostelecom for top management positions;• participation in the activities of the Board of Directors and control bodies;• outsourcing of support functions (as agreed with the partner)	Integration into Rostelecom’s corporate governance framework and culture, including: <ul style="list-style-type: none">• building a unified corporate governance model for subsidiaries and affiliates;• appointing sole executive bodies and most representatives in the collective governing and control bodies at subsidiaries and affiliates;• a unified financial planning and treasury system;• outsourcing support functions;• centralising the internal control and audit functions;• developing unified approaches and documents

¹ Please, see: https://www.company.rt.ru/ir/agm/files/2021/Appendix_5_to_annual_report_2021_rus.pdf.

Governance principles at subsidiaries and affiliates

Proportionality and transparency

Governance tools should be appropriate to the scale and objectives of subsidiaries and affiliates and be unambiguous and understandable to employees.

Consistency and holistic approach

The governance tools at subsidiaries and affiliates should allow the use of systems analysis and synthesis in every decision made by the leadership and cover all aspects of the subsidiary’s or affiliate’s activities. Relations between Group companies should be those of a mutually beneficial partnership.

Efficiency and effectiveness

Unprofitable subsidiaries and affiliates are liquidated or measures are taken to improve their performance. Governance tools should be easy to integrate into existing information systems. Information flows should meet the principle of minimal sufficiency.

Compliance

Governance tools and decisions should comply with the laws of Russia and other countries in which the subsidiary or affiliate operates. Particular attention should be paid to compliance with anti-corruption laws.

Collective decision-making and sole responsibility of the leadership

Rostelecom participates in the appointment of CEOs and board members at subsidiaries and affiliates. Company divisions provide analytical support to elected members of the boards of directors of subsidiaries and affiliates nominated by Rostelecom.

Delegation of powers, centralisation and decentralisation of leadership functions, limitation of authority and accountability for results for heads of subsidiaries and affiliates

Heads of subsidiaries and affiliates are responsible and accountable for the activities of their respective subsidiary or affiliate. The constituent documents of the subsidiaries and affiliates should determine transaction limits beyond which heads of subsidiaries and affiliates may not enter into transactions independently or dispose of, or encumber, property of their respective subsidiaries and affiliates.

Priority of governance functions over the structure when establishing a subsidiary or affiliate and priority of structure over governance functions in existing subsidiaries and affiliates

When establishing or acquiring companies, Rostelecom implements governance and control systems across its subsidiaries and affiliates as quickly as possible. As these institutions are formed, the entire governance framework and structure of subsidiaries and affiliates are optimised.

Feedback

We leverage feedback from our subsidiaries and affiliates to improve related governance and control tools.

Motivation to achieve goals and objectives

Managers and employees across subsidiaries and affiliates should be motivated by incentives for achieving targets set for their respective subsidiaries and affiliates. Incentives for Rostelecom employees responsible for subsidiaries and affiliates should factor in achievement of strategic goals set for the respective subsidiaries and affiliates.

Creating a corporate collaboration environment

Development and implementation of methodologies and procedures governing the coordination of information and material flows in relations with subsidiaries and affiliates.

Involvement of the Board of Directors in governing subsidiaries and affiliates

Rostelecom’s Board of Directors determines the Company’s position on:

- general shareholders’ meetings of subsidiaries and affiliates in which Rostelecom is the sole shareholder;
- matters reviewed by subsidiaries’ and affiliates’ governing bodies with regard to acquiring shares of other business entities, including at the time of their establishment, if the value of the transaction exceeds 15% of the book value of total assets owned by such subsidiary or affiliate as at the last reporting date;
- matters reviewed by subsidiaries’ and affiliates’ governing bodies with regard to the acquisition and disposal of Rostelecom’s shares by them.

Forming boards of directors at subsidiaries and affiliates

Candidates to boards of directors of subsidiaries and affiliates are selected based on the principles of overall competence, balance of qualifications and experience, succession planning, and compliance with legal requirements. Each board of directors is chaired by a Rostelecom top manager in charge of a Rostelecom business segment in which the relevant subsidiary or affiliate is operating.

Key improvements in 2021

In 2021, Rostelecom became the first partner of JSC VTB Registrar to join its unique proprietary initiative, MarketDesk. The MarketDesk platform is designed for remote sale of small blocks of shares by individuals whose securities are accounted for in Rostelecom’s share register. In 2021, services offered by the platform were provided to shareholders free of charge.

Corporate governance level

Corporate governance rating assigned by the Russian Institute of Directors: 7++ – advanced corporate governance practice. In 2021, Rostelecom ranked among the top companies for complete and high-quality disclosure of compliance with corporate governance principles, according to the National Corporate Governance Index.

1 Affirmed in January 2021.
2 Please, see: <http://cgindex.ru/wp-content/uploads/2021/12/National-CG-Index-2021.pdf>.

Compliance with the Corporate Governance Code¹

Code section	Full compliance					Partial compliance					No compliance					Total number of principles under each section of the Code
	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021	
Rights and equal opportunities for shareholders in exercising their rights	11	12	12	13	13	2	1	1	-	-	-	-	-	-	-	13
Board of Directors	30	32	32	32	32	5	4	4	4	4	1	-	-	-	-	36
Corporate Secretary	2	2	2	2	2	-	-	-	-	-	-	-	-	-	-	2
Remuneration system for Board members, executive bodies, and other key executives	8	8	8	8	9	2	2	2	2	1	-	-	-	-	-	10
Risk management and internal control system	6	6	6	6	6	-	-	-	-	-	-	-	-	-	-	6
Company disclosures and information policy	6	6	6	7	6	1	1	1	-	1	-	-	-	-	-	7
Material corporate actions	3	3	3	4	4	2	2	2	1	1	-	-	-	-	-	5
Total	66	69	69	72	72	12	10	10	7	7	1	-	-	-	-	79

1 For 2017–2020 – based on the methodology recommended by the Bank of Russia’s Letter No. IN 06-52/8 dated 17 February 2016, and for 2021 – by Letter No. IN-06-28/102 dated 27 December 2016. For more details, see Appendix 1, Report on Compliance with the Corporate Governance Code Recommended by the Bank of Russia, to this Annual Report: https://www.company.rt.ru/ir/agm/files/2021/Appendix_1_to_annual_report_2021_eng.pdf.

Improvement plans

Rostelecom will continue to improve its corporate governance framework. In particular, plans for 2022 include further development and rollout of digital services and remote communication channels for shareholders to facilitate access to rights, subject to all applicable legal requirements.

321 Governing bodies

General Shareholders’ Meeting

The General Shareholders’ Meeting is the Company’s supreme governing body. Its activities are regulated by Russian laws, Rostelecom’s Charter¹, and the Regulations on the General Shareholders’ Meeting².

During 2021, Rostelecom’s Annual General Shareholders’ Meeting³ was held on 28 June, and no Extraordinary General Shareholders’ Meeting were held.

Number of participants in Annual and Extraordinary General Shareholders’ Meetings

	AGSM ⁴ 2019	EGSM ⁵ 2019	AGSM 2020	EGSM 2021
Paper ballots	1,141	6	9	10
Did not vote (only registered for the meeting)	65	0	0	0
E-proxy voting (ISO – via a depository)	46	92	42	35
E-voting system by JSC VTB Registrar ⁶	1,513	1,480	1,848	1,928
E-voting system by NSD ⁷	118	167	162	279
Total	2,883	1,745	2,061	2,252

1 New version No. 21 was approved by the Company’s Annual GSM on 28 June 2021 (Minutes No. 1 dated 29 June 2021). The full text of the current version is available at https://www.company.rt.ru/en/ir/corporate_governance/docs.

2 New version No. 11 was approved by the Company’s Annual GSM on 14 June 2019 (Minutes No. 1 dated 18 June 2019). The full text of the current version is available at https://www.company.rt.ru/en/ir/corporate_governance/docs.

3 Minutes No. 1 dated 29 June 2021: www.company.rt.ru/en/ir/agm/events/gosa/detail/2020/.

4 Annual General Shareholders’ Meeting.

5 Extraordinary General Shareholders’ Meeting.

6 Please, see: pos.vtbreg.ru.

7 Please, see: www.e-vote.ru.

Board of Directors

The Board of Directors is a collective governing body responsible for the Company’s growth strategy and general management. The powers of the Board are detailed in the Charter and the Regulations on the Board of Directors¹.

Evaluation of the Board of Directors’ performance²

In early 2022, an independent consultancy, JSC VTB Registrar, evaluated the overall performance of the Board of Directors as well as the performance of its committees and each Board member, including the Chairman. The weighted average score of the Board of Directors was 5 out of 5. The consultancy noted the balanced composition of the Board and the high performance of the Board and its committees.

Based on the evaluation results, it was recommended the following: to additionally focus on import substitution and cybersecurity issues, as well as the risk management system as a whole.

Induction of Board members

An onboarding system and induction programmes are an important part of the Board’s effective performance.

The Company has in place the induction procedures for new Board members. They are familiarised with all of the Company’s internal documents regulating the proceedings of the Board, and hold meetings with members of the Management Board as well as internal and external auditors.

At the first meeting of the Board of Directors, the President briefs the new Board members on Rostelecom’s strategy and business, as well as on key projects implemented by the Company or scheduled for the coming corporate year.

1 New version No. 16 was approved by the Company’s Annual GSM on 18 June 2018 (Minutes No. 1 dated 20 June 2018). The full text of the current version is available at https://www.company.rt.ru/en/ir/corporate_governance/docs.

2 For more details on the Board of Directors’ performance evaluation, see Appendix 2, Governance and Control Bodies, to this Annual Report at https://www.company.rt.ru/ir/agm/files/2021/Appendix_2_to_annual_report_2021_rus.pdf.

Key principles
of the Board
of Directors

Make decisions based
on reliable information
on the Company's operations.

Ensure the Company's
adherence to long-term
interests of its shareholders
and receipt by shareholders
of all relevant information
on the Company's operations.

Balance
the interests of various
groups of shareholders and
make most objective and
well-balanced decisions
for the benefit of all
shareholders.

Interpret ambiguities
in the rules of any laws
and regulations in favour
of enhancement of the rights
and legitimate interests
of shareholders.

Key functions and
tasks of the Board
of Directors

Set up and advance business
objectives and strategic goals
of the Company.

Protect the rights and
legitimate interests
of shareholders.

Ensure integrity, reliability, and
fairness of public information
about the Company.

Requirements for nominees to the Board of Directors

When selecting nominees to the Board of Directors, Rostelecom is guided by Russian and international corporate governance standards. The Company strives to compose the Board of Directors so that it is able to make fair and independent judgements and adopt all appropriate corporate resolutions in a timely and effective manner.

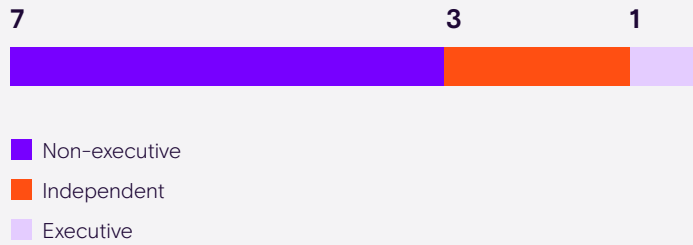
Persons nominated to the Board of Directors must have an impeccable business and personal reputation, as well as the professional qualifications necessary for effective decision-making by the Board, and must not raise any doubt as to whether they will act in the interests of the Company and its shareholders.

A conflict of interest gives a strong reason to doubt that the nominee will stay objective and unbiased, acting in the best interests of the Company, and it is therefore not advisable to nominate to the Board of Directors persons who hold an interest in, sit on executive bodies of, or are employed by Rostelecom's competitors.

Independent directors are enabled to influence decisions made by the Board. The Company aims for at least one third of the Board to be made up of independent directors.

Independent directors make a positive contribution to shaping objective assessments when the Board of Directors makes decisions on all matters within its remit, thus ensuring that the interests of all Rostelecom shareholders are balanced as much as possible.

Director independence



11

directors elected
annually

53.7 years old

average age
of the Board members¹

5.1 years

average tenure
of the Board members

¹ Average age and tenure of Board members as at 31 December 2021.

Composition of the Board of Directors¹

Competences of the Board of Directors

Qualifications of the Board of Directors' members

The liability of the Company's directors was insured for EUR 25 million, with additional insurance coverage of EUR 920 thousand for each independent director (EUR 4.6 million in total).

No conflicts of interest involving members of the Board of Directors were identified in 2021. Board members quarterly fill in questionnaires listing all potential drivers of a conflict of interest.

Board of Directors' and its committees' performance report¹

Board members' attendance at Board and its committees' meetings

Board of Directors' membership before the General Shareholders' Meeting on 28 August 2021

Board of Directors' membership after the General Shareholders' Meeting on 28 June 2021

¹ For more information about the issues considered at the meetings of the Board of Directors and committees of the Board of Directors, see Appendix No. 3 «Information on meetings of the Board of Directors and its committees» to this Annual Report: https://www.company.rt.ru/ir/agm/ files/2021/Appendix_3_to_annual_report_2021_rus.pdf.

Matters discussed by the Board of Directors

Topic	Number of matters discussed
Audit, risk management and internal control	15
Matters of General Shareholders' Meetings	16
Organising the activities of the Board of Directors and its committees	7
Miscellaneous	4
Approval of interested party transactions	13
Approval of transactions regulated by the Charter	28
Strategy and development	22
Management of subsidiaries and affiliates	25
Management of non-core assets	10
HR management	22
Approval of internal documents	7
Issuing of securities	3
Total number of matters discussed	172

Key 2021 results

Monitored the implementation of the overall strategy and strategic projects:

- Digital Economy of the Russian Federation national programme;
- 5G network deployment;
- Census on the basis of the Aurora OS Russian mobile platform;
- Construction of a new fibre-optic cable link under the working title of TEA NEXT (Next Generation Transit Europe-Asia), spanning Russia from west to east;
- Cybersecurity provision.

Developed and approved PJSC Rostelecom's updated strategy following the consolidation of the 100% stake in a subsidiary.

Updated PJSC Rostelecom's Long-Term Development Programme, key performance indicators system and Innovative Development Programme to roll out the Company's new strategy.

Plans for 2022

Monitor the implementation of the approved strategy of Rostelecom Group, adjust the strategy if necessary.

Focus on developing the key strategic business lines – Data Centres and Cloud, Information Security, and Digital Health.

Additionally focus on Rostelecom's further efforts to deploy 5G networks.

15

Board meetings held in 2021

3

Board meetings held in person

12

Board meetings held in absentia

172

matters discussed by the Board

Board committees’ performance in 2021

8
meetings held
in the reporting year,
2 of them in person

27
matters discussed

Audit Committee¹

The Audit Committee responsible for discussing matters of:

- accounting statements;
- internal and external audit;
- countering employee and third-party misconduct;
- compliance with the Code of Ethics;
- risk management.

4
meetings held
in the reporting year,
2 of them in person

9
matters discussed

Strategy Committee¹

The Strategy Committee responsible for discussing matters of:

- strategic goals and strategy implementation;
- priority areas and progress on strategic plans;
- distribution of profits, including dividends;
- the Company’s performance and growth prospects over the longer term;
- relations with the organisations in which the Company has interest, including disposal of interest in other entities;
- trading Company securities;
- financial and business evaluation models;
- reorganisation and liquidation of the Company and its controlled entities;
- using reserve and other funds;
- major and interested party transactions.

1
meeting was held
in the reporting year
in absentia

6
matters discussed

Nomination and Remuneration Committee²

The Nomination and Remuneration Committee responsible for discussing matters of:

- development, review and implementation of the Remuneration Policy;
- performance evaluation of the Company’s executive bodies and key executives;
- early termination of employment contracts with members of the Company’s executive bodies and other key executives;
- recommendations to the Board of Directors on the Corporate Secretary;
- disclosure of information on remuneration policy and practice and on the management’s shareholding in the Annual Report;
- qualifications and responsibilities of Board members, membership enhancement priorities and selection of new candidates;
- appointment of members of the Management Board, including the Chairman, and determining the terms of their employment contracts.

1
meeting was held
in the reporting year
in absentia

2
matters discussed

Corporate Governance Committee²

The Corporate Governance Committee responsible for discussing matters of:

- preparing for, and holding, the Annual and Extraordinary General Shareholders’ Meetings;
- approaches to information disclosure and rules for handling information that is not publicly available;
- preparing amendments to, and approving new versions of, regulations on the Company’s governing bodies;
- corporate conflict settlement;
- compliance with international standards and requirements of stock exchanges;
- approval of the Company’s registrar and terms of the agreement with the registrar.

1 New version No. 4 of the Regulations on the Audit Committee of PJSC Rostelecom’s Board of Directors was approved by the Board of Directors on 6 August 2020 (Minutes No. 24 dated 6 August 2020). The full text of the document is available at https://www.company.rt.ru/en/ir/corporate_governance/board/.

2 New version No. 4 of the Regulations on the Nomination and Remuneration Committee of PJSC Rostelecom’s Board of Directors was approved by the Board of Directors on 6 August 2020 (Minutes No. 24 dated 6 August 2020). The full text of the document is available at https://www.company.rt.ru/en/ir/corporate_governance/board/.

1 New version No. 4 of the Regulations on the Strategy Committee of PJSC Rostelecom’s Board of Directors was approved by the Board of Directors on 6 August 2020 (Minutes No. 24 dated 6 August 2020). The full text of the document is available at https://www.company.rt.ru/en/ir/corporate_governance/board/.

2 New version No. 5 of the Regulations on the Corporate Governance Committee of PJSC Rostelecom’s Board of Directors was approved by the Board of Directors on 6 August 2020 (Minutes No. 24 dated 6 August 2020). The full text of the document is available at https://www.company.rt.ru/en/ir/corporate_governance/board/.

Key matters discussed by committees in 2021

Audit Committee

- Recommendations to the Board of Directors on the Company’s auditor;
- RAS and IFRS reports;
- Bonus payments to the Senior Auditor and Senior Risk Manager;
- Internal Audit Unit performance reports and activity plans, including the recognition of the risk management and internal control system as generally effective, except for areas where certain observations or deficiencies were noted that require specific corrective action;
- Regulations on the Internal Audit;
- Risk management programme for 2021;
- Risk management results;
- Recommendations on the appointment of the Company’s Senior Risk Manager.

Nomination and Remuneration Committee

- Report on achieving key performance indicators for 2020;
- Report on the key results of the Board of Directors’ performance evaluation;
- Bonus payments to the President and Corporate Secretary.

Strategy Committee

- Strategy for 2021–2025;
- Long-Term Development Programme and Innovative Development Programme for 2021–2025;
- Dividend Policy for 2022–2024;
- Adjustment of the business plan for 2021;
- Business plan for 2022.

Corporate Governance Committee

- Report on compliance with the information policy;
- Inclusion of the matter on approval of PJSC Rostelecom’s Charter (version No. 21) in the agenda of the 2020 Annual General Shareholders’ Meeting.

Corporate Secretary

The Corporate Secretary facilitates the coordination between the Company and its shareholders, and assists the Company’s governing bodies in corporate governance. The Corporate Secretary is elected by the Board of Directors. The Corporate Secretary reports to the Board of Directors.

Ekaterina S. Mironova has been the Company’s Corporate Secretary since 2011¹.

1 For more details on the Corporate Secretary, see Appendix 2, Governing and Control Bodies, to this Annual Report at https://www.company.rt.ru/ir/agm/files/2021/Appendix_1_to_annual_report_2021_rus.pdf.

President and Management Board

8

Members of the Management Board

47.5 years old

Average age of the Management Board members

7 years

Average tenure of the Management Board members

22

Management Board meetings held in person in 2021

Composition of the Management Board'

No conflicts of interest involving members of the Management Board were identified in 2021.

Management Board’s performance report

Management Board members’ attendance at meetings

Meetings in person / in absentia 22

Key matters discussed by the Management Board

Operations and operational excellence

- Performance reports on the business plan and drafting the business plan for 2021.
- Enhancement of corporate project management.
- Implementation status and key priorities of Rostelecom’s production system.
- Procurement optimisation.
- Monitoring the progress of key strategic projects:
 - Bridging the Digital Divide;
 - Providing Internet Access for Hospitals and Out-Patient Clinics;
 - Arranging for Video Surveillance and Ensuring the Operation of the Broadcasting Portal During the Elections in Russia.
- Changes in the organisation of the Company’s branches and optimisation of employees’ performance when working remotely.

The Company’s growth

- Drafting the Company’s strategy to 2025.
- Strategies of the business segments and key subsidiaries.
- Target IT architecture development and transformational solutions for telecom networks.
- Developing digital services in healthcare.

Risk management

- Progress of the Risk Management Programme.

Enhancement of corporate governance standards

- Development and approval of the Risk Management Programme.
- Internal control development concept.

Preparation of materials and matters referred to the Board of Directors

- Preliminary review of interested party transactions.

Social responsibility

- Charity and sponsorship initiatives.

Management Board committees’ performance report

To improve the performance of the Management Board, the Company has in place four committees.

Budget and Investment Committee

Committee functions

The Budget and Investment Committee facilitates the linkages between, and alignment of, the budget and investment processes, monitors their progress and makes relevant proposals to the Management Board.

Key 2021 results

- Reviewed and assessed the Company’s investment projects and programmes for 2021 and 2022, made go/no-go decisions.
- Reviewed 2022 budgets of business units and branches as part of preparing the Company’s draft consolidated budget for 2022.
- Monitored the performance of the 2021 investment plan.

Plans for 2022

- Review and assess the Company’s investment projects and programmes.
- Review budgets of business units and branches as part of preparing the Company’s draft consolidated budget.
- Monitor the performance of the investment plan.

43 meetings held in the reporting year, 25 of them in person

91 matters discussed

27

meetings held
in the reporting year,
24 of them in person

126

matters discussed

Compensation Committee

Committee functions

The Compensation Committee is responsible for discussing matters of:

- headcount increases and sources of financing;
- one-off bonuses to employees;
- covering elective surgery costs for Company employees;
- determining the terms of the Company’s Housing Programme.

Key 2021 results

- Determined the terms of the Company’s Housing Programme.
- Resolved to cover elective surgery costs for Company employees.
- Made decisions on headcount increases and sources of financing.
- Approved the reimbursement of rental costs.
- Approved reclassification¹ rules.
- Approved the list of employees to be assigned a different category under the Long-Term Incentive Programme.
- Approved the allocation of defined contributions for employees of PJSC Rostelecom’s Corporate Centre and subsidiary, LLC Rostelecom Information Technologies (RTC-IT), pursuant to the Private Pension Insurance Programme.
- Approved incentives for employees of the Corporate Customer Relations Department.
- Approved a system of targeted financial incentives for employees of the B2O segment.
- Approved a new approach to motivating full-time installers.
- Approved an addendum to the memorandum on the approach to financial incentives for employees of PJSC Rostelecom’s Property Management Department.
- Decided to delegate some matters within the remit of the Compensation Committee to be discussed by the Organisational Development and HR Management Unit of the Company’s Corporate Centre to streamline the work of the Compensation Committee.

Plans for 2022

Discuss the following matters:

- Changes to the incentive system of the Company’s business units.
- Reclassification ratios.
- Bonus payments to employees.
- The Housing Programme.
- Headcount increases and sources of financing.
- Covering employees’ medical treatment costs.

3

meetings held
in the reporting year,
1 of them in person

6

6 matters discussed

Risk Management Committee

Committee functions

The Risk Management Committee coordinates the development of the risk management system (RMS) and ensures efficient risk management at all levels to make balanced business decisions.

Key 2021 results

- Approved the Risk Management Programme.
- Discussed risk management matters to be further submitted to the President, the Management Board, the Board of Directors, and the Board’s Audit Committee.
- Issued instructions to the RMS participants and approved risk management measures.
- Regularly supervised risk management procedures for all risks and at all organisational levels.
- Monitored mitigation activities and key risk indicators.

Plans for 2022

- Improve risk management processes: risk identification and assessment, development of risk management measures, RMS control and monitoring.

14

in-absentia meetings held
in the reporting year

32

matters discussed

Charity Committee

Committee functions

The key objectives of the Charity Committee are to review donation requests from individuals or legal entities and advise the Company’s governing bodies on charitable giving.

Key 2021 results

- Recommended a donation of RUB 157 million to support education, care, spiritual heritage, environment, and sports.

Plans for 2022

- Develop recommendations for charitable giving in 2022.

1 Moved amounts from other cost items to employee costs.

3 Control bodies¹

Revision commission

Key role

- Control of financial and business activities in the periods between meetings of general meetings of shareholders.

Key 2021 results

- At the beginning of 2022, an audit of the Company’s financial and business activities for 2021 was conducted by way of full and random inspections of individual transactions, including the Annual Report and annual accounting (financial) statements².
- In the course of 2021, revision of the company’s operations was also conducted in the following areas:
 - assessment of the efficiency of financial and business operations, analysis of the remuneration system, including KPI review;
 - compliance with legal acts when carrying out financial and economic activities in the main areas of the company’s activities;
 - analysis of the ICS, CRMS and internal audit system, budget and investment plan execution, and effectiveness of disposition
 - analysis of the company’s real estate management program, including the procedure for implementation and execution of transactions in 2021, and analysis of the effectiveness of equity investment management;
 - execution of the instructions of the President of the Russian Federation and the Government of the Russian Federation and recommendations of the Revision Commission based on the results of the inspection for 2020.

1 For more details on the performance of control bodies, see Appendix 2, Governance and Control Bodies, to this Annual Report at https://www.company.rt.ru/ir/agm/files/2021/Appendix_2_to_annual_report_2021_rus.pdf.

2 The Revision Commission issued an unqualified positive opinion and confirmed reliability of data contained in the Annual Report and annual accounting (financial) statements of the PJSC Rostelecom for 2021.

Internal Audit Unit

Key roles

- Internal audit based on a risk-oriented approach and best practices.
- Independent assistance in the enhancement of risk management, internal controls and corporate governance.
- Ensuring efficient operation of the Ethics Hotline.

Key 2021 results

- Executed the audit action plan, achieved economic benefits.
- Provided recommendations on improving risk management, internal controls and corporate governance, as well as independent and objective assurance and consultations aimed to enhance Rostelecom’s performance, generating additional revenue and savings.
- Introduced IT solutions in audit, taking into account trends towards digitalisation and sharing experience between project teams.
- Signed agreements with certain subsidiaries for paid internal audit services to improve risk management.

Risk Management divisions

Key roles

- Build, monitor, and maintain the RMS.

Key 2021 results

- Reviewed cases dealing with risks related to business continuity, components shortage crisis, and import substitution risks; approved measures to manage these risks.
- Prepared the Risk Management Programme for 2022.
- Provided methodological support to subsidiaries and affiliates in preparing the Risk Management Programme.
- Assessed the target maturity level of the RMS using the maturity model of the autonomous non-profit organisation of continuing professional education Institute for Strategic Risk Analysis in Decision Making.
- Updated the regulatory and methodological framework of the RMS, including at subsidiaries and affiliates.

Internal Control Unit

Key role	<ul style="list-style-type: none">Assist management in building an effective internal control system (ICS).
Key 2021 results	<ul style="list-style-type: none">Approved the Company's ICS development strategy.Drafted the Guarantee Map¹ for 2021.Ensured that business is involved in the ICS development through internal control training, introduction of self-assessment and periodic reporting.Analysed risks and control procedures for key business processes and developed recommendations to improve the ICS.Regularly monitored the progress on measures to improve the ICS.Organised the preparation and submission of reports on the ICS to the Federal Tax Service of Russia (FTS) in line with the requirements for companies applying the horizontal tax monitoring regime.Updated the ICS framework.

External audit

Key role	<p>We annually engage an external auditor for independent assessment of the accuracy of the Company's financial statements.</p> <p>In 2021, following a public tender, the Annual General Shareholders' Meeting² selected LLC Ernst & Young as PJSC Rostelecom's auditor (the "Auditor") in respect of RAS and IFRS reporting for 2H 2021 and 1H 2022, with the fee for audit services of Rostelecom's financial statements in accordance with RAS and IFRS totalling RUB 104.3 million (inclusive of VAT)³.</p> <p>The auditor confirmed the accuracy of the 2021 financial statements.</p>
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1 The Audit Commission issued an unqualified opinion and confirmed the accuracy of the data contained in PJSC Rostelecom's Annual Report and annual accounting (financial) statements for 2021.

2 Minutes No. 1 dated 29 June 2021.

3 For more details on the auditor's fee and the auditor selection procedure, see Appendix 2, Governance and Control Bodies, to this Annual Report at https://www.company.rt.ru/ir/agm/files/2021/Appendix_2_to_annual_report_2021_rus.pdf.



3.4 Remuneration

Board of Directors

4^m
RUB

Fixed annual remuneration payable to each member of the Board of Directors

400 thousand
RUB

Annual remuneration payable to members of the Audit Committee of the Board of Directors

320 thousand
RUB

Annual remuneration payable to members of other committees of the Board of Directors

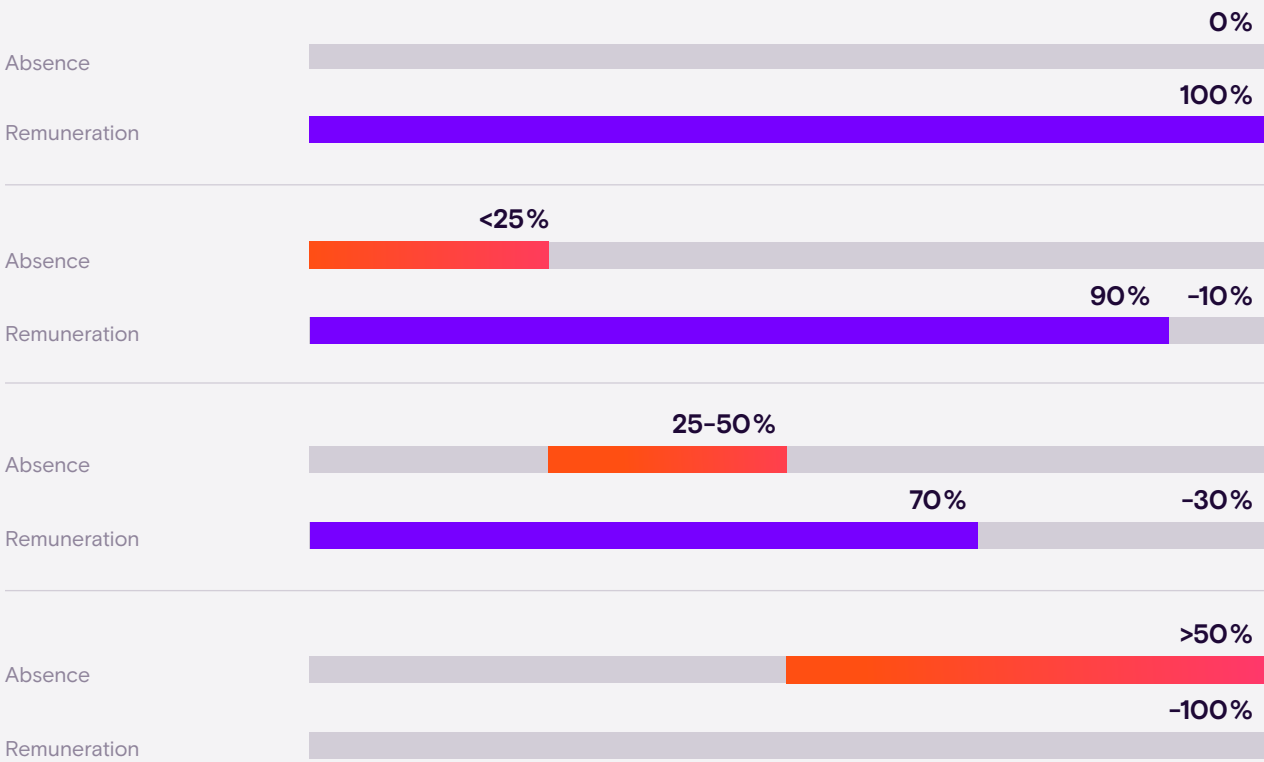
1.5×

Factor applied to the Chairman of the Board of Directors

1.25×

Factor applied to the Board of Directors' committee chairmen

Reduction of remuneration due to absence from meetings held in person or in absentia



Individual payments to members of the Board of Directors in office from 7 August 2020 to 28 June 2021, RUB.

No reimbursement of expenses or other payments were made to members of the Board of Directors in 2021, no loans (credit facilities) were granted.

In 2021, members of the Board of Directors who were not employed by the Company did not participate in the long-term incentive programme for the Company employees.

No annual remuneration is paid to the members of the Board of Directors holding public offices or employed by the Company, or to the members who renounced their remuneration.

Remuneration paid to the Board of Directors⁴, m RUB

President and Management Board

Separate payments are not provided for the performing functions of the Management board members.

The President’s compensation package is determined in his contract approved by the Board of Directors.

Furthermore, in line with the Board of Directors’ resolution, the President’s pay may include an annual bonus for good-faith performance of his duties and performance against budget targets.

Payments to Management Board members are made on the basis of employment contracts signed with all employees. No special remuneration is payable to Management Board members for serving on the Management Board.

Severance to the President and Management Board members is paid upon termination of employment by the Company in line with the Labour Code of the Russian Federation. The severance pay does not exceed the employee’s triple average monthly earnings.

Remuneration paid to the Board of Directors, m RUB

Components of remuneration payable to members of the Management Board

Payments to the Management Board and the highest paid employees in 2021, RUB

Revision Commission

800 thousand RUB

Annual remuneration payable to members of the Revision Commission

No annual remuneration is paid to the members of the Revision Commission holding public offices.

Payments to members of the Revision Commission in 2021, RUB

1.3x

Factor applied to the Chairman of the Revision Commission

1.1x

Factor applied to the Secretary of the Revision Commission

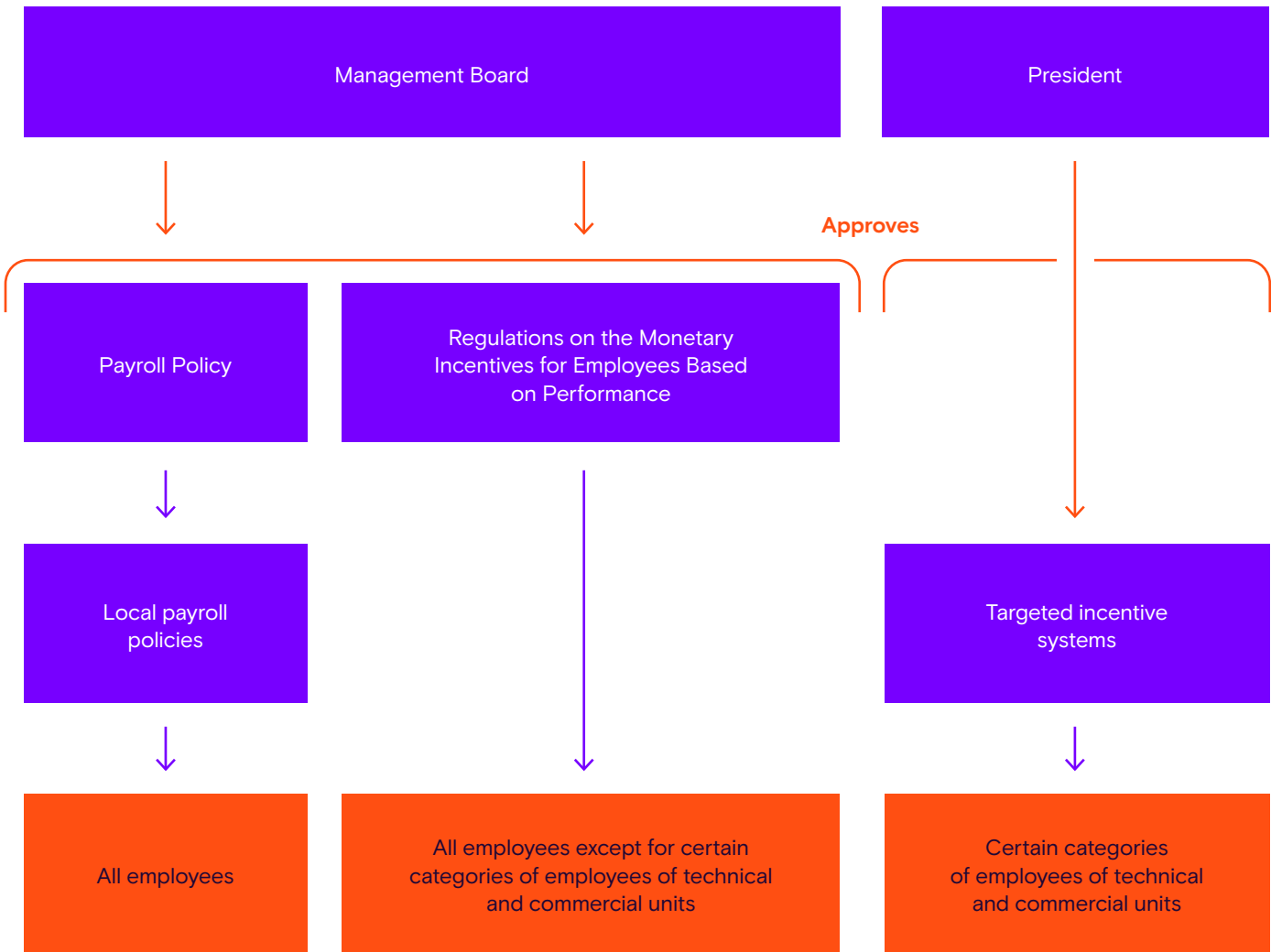
Incentive programmes

Rostelecom has in place a number of motivation policies and regulations for its employees.

The Company regularly participates in salary and HR policy reviews. Remuneration and financial incentives for Rostelecom employees are on par with the market.

Rostelecom does not use non-financial incentives except for the Long-Term Incentive Programme. Local remuneration systems, including incentive systems, are adapted in the Company's subsidiaries and affiliates to stay in line with current approaches to remuneration management in Rostelecom.

Severance may be paid to Company employees upon retirement by mutual agreement of the parties. The severance pay may not exceed the employee's triple average monthly earnings.



Long-term incentives

Expenses on the Long-Term Incentive Programme within the Statement of Profit and Loss¹, m RUB

¹ Wages, salaries, other benefits and social taxes, including personal income tax.

Short-term incentives

The Company has a regular bonus scheme for employees. We are also working to improve employee motivation system in line with business requirements.

In 2021, targeted incentive schemes and KPIs were finalised for the B2C, B2B and B2O segments, and the Technical Infrastructure Unit. Additional financial incentive programmes were also developed and implemented to further improve employee performance in order to meet individual business objectives.

Yet another employee motivation tool used by Rostelecom is quarterly assessments of in-house services. Such assessments improve cross-functional communication. Their results are used to enhance in-house services.

System of KPIs

Key performance indicators are set for employees based on their position and scope of responsibility/influence. Bonuses paid to employees depend on the achievement of corporate, business and individual targets.

Corporate KPIs

Business KPI: President and members of the Management Board

Business KPIs: B2C segment manager

Business KPIs: B2B/B2G segment manager

Information disclosure

Aiming to enhance its investment case and maintain a trust-based dialogue with its stakeholders, Rostelecom discloses information in line with:

- the requirements of Russian law;
- the requirements of the Bank of Russia's regulations;
- the Listing Rules of the Moscow Exchange;
- the basic principles of disclosure and provision of information by public joint stock companies as recommended by the Corporate Governance Code;
- internal documents.

The Board of Directors establishes the rules of, and approaches to, disclosures, which are formalised in Rostelecom's Information Disclosure Policy.

Key objectives of the Information Disclosure Policy are to:

- enhance openness and build trust;
- improve transparency;
- determine the Company's disclosure framework.

Key principles of the information policy:

- timely, consistent and prompt provision of information;
- accessibility, objectivity, completeness, accuracy and comparability of disclosed information;
- equal rights of all stakeholders to obtain information in compliance with all applicable laws, standards and regulations;
- information disclosure regardless of specific individual or group interests;
- reasonable balance between the Company's transparency and protection of its business interests;
- confidentiality of information that constitutes a state secret or a trade secret in accordance with the Company's internal documents;
- control over the use of insider information.

The Company discloses information on its official website <https://www.company.rt.ru/en/> and on the corporate information disclosure website run by Interfax (in Russian) www.e-disclosure.ru.

Securities and shareholder and investor relations

Securities

Shares

As at 31 December 2021, PJSC Rostelecom's charter capital was RUB 8.73 million divided into 3,282,997,929 ordinary and 209,565,147 preference shares. The total number of shareholders of Rostelecom amounted to 151,369 people: 701 legal entities and 150,668 individuals¹.

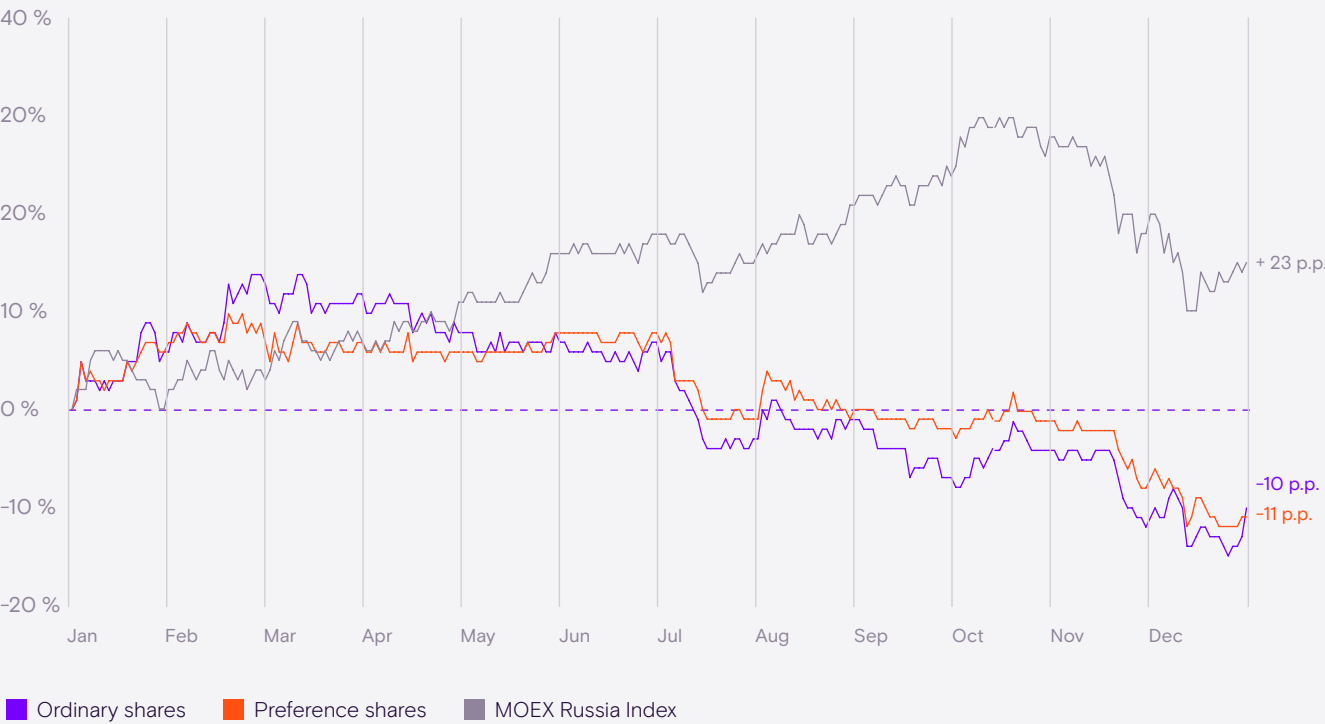
PJSC Rostelecom ordinary and preference shares (tickers RTKM and RTKMP) are admitted to the Level One quotation list of Moscow Exchange and to the non-quotation section of Saint Petersburg Exchange's list.

Key performance highlights of PJSC Rostelecom shares on the Moscow Exchange², RUB

Metric	Ordinary shares	Preference shares
Price as at 31 December 2020	96.73	85.60
Annual low (2021)	81.97	75.05
Annual high (2021)	110.75	93.80
Price as at 30 December 2021	87.22	76.15
Traded volume on the Moscow Exchange in 2021, m RUB	60,012	5,798

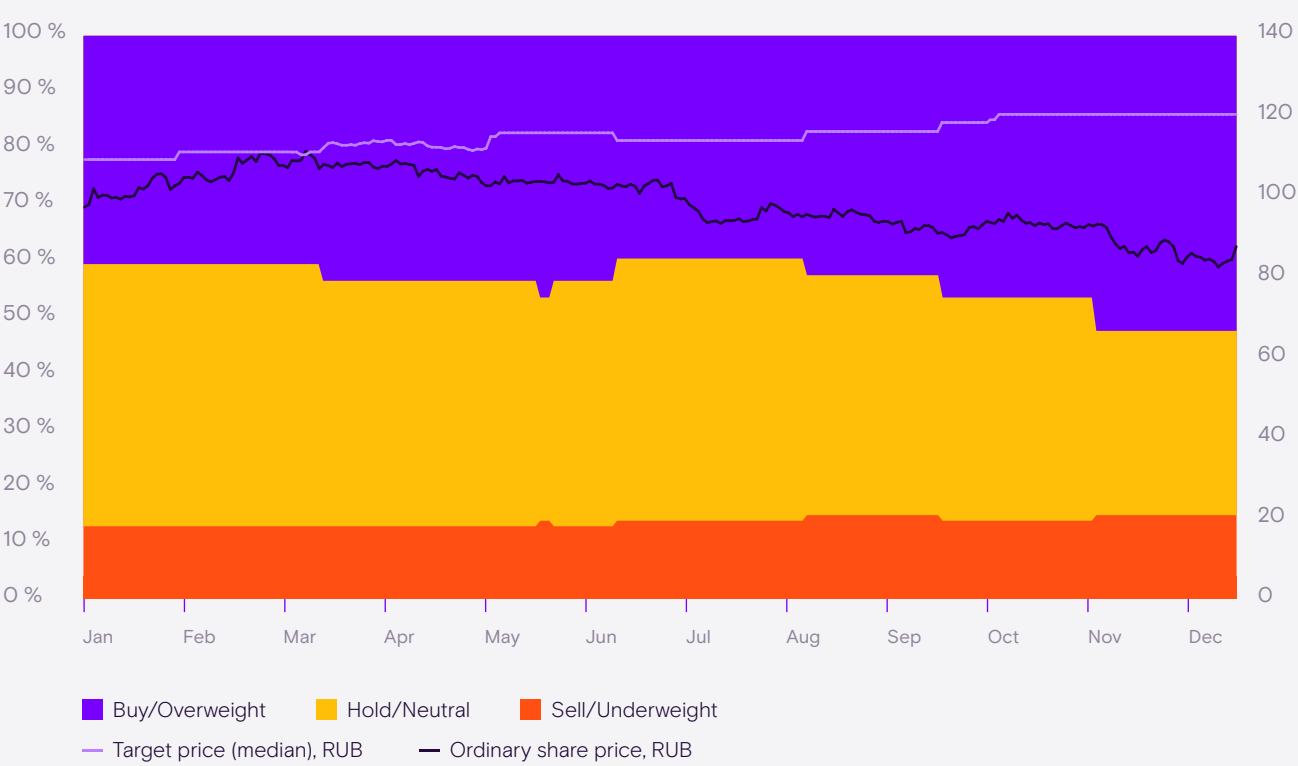
1 Excluding disclosure of shareholders whose shares are held by nominee holders.
2 Source: Bloomberg.

PJSC Rostelecom ordinary and preference share price and MOEX Russia Index performance, 2021, %



Source: Bloomberg

Analyst recommendations for PJSC Rostelecom ordinary shares, 2021, %



Shareholding structure as at 31 December 2021

Depository receipts

PJSC Rostelecom launched an American Depositary Receipt (ADR) programme for its ordinary shares in February 1998¹. One ADR represents six ordinary shares. The ADRs are traded on the OTCQX trading platform, as well as on the London, Frankfurt and other foreign stock exchanges under unlisted trading privileges. As at 31 December 2021, 6.3 million ADRs were issued, or 1.1% of the total outstanding ordinary shares.

Bonds

In July 2021, Rostelecom placed five-year exchange bonds for RUB 15 billion at 7.7% p.a. until the final redemption date. The proceeds were used to refinance the Company's existing debt and did not change its overall leverage.

As at 31 December 2021, the total value of the Company's outstanding bonds amounted to RUB 128.88 billion, or 35 % of its debt portfolio.

Outstanding bonds as at 31 December 2021

Series	Offering date	Issue size, RUB	Number of outstanding bonds	Maturity date
BO-01	29 May 2015	5,000,000,000	862,810	16 May 2025
OO1P-01R	22 September 2016	15,000,000,000	8,016,404	10 September 2026
OO1P-02R	26 April 2017	10,000,000,000	10,000,000	14 April 2027
OO1P-03R	21 November 2017	10,000,000,000	10,000,000	9 November 2027
OO1P-04R	16 March 2018	10,000,000,000	10,000,000	3 March 2028
OO1P-05R	3 April 2019	15,000,000,000	15,000,000	21 March 2029
OO2P-01R	5 December 2019	10,000,000,000	10,000,000	27 November 2025
OO2P-03R	18 February 2020	15,000,000,000	15,000,000	14 February 2023
OO2P-02R	19 February 2020	15,000,000,000	15,000,000	10 February 2027
OO2P-04R	24 April 2020	10,000,000,000	10,000,000	21 April 2023
OO2P-05R	14 October 2020	10,000,000,000	10,000,000	8 October 2025
OO2P-06R	23 July 2021	15,000,000,000	15,000,000	17 July 2026

¹ For more details on the depository and custodian, see Appendix 9, Additional Information on PJSC Rostelecom, to this Annual Report at https://www.company.rt.ru/ir/agm/files/2021/Appendix_9_to_annual_report_2021_rus.pdf.

Dividends

In 2021, the Board of Directors approved the Dividend Policy¹, covering dividend payments in 2022, 2023 and 2024. According to the new policy, the Company will strive to pay at least RUB 5 annually per ordinary share and at least 5% more per share than in the previous reporting year.

On 28 June 2021, the Annual General Shareholders' Meeting resolved to pay dividends for FY2020 in the total amount of RUB 17,462,815 thousand; dividends on ordinary and preference shares were RUB 5 per share. Dividends were paid out of retained earnings of previous years; the amount paid to the federal budget was RUB 6,270,948 thousand, with no outstanding dividends payable to the federal budget.

Dividend historical payout

Dividends for	Dividend per ordinary/ preference share, RUB	Total accrued, RUB thousand	Total paid prior to 2021, RUB thousand	Total paid during 2021, RUB thousand	Total paid by end of 2021	
					RUB thousand	%
2020	5/5	17,462,815	–	17,352,408	17,352,408	99.37
2019	5/5	17,462,815	17,355,197	4,351	17,389,548	99.58
2018	2.50/2.50	6,961,200	6,911,012	1,704	6,912,716	99.30
9M 2018	2.50/2.50	6,961,200	6,911,428	1,374	6,912,802	99.30
2017	5.05/5.05	14,050,000	13,954,275	901	13,955,176	99.33

¹ Approved by PJSC Rostelecom's Board of Directors on 19 April 2021 (Minutes No. 09 dated 20 April 2021). The full text of the document is available at https://www.company.rt.ru/en/ir/corporate_governance/docs/.

Shareholder and investor relations

The company actively cooperates with analysts of banks and rating agencies. The full list of analysts can be found on the company's website: <https://www.company.rt.ru/ir/ratings/coverage/>.

AA(RU)

Analytical Credit Rating Agency (ACRA)

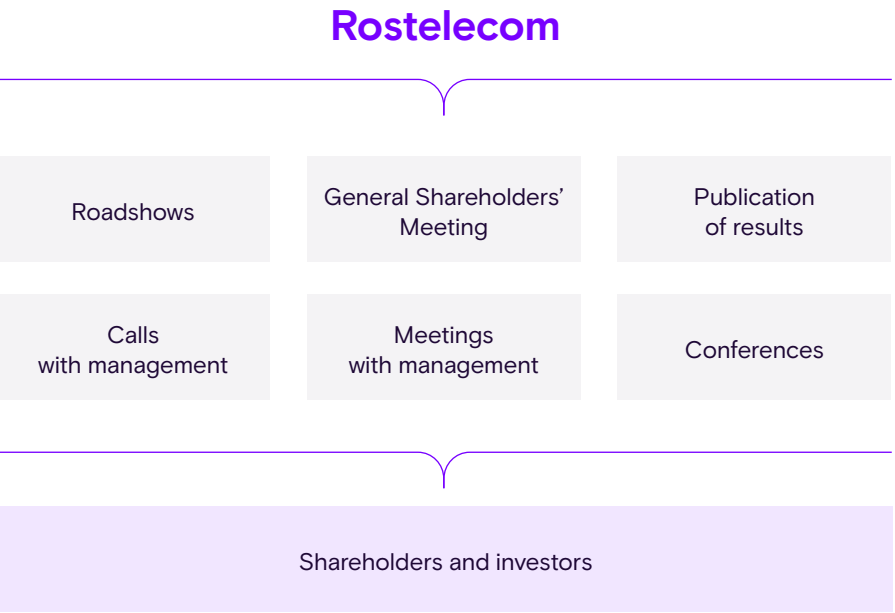
Forecast stable
Confirmed May 31, 2021

Rostelecom is committed to building strong relations with the investment community, promptly providing information on its operations to stakeholders, and quickly responding to requests from investors and other target audiences. The Company maintains an ongoing dialogue with sell-side analysts and holds regular meetings with existing shareholders and potential investors.

In its interactions with investors, the Company primarily aims to:

- promote Rostelecom's investment case;
- manage expectations;
- participate in analysing strategic decisions on the Company's growth, including their impact on market capitalisation;
- expand and diversify Rostelecom's investor base, focusing on long-term investment funds;
- reduce borrowing costs.

Key shareholder and investor relations tools



Over the past year, the Company's management and IR team continued to leverage digital platforms and online investor communication channels amid the pandemic and the shift to remote work. In 2021, the Company took part in eight online investment conferences. The Investor Day was an important event in 2021, with Rostelecom presenting its updated development strategy to 2025 along with FY2021-2023

dividend policy ¹, followed by a series of virtual NDRs with key investors. At an online meeting with investors and analysts in the autumn of 2021, Rostelecom management further detailed their view on value creation through the transition to a segment and cluster based management model and also shared the Company's vision for developing digital clusters as part of the previously approved 2025 strategy. Management also presented a digital cluster acceleration scenario with the potential for additional increase in business value. In total, Rostelecom held about 50 meetings with the investment community throughout 2021, mostly online.

In addition to four quarterly disclosures of its financial and operating results and about 35 press releases for a financial audience published in 2021, Rostelecom widely reported to its investors and shareholders on the major deal to engage large financial investor as a partner in developing the data centre and cloud solution business, which is strategically important for the Company.

In 2021, as part of our efforts to improve Rostelecom's ESG profile, we continued to engage with ESG specialists and experts to clarify the details of the Company's sustainability performance to improve its position in the rankings compiled by relevant providers. An important ESG development was Rostelecom's inclusion in the Bloomberg Gender-Equality Index for the second year running. Rostelecom demonstrated a high level of disclosure and overall performance across the index framework. In addition, Rostelecom topped the ESG ranking by the National Rating Agency², covering 105 issuers from the industrial and consumer sectors whose securities are admitted to the first and second level quotation lists of the Moscow Exchange.

Rostelecom's disclosure achievements were commended at the 24rd Annual Reports Contest organised by the Moscow Exchange³. Rostelecom's Annual Report 2020 ranked first among telecom and FMCG companies for the second year running.

¹ Covers dividend payments in 2022-2024.
² Please, see: <https://www.ra-national.ru/ru/node/64288>.
³ Please, see: <https://konkurs.moex.com/winners>.

IR calendar

Date	Event	Format
26 January 2021	A conference call with management. Engaging a partner in developing Rostelecom’s data centre and IaaS business	A management conference call with investors. Publication of a press release and presentation
12 February 2021	WOOD’s EM Consumer & Industrials Virtual Conference	One-on-one and small group online meetings with management
3 March 2021	Announcement of Q4 and FY2020 IFRS results	Publication of a press release, presentation, statements, and other materials for the reporting period. A management conference call with investors
20 April 2021	Investor Day. Presentation of Rostelecom’s updated Development strategy to 2025 and dividend policy for 2021-2023	A management video webcast with investors. Publication of the Dividend policy, a press release, and presentation
13 May 2021	Announcement of Q1 2021 IFRS results	Publication of a press release, presentation, statements, and other materials for the reporting period. A management conference call with investors
19 May 2021	SberCIB’s Russia: The Inside Track	One-on-one and small group online meetings with management
24–27 May 2021	Rostelecom NDR 2021	One-on-one and small group online meetings with management
24 June 2021	Renaissance Capital Annual Russia Investor Conference	One-on-one and small group online meetings with management
5 August 2021	Announcement of Q2 2021 IFRS results	Publication of a press release, presentation, statements, and other materials for the reporting period. A management conference call with investors

Date	Event	Format
9 November 2021	Announcement of Q3 2021 IFRS results	Publication of a press release, presentation, statements, and other materials for the reporting period. A management conference call with investors
16 November 2021	Virtual meeting with management. Value creation through the development of digital clusters as part of Rostelecom’s strategy to 2025	A management video webcast with investors. Publication of a press release and presentation
18 November 2021	Dialogue with the Issuer, BCS’ online conference	Group online meeting of private investors with management
19 November 2021	MOEX & Sova Capital Forum	One-on-one and small group online meetings with management
20 November 2021	Investment Leaders Forum	Presentation of the ESG case to retail investors
7 December 2021	Dialogue with the Company for private investors, VTB’s online conference	Group online meeting of private investors with management
9–10 December 2021	WOOD’s Winter Wonderland	One-on-one and small group online meetings with management



ADDITIONAL
INFORMATION

4.1 Consolidated Financial Statements PJSC Rostelecom and its subsidiaries for 2021

The consolidated financial statements of PJSC Rostelecom and its subsidiaries for 2021 are available on the company's corporate website:
https://www.company.rt.ru/upload/protected/iblock/O19/IFRS_12m2021_ENG.pdf

4.2 Glossary

4G	The fourth generation of mobile technology with advanced requirements. 4G usually includes a family of advanced technologies enabling bandwidths of over 100 Mbps
5G	The fifth generation of mobile technology achieving higher bandwidths than 4G, driving greater mobile availability, extremely reliable large-scale networking of devices, lower latencies, bandwidths of 1 Gbps–2 Gbps and lower energy consumption by batteries. 5G adoption will drive the expansion of the Internet of Things
ACRA	Analytical Credit Rating Agency
AGSM	Annual General Shareholders' Meeting
ARPU	Average revenue per user (average revenue per unit)
B2C	Business-to-consumer
B2B	Business-to-business
B2G	Business-to-government
B2O	Business-to-operator
BDD	Bridging the Digital Divide national programme

Big Data	Large amounts of varied structured and unstructured data efficiently processed by horizontally scaled software tools
Broadband	Broadband services
CAPEX	Capital expenditures for acquiring or upgrading non-current assets
CAGR	Compound average growth rate
CDN	(Content Delivery Network)A large online network of servers geographically distributed across several data centres to serve content to end users with high availability and high performance
Cloud services	A model for enabling on-demand network access to a shared pool of configurable computing resources
CRM	Customer relation management software
DDoS (Distributed Denial of Service)	An attempt to make an online service unavailable by overwhelming it with traffic from multiple sources
DLDTN	Domestic long-distance transit node
DWDM	Dense wavelength division multiplexing
Data centre	Data processing centre
Digital Economy	The Digital Economy of the Russian Federation programme approved by the Russian Government’s Decree dated 28 July 2017
EBITDA	Earnings before interest, taxes, depreciation, and amortisation (an evaluation metric, also known as pre-tax profit)
EGSM	Extraordinary General Shareholders’ Meeting
eNPS (Employee Net Promoter Score)	A method to measure employee loyalty
ESG	Environmental, social and corporate governance
FCF	Free cash flow
FOCL	Fibre-optic communications line

FTTB/FTTx (Fibre-to-Building)	Broadband network architecture using optical fibre to provide all or part of the local loop used for last mile telecommunications
GPON (Gigabyte Passive Optical Network)	A cost-efficient broadband technology
Headquarters	Headquarters of PJSC Rostelecom
IaaS (Infrastructure as a Service)	A cloud computing service model where subscribers can access fundamental information technology resources – virtual servers with a given computing power, operating system and network access
IFRS	International Financial Reporting Standards
IZTN	Inter-zone transit node
IoT/IIoT (Internet of Things / Industrial Internet of Things)	The internet-based interconnection of devices embedded in everyday objects enabling them to send and receive data
IT	Information technology
IP/MPLS (Multiprotocol Label Switching)	A routing technique in high-performance telecommunications networks that directs data from one node to the next based on short path labels rather than long network addresses, thus avoiding complex lookups in a routing table
IPTV	A system through which television services are delivered using the internet protocol suite over a packet-switched network such as a LAN or the internet
Issuer	An entity or an individual issuing securities to support and finance their business
KPI	Key performance indicators
LP (Landing Page)	A destination web page
Last mile	Final leg of the telecommunications networks that deliver telecommunications services to retail end users
MRF	Macroregional branch of PJSC Rostelecom
MVNO (Mobile Virtual Network Operator)	A telecommunications operator that does not own the mobile network infrastructure over which it provides services to its customers under its own brand

NPS (Net Promoter Score)	An index reflecting consumer loyalty to a product or company (likelihood to recommend) and used to gauge repurchase intent
OIBDA	Operating income before depreciation and amortisation (an evaluation metric)
OTT (Over the Top)	Delivery of video signals from a content provider directly to a user’s device over the internet bypassing an operator
O2O	Rostelecom’s project, Operator to Operators, aimed to offer network infrastructure support, operation and development services to other operators
PaaS (Platform as a Service)	A cloud computing model where users can access and use information technology platforms
PBX	Private branch exchange
Pay TV	Subscription-based television services provided by both analogue and digital cable and satellite television, as well as via digital terrestrial and internet television
ROIC	Return on invested capital
RPS	Rostelecom’s production system
RSPP	Russian Union of Industrialists and Entrepreneurs
SaaS (Software as a Service)	A cloud computing service model where subscribers are provided with ready-to-use provider-managed software
SDN (Software Defined Network)	An approach facilitating computer network management
SME	Small and medium-sized enterprises
SLA	Service level agreement
Smart Home	A high-tech solution for integrating diverse household systems under artificial intelligence control
Smart TV	An advanced television set with integrated internet and digital interactive feature
Subscriber	An individual or an entity with a valid contract who has used any service entailing data traffic, a subscription fee or a service charge in the past six months

TMT	Technology, media and telecommunications sector
TTM (Time-to-Market)	The amount of time it takes to design and manufacture a product before it is available to buy
TSR	Total shareholder return
TEA	Transit Europe–Asia terrestrial cable system
VDI (Virtual Desktop Infrastructure)	A technology creating a virtual IT infrastructure to deploy full-scale workstations on a single server hosting multiple virtual desktops
vIMS (virtualised IP Multimedia Subsystem)	An architectural framework for delivering IP-based multimedia services
VoD (Video on Demand)	A technology enabling customers to select and view content any time they need. VoD is often delivered to television sets and desktops over IPTV
VPN / IP VPN (Virtual Private Network)	A virtual private network for expanding a dedicated network through a public network (the internet), enabling desktops to send and receive data via a shared or public network as if the desktop was directly connected to the private network, while taking advantage of the public network functionality, security policy and management capabilities
Wi-Fi	Wireless local area networking (WLAN) of devices

Contact details

Full company name	Public Joint Stock Company “Rostelecom”
Abbreviated name	PJSC Rostelecom
State registration certificate number and date	Initial state registration details: Certificate No. 021.833 dated 23 September 1993
Legal entity registration details	Certificate of entry into the Unified State Register of Legal Entities of an entity registered before 1 July 2002 (OGRN 1027700198767) series 77 No. 004891969 dated 9 September 2002
Location	Saint Petersburg, Russian Federation
Legal address	15 Dostoevskogo St., Saint Petersburg, 191002, Russian Federation
Postal address	30 Goncharnaya St., Moscow, 115172, Russian Federation
Type of economic activity	All-Russian Classifier of Types of Economic Activity (OKVED) code 61.10 – telecommunications services
Headquarters	Phone: 8 800 200 0033 (toll-free) Phone: +7 499 999 8283 Fax: +7 499 999 8222
Hotline for shareholders	Phone: 8 800 100 1666 (toll-free)
Website	www.rt.ru
External Communications and Corporate Social Responsibility Department	Phone: +7 499 999 8283 Email: pr@rt.ru
Investor Relations and Sustainable Business Development Department	Phone: +7 499 995 9780 Email: ir@rt.ru
Corporate Governance Department	Phone: +7 499 995 9840 Email: rtkm@rt.ru
Corporate Secretary	Phone: +7 499 999 8283 Email: rtkm@rt.ru
Company Office	Headquarters 30 Goncharnaya St., Moscow, 115127