

Your Value Partner



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Forward-Looking Statements

The forward-looking statements and projected figures concerning the future performance of NTT and its subsidiaries and affiliates contained or referred to in this report are based on a series of assumptions, projections, estimates, judgments, and beliefs of the management of NTT in light of information currently available to it regarding the economy, the telecommunications industry in Japan, and other factors. These projections and estimates may be affected by the future business operations of NTT and its subsidiaries and affiliates, the state of the economy in Japan and abroad, possible fluctuations in the securities markets, the pricing of services, the effects of competition, the performance of new products, services, and new businesses, changes to laws and regulations affecting the telecommunications industry in Japan and elsewhere, and other changes in circumstances that could cause actual results to differ materially from the forecasts contained or referred to in this report.

Editorial Policy

This is an integrated report that combines information that is important to shareholders and investors, including not only such information as growth strategies and financial results but also environmental (E), social (S), and governance (G) information. The report focuses on explanations of NTT Group's initiatives targeting increases in corporate value over the medium to long term. In editing this report, reference was made to the International Integrated Reporting Framework of the International Integrated Reporting Council (IIRC). The report is intended to help readers better understand NTT Group, which is accelerating its self-transformation to become "Your Value Partner" and working to increase corporate value by contributing to the realization of a sustainable society.

Report Scope

• Directly Affiliated Companies (8 Companies)

NTT, NTT DOCOMO, NTT East, NTT West,
NTT Communications, NTT DATA, NTT FACILITIES,
NTT COMWARE

• Their Affiliated Companies (18 Companies)

Six NTT East Group Companies (NTT EAST-HOKKAIDO,
NTT EAST-TOHOKU, NTT EAST-KANSHINETSU, NTT EAST-
MINAMIKANTO, NTT EAST SERVICE, NTT-ME), five NTT West
Group Companies (NTT NEOMEIT, NTT MARKETING ACT,
NTT Business Solutions, NTT Field Techno, NTT BUSINESS
ASSOCIE WEST), and seven NTT FACILITIES Group Companies
(NTT FACILITIES CHUO, NTT FACILITIES HOKKAIDO,
NTT FACILITIES TOHOKU, NTT FACILITIES TOKAI,
NTT FACILITIES KANSAI, NTT FACILITIES CHUGOKU,
NTT FACILITIES KYUSHU)

Other Materials

- ▶ Presentation Materials
https://www.ntt.co.jp/ir/library_e/presentation/
- ▶ Shareholders' Meeting Materials
https://www.ntt.co.jp/ir/shares_e/shareholders_meetings.html
- ▶ Securities Report
https://www.ntt.co.jp/ir/library_e/yuho/
- ▶ Sustainability Report
https://www.ntt.co.jp/csr_e/report.html



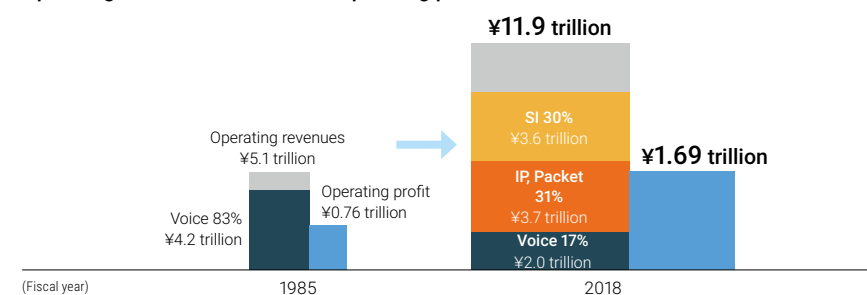
NTT Group's Journey of Transformation

NTT Group's Business Structure Transformation



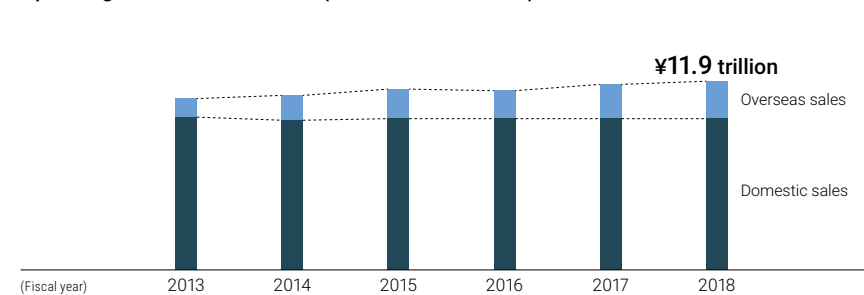
Change in Earnings Structure Focus to System Integration and IP

Operating revenues breakdown / Operating profit



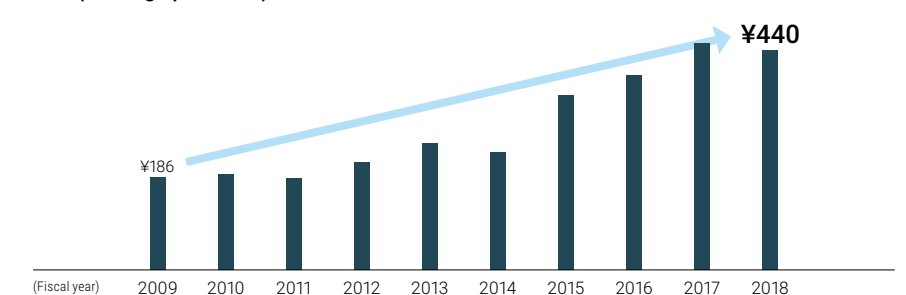
Expansion of global business

Operating revenues breakdown (Overseas / Domestic)



EPS Growth

EPS (earnings per share)



Group Formation



Nippon Telegraph and Telephone Corporation
(Holding Company)

Main Businesses

For NTT Group as a whole, formulation of management strategies and promotion of basic research



Mobile Communications Business

Main Company
NTT DOCOMO, INC.

- Business Activities** Mobile communications business, smart life business, etc.
- Major Services** Mobile phone services, "d market" services such as movie and music distribution and e-book services, and finance and payment services
- Competitive Advantages**
- A stable communication network that can be used comfortably anytime, anywhere
 - Top-notch research and development capabilities
 - Large market share and stable customer base



Regional Communications Business

Main Companies
Nippon Telegraph and Telephone East Corporation
Nippon Telegraph and Telephone West Corporation

- Business Activities** Regional telecommunications operations in Japan and related businesses, etc.
- Major Services** FTTH and other services
- Competitive Advantages**
- Secure, highly reliable, stable communication network
 - Provision of and support for ICT solutions with strong local ties
 - Large market share and stable customer base



Long Distance and International Communications Business

Main Companies
NTT Ltd.
(Global Operating Company)
NTT Communications Corporation
(Japan Operating Company)

NTT, Inc.
(Global holding company)

Main businesses
Governance, strategy planning, and policy promotion for the global business of NTT Group

- Business Activities** Long-distance telecommunications operations in Japan, international telecommunications business, solutions business, and related businesses
- Major Services** Cloud services, data center services, migration support services, and other services
- Competitive Advantages**
- Comprehensive solutions from application to IT infrastructure
 - Global coverage
 - Strong customer engagement



Data Communications Business

Main Company
NTT DATA CORPORATION

- Business Activities** Network system services, system integration, etc., in Japan and overseas
- Major Services** ERP services, ICT outsourcing, and other services
- Competitive Advantages**
- High-level technology development and project management capabilities
 - Large market share and stable customer base in Japan
 - Powerful service delivery capabilities using development bases in EMEA and in Central and South America

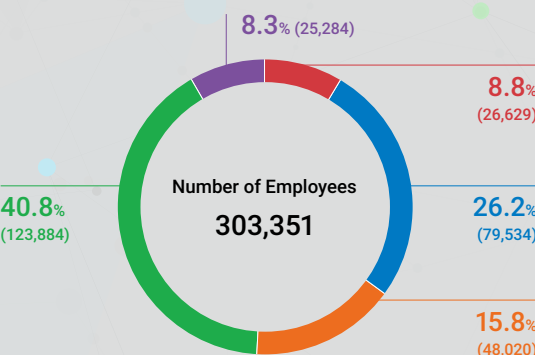
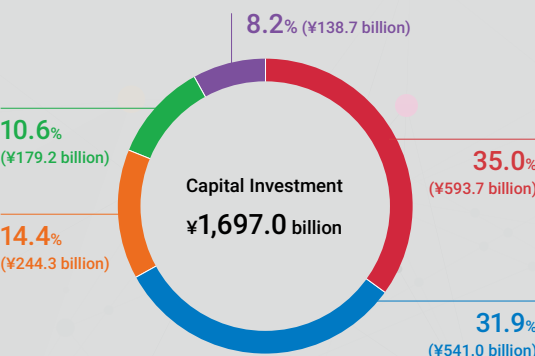
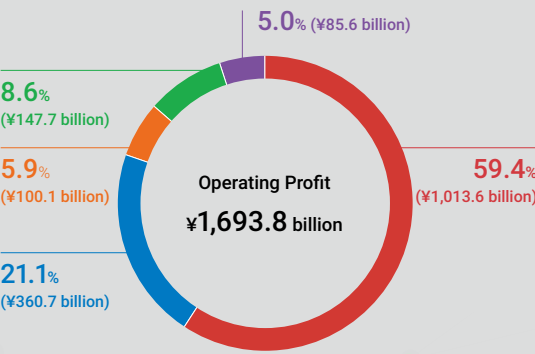
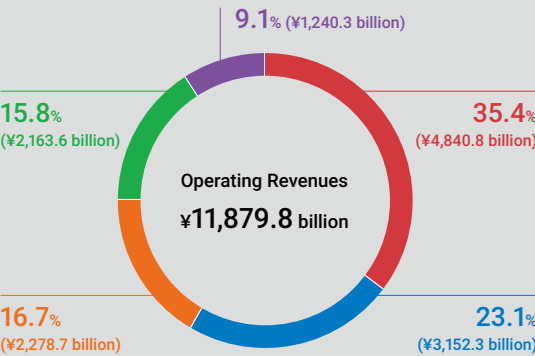


Other Businesses

Main Companies
NTT Urban Solutions, Inc.
NTT Anode Energy Corporation

- Business Activities** Real estate, finance, construction / electric power, system development, advanced technology development, etc.

Composition by Segment
(As of March 2019)



■ Mobile Communications Business ■ Regional Communications Business
■ Long Distance and International Communications Business
■ Data Communications Business ■ Other Businesses

September 2019

Jun Sawada

President and Chief Executive Officer,
Member of the Board

澤田 純

To resolve social issues through its business operations, NTT Group works together with its partners as “Your Value Partner.”

Our Mission and Vision

Over the past year, Japan has experienced an inordinate number of natural disasters, such as earthquakes, typhoons, and torrential rains. For over 100 years, NTT Group has protected Japan's information communications networks from these threats, as they cannot afford to be interrupted, even in a disaster. We remain dedicated to NTT Group's mission of fulfilling our duty to ensure communications even during disasters as a key infrastructure. We will remain committed to meeting customers' expectations and working with pride in the NTT brand and its reliability. It is a part of our identity.

Since its launch through the privatization of Nippon Telegraph and Telephone Public Corporation in 1985, NTT has been required to fulfill the missions of both a public utility and a private company. While carrying out the public aspect of its mission by providing safe, reliable communications services without interruption over the entire country from coast to coast, we have also had the important task of realizing a business function of continuously generating profits as a private company. To resolve social issues through business operations, NTT Group must continue to engage in flexible, ongoing transformation in step with the changes in society, just as it has always done.

Over the years, NTT Group has made significant changes to its business structure. In 1985, voice-related revenues accounted for more than 80% of our operating revenues; but today this figure has decreased to less than 20%. Meanwhile, IP/packet communications services revenue and system integration services revenue account for over 60%. Moreover, in expanding our global business, the ratio of overseas sales has expanded to around 20% of total operating revenues.

Looking ahead, NTT Group will remain true to the mission of “acting simultaneously as a public utility and a private company,” while continuing to transform itself in line with the changes in society, aiming to resolve social issues through its business operations with its partners as “Your Value Partner.” Our aspiration is to contribute to realizing “Smart World/Society 5.0,” a world where all people receive the benefits of ICT and can work more easily, and live enjoyable, fulfilling lives.

“Your Value Partner 2025”— Medium-Term Management Strategy for Realizing Our Vision

In November 2018, we announced a medium-term management strategy for contributing to the realization of a smart society. The strategy comprises 10 measures based on four pillars: 1) Support our customers' digital transformations, 2) Accelerate our own transformation, 3) Leverage talent, technologies, and assets, and 4) Promote ESG management and enhance the returns of shareholders to improve corporate value. The strategy sets out targets for each key juncture in the short term (three years), medium term (five years), and long term (seven years), based on major events such as the start of 5G services and migration to PSTN IP networks.

The main target indicator is earnings per share (EPS). Taking the result for the fiscal year ended March 31, 2018 of ¥425* as a starting point, we plan to achieve 50% growth to around ¥640 by the fiscal year ending March 31, 2024. While basically striving to grow profits, we will also carry out share buybacks flexibly. We aim to realize this growth in profits through the combination of a rapid recovery from a drop in profits associated with a large-scale customer return program (introduction of new rate plans) at

NTT DOCOMO, the expansion of overseas operating profit through bold reorganization of our global business, and efficiency increases and cost reductions in existing businesses.

In our global business, where we have been working to increase the scale of revenues, we have focused our efforts on increasing the profit margin, which has been an issue, and we are aiming to achieve an overseas operating profit margin of 7%. Through the reorganization of the global business, we have unified everything under the NTT brand. In around two years’ time, we aim to pivot to a business model centered on managed IT services and thereby increase the profit margin.

In the domestic business, we are aiming to achieve at least ¥800 billion of cost reductions on our fixed-line and mobile access networks, and we are also thinking of setting a target for the capex to sales ratio and continuing the streamlining of our capital investment.

* Excludes the effects of the arbitration award received from Tata Sons Limited.

Setting ROIC as a Financial Target

We will transition away from outdated business models predicated on holding assets and change our awareness by shifting our focus to cash flows. While working to improve the efficiency and productivity of our existing businesses, we are also actively making growth investments in new businesses. In this situation, we have set return on invested capital (ROIC) as a new target for the pursuit of efficiency of invested capital. To ensure that this approach is implemented and takes root among all NTT Group companies as early as possible, we have already incorporated ROIC as one of our business evaluation indicators.

As part of this, in July 2019 we concluded a capital and business alliance with JTOWER Inc., which operates infrasharing projects for in-building and outdoor communications facilities. Our goal is to contribute to efficient, early 5G service area expansion and the reduction of non-service areas. In the future, we will also look at securitizing assets such as real estate and data centers.

Promoting the B2B2X Model

NTT Group is promoting the B2B2X model that supports digital transformation (DX) for service providers (the center B) and offers even more added value for end users. We plan to expand the number of projects from 39 as of March 31, 2019 to 100 by March 31, 2022, and we are targeting operating revenues for the fiscal year ending March 31, 2024 of ¥600 billion, 10 times the level in the fiscal year ended March 31, 2019.

Our public safety solution in Las Vegas, United States., has become an important and advanced example for us. We have conducted joint verification tests with Dell Technologies Inc. since September 2018, and started commercial provision in 2019. This solution helps customers such as local governments, police, and fire departments respond rapidly to incidents and accidents by centrally managing their ICT resources, enabling them to track the movement of crowds, traffic conditions, and the incidence of emergencies through multiple sensors and analyze them. The field of application is currently being widened from public safety to include monitoring of illegal occupation of parks and illegal activities therein, analysis of traffic volumes, and so forth.

The reason that Las Vegas selected NTT Group was the Group’s comprehensive capabilities in cybersecurity, data management, and other aspects, as well as its proposal that ownership of the data collected from sensors should remain with the city. In the B2B2X model, the center B is the main player. NTT Group’s basic idea is that center Bs such as local governments should retain ownership of data, and that this should be used in local production for local consumption through services for local residents. This is in direct opposition to the notion that companies should have ownership of data to make use of big data in business.

The Group’s collaboration with the Japan Professional Soccer League (J.League) announced in March 2019 is a similar case. NTT Group provides location setup and operation for video capture and so forth to support the provision of new spectator experiences to diverse spectators. However, the ownership of the data of match footage and so forth remains with J.League. J.League



concurred with NTT Group’s idea that data should belong to the customer, the central B, and this led to our winning the order.

Horizontally Developing Successful Examples

Under the B2B2X model, our policy is to build profits by pursuing economies of scale through active horizontal development of successful examples.

One of the initiatives that has the greatest potential for horizontal development is further stimulation of local economies. In June 2019, we started an initiative with Hokkaido University and Iwamizawa City to realize smart agriculture with self-driving tractors. In July 2019, we concluded a comprehensive cooperation agreement with Chiba City regarding electric power management and safety management. Moreover, we concluded a “Community Development Partnership Agreement” with 12 municipalities in the Sapporo Metropolitan Area. Outside of local governments, we have steadily accumulated successful examples, such as launching a collaboration with Tokyo Metro Co., Ltd. in order to achieve reduced congestion and smooth transportation.

In the manufacturing business, we have received inquiries from several quarters regarding the explosion-proof remote measurement sensors using AI and other technologies that NTT Group is providing to JSR Corporation. Another project that has potential for wider uptake is the IoT platform for managing automated operation of vessels, which we are developing with Nippon Yusen Kabushiki Kaisha.

Toward our medium-term management strategy “contribute to revitalization of regional societies and economies,” in July 2019 NTT East established NTT AgriTechnology. The company has established bases for accumulating expertise on next-generation

facility horticulture that can realize high-level environmental control, yield prediction, and other functions using IoT and AI. The project is expected to expand across various other fields beyond agriculture going forward.

Rolling Out 5th-Generation Wireless Systems

Amid major changes in the market environment, NTT DOCOMO introduced strategic new rate plans in June 2019 ahead of other companies. At the same time, the company is expanding its personal solutions, such as digital payment and point services, aiming to expand earnings by widening the customer base from “lines” to “members.”

5G pre-commercial services started in September 2019, with full-scale commercial services slated to begin in spring 2020. By the fiscal year ending March 31, 2025, we plan to achieve 97% of our basic rollout, establishing an area with 26,000 base stations. However, we aim to bring our plan forward and offer 5G as quickly as possible to as many people as possible. Therefore, in the first quarter of the fiscal year ending March 31, 2021, we will rollout 5G in 47 prefectures, establishing 10,000 base stations one year later. Currently, we are working with over 3,000 partners to propose new styles of sports viewing, resolve labor shortage issues through remote operation of construction machinery, and create new value through such means as remote medical care, all leveraging features of 5G, including ultrahigh speed, low latency, and multiple simultaneous connections.

With the start of 5G pre-commercial services in September 2019, we launched DOCOMO Open Innovation Cloud as a platform for solution co-creation with partners. In addition, we expanded DOCOMO 5G Open Lab, which provides an environment for connecting various devices for 5G technology testing, to 11 sites nationwide. Through these initiatives, we will further accelerate efforts to resolve social issues by realizing the “MY NETWORK KOUSOU,” which provides a new user experience by connecting peripheral devices such as smart glasses to a 5G-capable smartphone acting as a hub.

Enhancing Competitiveness in Global Business

NTT Group's global business strengths lie in its ability to provide one-stop, comprehensive services from solutions to communications infrastructure. Up until now, the Group has been unable to fully demonstrate its strengths due to confusion between different brands. Now, however, we have united the NTT brand and reorganized overlapping systems and products to start operations under NTT Ltd. as a global operating company from July 2019.

Looking ahead, we will integrate our operations and systems, including personnel and finance, aiming to pivot to a business model centered on managed IT services in about two years' time in order to further strengthen our profit margin. We are already promoting horizontal connections between different sites in each country. As "One NTT," we will work with a sense of loyalty and pride in NTT to develop our ability to provide highly profitable solutions.

In addition, we are promoting efforts to continuously increase our competitive advantage through a combination of short-, medium- and long-term strategies. In the short term, our disruptive innovation approach is to strengthen our initiatives, use advanced technologies on a global scale, and engage in co-creation with customers to promote innovative solutions. In the medium term, our global innovation fund, NTT Venture Capital, L.P. will perform the function of connecting advanced technologies and personnel with expertise in technology to innovative businesses and NTT Group. Our long-term initiatives include the opening of NTT Research, Inc. as an overseas research laboratory in Silicon Valley, United States, to pursue our policy of advancing basic research and development into areas such as quantum computing, encrypted data, and biometrics.

In addition, we are taking steps to further raise our global profile by starting a collaboration as an official technology partner of North America's ultimate motor racing event, the IndyCar Series. We have also concluded a technology partnership

agreement with Major League Baseball in the United States. Through these collaborations and partnerships, we will provide innovative experiences to sports fans using the latest technologies, while raising the profile of the NTT brand through television and websites, as we strengthen our competitive edge globally.

Driving Self-Digital Transformation in Domestic Business

In our existing domestic business, where we have been steadily working to cut costs through accumulated efforts, we will now aim to achieve significant cost reductions by dramatically changing our conventional processes through DX with a view to strengthening our competitive advantage and lifting service levels. Chief digital officers (CDO) have been appointed at each company and various KPIs for increasing efficiency established as we proceed to completely overhaul our business processes using digital technology.

NTT East and NTT West have started an initiative to unify their entire business operation system, in addition to integrating their optical fiber-related IT systems. At the individual business site level, NTT Group's robotic process automation (RPA) system *WinActor*® is already in use for many business processes, and we will expand its scope of application even further. *WinActor*® can be used even without a high level of software skills, and has the No. 1 share of the RPA market in Japan. It can be used in all kinds of value chains, including in those of companies and local governments. In our own DX, we are working to integrate business process systems and link systems together, while also using RPA as a tool to promote digital processing through AI and optical character recognition (AI-OCR) and voice-to-text functions, among others. In this way, we are driving a Company-wide DX. By accumulating this multifaceted DX expertise through our own know-how, I am certain that we will be equipped to make a significant contribution to supporting customers' DX.

Utilizing Talent and Assets

NTT Group has over ¥20 trillion in assets, including 7,300 telephone exchanges throughout Japan and a communications network. We are using these in an effort to create new added value. In July 2019, NTT Urban Solutions, Inc. started operations in the urban solutions business. This company is going beyond the conventional real estate development business by bringing together various resources within the Group and blending them with ICT, energy, and other elements to promote an urban solutions business that contributes to resolving local issues and realizing local communities brimming with individuality. The company plans to expand its current operating revenues of around ¥400 billion to around ¥600 billion by the fiscal year ending March 31, 2026.

Moreover, in addition to our existing telephone exchanges and basic infrastructure, we will combine expertise in high-voltage direct current transmission and distribution, electricity storage, and other technologies with ICT platforms to advance the smart energy business. In September 2019, we integrated the electric power functions that had been distributed throughout the Group to start a new business as NTT Anode Energy. We will develop business in three areas: power generation; transmission, distribution, and storage; and retail and wholesale, aiming to commercialize new value such as increased energy efficiency by building direct current area grids and disaster resistance. We aim to double the business' current operating revenues of around ¥300 billion to ¥600 billion by the fiscal year ending March 31, 2026.



(Top row) From left: Agreement to promote smart cities with Las Vegas, State of Nevada; comprehensive collaboration agreement with Chiba City; and Conclusion of a technology partnership agreement with Major League Baseball
(Bottom row) From left: NTT Group CSR Award 2019; Group branch manager conference; and NTT R&D forum

Furthermore, we will promote the Smart Infra business to digitize spatial information, mainly regarding social infrastructure such as civil engineering facilities. Through this business, we will increase efficiency and create connected value chains for civil engineering-related business operations, from design through to maintenance, and promote our own DX. We will also utilize this expertise to provide solutions for social infrastructure issues.

Creating the Infrastructure for a New Society

Social infrastructure that enables all people to benefit naturally and unselfconsciously from technology is essential to realizing a smart world. However, processing with the current level of electronic technology is limited in terms of performance by the nature of semiconductor processing and electricity consumption. To realize a smart world, we must drive change in various aspects of lifestyles and industry structures in our society. This will require nothing less than the building of a new information communications infrastructure that includes low energy consumption and high-speed signal processing technologies. To resolve these issues, we have come up with the new network concept, IOWN, which applies 11 technologies, including optical engineering technologies, end-to-end and provides an information and communications infrastructure that will support sustainable growth. This concept is unique to NTT Group, which has the world's most advanced optical engineering technologies.

IOWN comprises three main technology components. Based on "all-photonic networks" that use optical processing is not only networks but also device processing, the concept creates a virtual society called "digital twin computing" that enables high-speed, real-time interaction between things and people in cyberspace. These are managed by the service *Cognitive Foundation*®, in which these and various other ICT resources are efficiently combined. Some of these technologies have already been implemented, while others are in the preparation phase. Details and specifications will be announced going forward.

In April 2019, we succeeded in developing the world's first opto-electric elements using optical technology. Rather than electrons, photons fly through the chip, creating a semiconductor

than is 100 times more efficient than a conventional chip. It represents an achievement of research into all-photonic networks that use optical engineering technology in every component from servers to devices. Going forward, we will leverage our accumulated technologies and collaborate with experts in a wide range of research and technology fields along with global partners to realize the IOWN concept.

Working toward Ongoing Improvements in Corporate Value

NTT is required to fulfill the functions of both a private company and a public utility. To a greater degree than other companies, we are considered to be a public institution. In other words, our contribution to society is equivalent to increasing our corporate value. Promoting ESG management has been and will continue to be NTT's mission. We aim to anticipate changes in the world and take steps to address them ahead of time through various measures.

Looking at E, reducing our environmental impact, as a major consumer accounting for close to 1% of Japan's electricity consumption, NTT Group's social responsibility is to take steps to promote the use of renewable energy. To this end, we have become the first electronic communications provider in the world to join the international EP100 and EV100 initiatives. To increase energy efficiency, the Group is aiming to double the energy productivity of the telecommunications business in 2025 compared with the fiscal year ended March 31, 2018. Furthermore, we aim to convert 50% of the general-purpose vehicles owned by the Group to electric vehicles (EVs) by 2025, reaching 100% by 2030.

In S, the social aspect, we consider our business of providing uninterrupted ICT services itself to be our social responsibility. We respond to all kinds of threats, including carrying out disaster countermeasures and supporting stronger customer security, helping customers continue their businesses. Moreover, it is also extremely important to promote diversity to enable the Group to change in step with society, and to create workplace environments that are comfortable for employees. As we continue to unify our brand globally, we will seek to change our corporate culture to ensure utilization of the strengths of each company



and the different abilities and talents of individuals who have been cultivated through our various businesses. We believe doing so will generate innovation and contribute to the resolution of social issues.

In terms of G, we will continue strengthening our governance. To strengthen the supervisory function of the Board of Directors, improve corporate governance, and promote diversity at the same time, we increased the number of outside Members of the Board by two in June 2019, and appointed two female members for the first time. With this appointment of female Members of the Board, we have now complied completely with all of the 78 principles of Japan's Corporate Governance Code, set out by the Tokyo Stock Exchange.

Furthermore, to carry out our responsibilities to shareholders, we have also included enhancing returns to shareholders among our fundamental medium-term management strategies. Our basic approach on dividends is to continuously increase them, and we

intend to continue enhancing returns going forward. The planned dividend for the fiscal year ending March 31, 2020 is ¥190, an increase of ¥10 from the previous fiscal year, for a ninth consecutive year of dividend increases. Share buybacks will be conducted flexibly in accordance with our financial position and other factors, as we work to increase capital efficiency. In the fiscal year ending March 31, 2020, share buybacks totaling approximately ¥500 billion have been conducted up to the end of September.

NTT Group will accelerate its transformation as "Your Value Partner," aiming to continue as a reliable partner for our stakeholders, including customers, shareholders, and local communities. In doing so, we will focus all of our efforts on sustainably increasing our corporate value and contributing to the realization of a smart world.

I ask all of our shareholders and investors to continue supporting our efforts.

Value Creation Process—Cycle to Realize Ongoing Improvements of Corporate Value—

The Company's attributes include a solid customer base in Japan and overseas, global brand power, human resource capabilities, and world-class research and development capabilities. We will leverage these to sustainably increase our corporate value in a manner unique to NTT through digital transformation together with our partners.



NTT Group : Contributing to the Realization of a Smart World

Your Value Partner 2025

We are advancing the measures below based on the "Your Value Partner 2025" medium-term management strategy, released November 2018. The following sections explain the main measures that we are taking. The measures of the fiscal year ending March 31, 2020, include the main measures implemented in the period through to September.

Pillars of Medium-Term Management Strategy

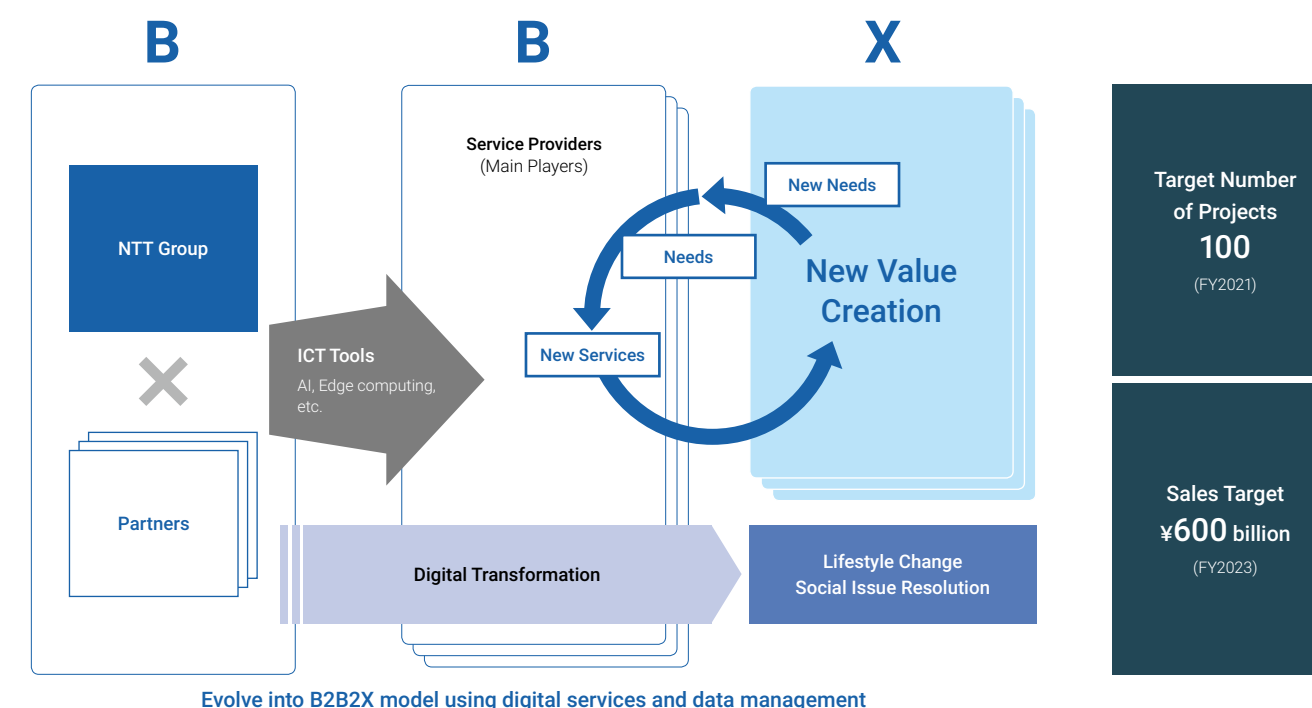
Support our customers' digital transformations	<ol style="list-style-type: none"> 1. Promote B2B2X model 2. Roll out 5th-Generation Wireless System 3. Provide personal services
Accelerate our own digital transformation	<ol style="list-style-type: none"> 4. Enhance competitiveness in global business 5. Drive self-digital transformation in domestic business 6. Migrate PSTN to IP Networks
Leverage talent, technologies, and assets	<ol style="list-style-type: none"> 7. Enhance and globalize R&D 8. Create new lines of business (Real estate, etc.) 9. Contribute to vitalization of regional societies and economies 10. Disaster Countermeasures
Promote ESG management, and enhance the returns of shareholders to improve corporate value	

Contribute to the realization
of a digitalized society
= Smart World

Support Our Customers' Digital Transformations

Promote the B2B2X Model

While leveraging information digitization, IoT, AI, and other social and technological trends, NTT Group will support the digital transformation of "center B," which refers to service providers in a variety of fields. In this way, we will accelerate the B2B2X model and provide added value to end users (X).



The B2B2X Strategy Committee was established at NTT in January 2019 to advance B2B2X models even further.

The committee will increase the number of projects by conducting the preparation of strategies, the management of targets, and the advancement of projects for the Group and by encouraging even greater collaboration within the Group.

Main B2B2X Projects in the Fiscal Year Ending March 31, 2020

- Entered into an industry-government-academia cooperation agreement with Hokkaido University and the city of Iwamizawa with the goal of creating a smart agri-city (June 2019)
- Entered into a comprehensive cooperation agreement with Chiba City for future community development (July 2019)
- Entered into a "Community Development Partnership Agreement" with 12 municipalities in the Sapporo Metropolitan Area (July 2019)
- Launched a collaboration with Tokyo Metro Co., Ltd., in order to achieve reduced congestion and smooth transportation (July 2019)

► For details on the agreement concluded with Hokkaido University and the city of Iwamizawa, please see page 19.

Roll Out 5th-Generation Wireless Systems

We will steadily build out 5G networks in the locations where they are needed. While supporting the advancement of digital transformation through 5G, we will create new value and help address social issues.

Immersive and Interactive 5G Services and Solutions

- Delivery of **new sports-viewing styles**
- **Circumvent labor shortage** through remote operation of construction equipment
- **Eliminate inequality in access to healthcare** through remote medicine
- **Disaster prevention and mitigation** using AI analytics of city video/image feeds

Cumulative investment
in 5G infrastructure build-out, etc.
¥1 trillion
(FY2019–FY2023)

Activities with Partners

- In May 2017, we began creating 5G trial sites that allow general customers to experience the characteristics of 5G.
- In February 2018, we launched the DOCOMO 5G Open Partner Program with the aim of working with a wider range of partners on the use of 5G for the creation of new ways of using mobile communications.

Pre-commercial service
from Sep. 2019
Commercial service
from spring 2020

Main 5G Initiatives in the Fiscal Year Ending March 31, 2020

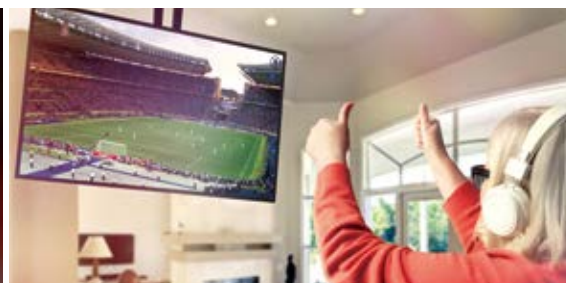
- Concluded an agreement with JTOWER Inc. on a capital and business partnership with the aim of realizing efficient early expansion of 5G service areas and reducing the number of communications (radio) quiet areas (July 2019)
- At the Rugby World Cup Japan 2019™ and in four NTT DOCOMO stores in Higashi-Meihan, for the first time in Japan provided general customers with pre-commercial-service 5G network environment equivalent to 5G commercial services (September 2019)
—Realization of new styles of viewing sports matches, including multiangle viewing and highly immersive live viewing—
- Increased the number of bases with permanently installed DOCOMO Open Lab® environments for the verification of 5G technologies from four to 11 bases (September 2019)
- Began offering DOCOMO Open Innovation Cloud™ to partner companies and organizations participating in the DOCOMO 5G Open Partner Program to advance the on-site verification of services for 5G solutions (September 2019)
- Commenced joint examination with FANUC CORPORATION and Hitachi, Ltd., aimed at the 5G-enabled advancement of manufacturing sites (use of real-time data to enhance productivity and quality control) (September 2019)

Basis for the Provision of 5G Services from September 20, 2019

5G partners	5G base stations	5G terminals	Personnel involved in provision of 5G services
3,000 companies	Roll out in all 47 prefectures in FY2020 Q1 Then establish a platform of 10,000 base stations one year after FY2020 Q1	Four models Three smartphone models and one communications terminal model	More than 15,000 personnel More than 10,000 personnel for network construction and more than 5,000 operations managers and technical managers for collaborations with partners



Multiangle viewing: While watching a sports event in a stadium, crowd members will be able to view the sports event from different angles in real time.



Live viewing: Multiple high-definition videos, sound, and other information are transmitted via 5G telecommunications, which enables the viewing of impressive videos of sports matches even from outside stadiums.

For details on 5G, please see NTT DOCOMO's website.
<https://www.nttdocomo.co.jp/corporate/ir/library/presentation/index.html#190918> (Japanese Only)



Provide Personal Services

NTT DOCOMO will further expand its client base and create earnings opportunities by leading the provision of highly personalized solutions that help change each customer's everyday life.

		Target	FY2019 Progress
Personal Solutions	<div>Rate</div> <ul style="list-style-type: none">• Great value and simple rate plans	Approx. 20–40 %*1 rate reduction (FY2019 Q1)	Began offering Gigaho™ and Gigalight™ (from June 2019)
	<div>Services</div> <ul style="list-style-type: none">• Expand collaborative partners• Promote electronic payment, use of points• Upgrading of personal contents	Locations where payment / point service can be used*2 2 million (FY2021)	Locations where payment / point service can be used*2 1.11 million (As of the end of June 2019)
	<div>Communication</div> <ul style="list-style-type: none">• Optimum proposals suiting individual customers by leveraging AI, big data• Simple procedures, smooth resolution of business	No. of members 78 million (FY2021)	No. of members 71.31 million (As of the end of June 2019)

*1 The actual level of reduction may be different from the description herein depending on customer's usage behavior.

*2 Locations where payment and point services can be used are locations where *d POINT*, *iD*, and *dbarai*, are usable.

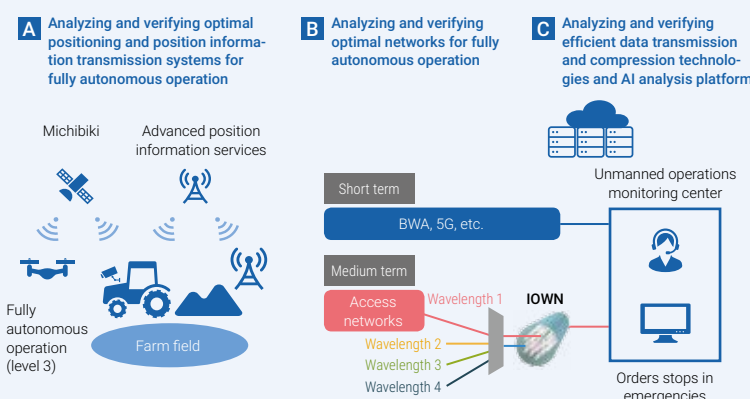
Case Study

Smart Agriculture

Helping address issues in Japan's agricultural industry, where the farming population is decreasing and aging, and mitigate worldwide food shortages

Overall Summary and Initiative Themes

- Themes**
- A. Infrastructure for high-precision positioning and position information transmission
 - B. Next-generation regional networks
 - C. Advanced information processing technologies and AI infrastructure



Hokkaido University, the city of Iwamizawa, NTT, NTT East, and NTT DOCOMO aim to establish world-class smart agriculture that realizes leading-edge self-driving technology for agricultural machinery through the utilization of high-precision position information,*1 fifth-generation wireless systems (5G), and such data analysis technologies as AI.

The above parties concluded an industry-government-academia cooperation agreement on developing models for sustainable regional revitalization and smart cities with the aim of introducing these models to society and smart agriculture. In addition, the parties agreed to begin joint analysis for creating applications for IOWN*2 smart agriculture.

*1 This refers to the GNSS (Global Navigation Satellite System) Position Correction Information Distribution Platform, which NTT DOCOMO plans to offer and that enables high-precision position measurement with a margin of error of only several centimeters.

*2 For details on IOWN, please see page 30.

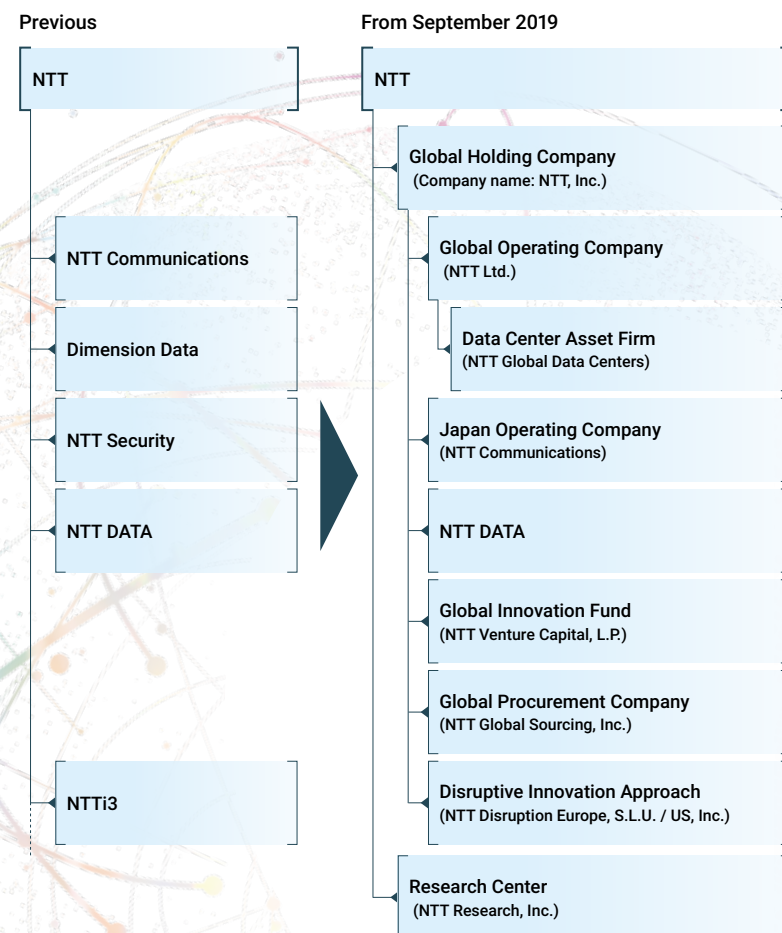
Accelerate Our Own Digital Transformation

Enhance Competitiveness in Global Business

We will strengthen the competitiveness of the global business by heightening synergistic benefits through the combination of integrated solutions that support the evolution of clients' businesses with initiatives for innovative creation that utilize leading-edge technologies. Further, the Group will unite its brand and pursue initiatives based on the "One NTT" global growth strategy.

NTT, Inc., was established as a global holding company and a wholly owned subsidiary of NTT. Further, the Group integrated Dimension Data Holdings plc, NTT Security Corporation, and the overseas businesses of NTT Communications Corporation to establish an NTT-branded global operating company (NTT Ltd.) under the control of the global holding company. This new operating company conducts businesses in 70 countries and areas worldwide (as of the end of July 2019). Further, the operating company has six directors, of whom the president and three other directors are non-Japanese. NTT Ltd. will continue reorganizing systems and operations in stages and transition to an operating company centered on managed IT services in approximately two years.

Strengthening the Global Business through Reorganization



* NTT DATA continues to collaborate with other companies in the Group while retaining its present management structure, status as a listed company, and brand.

Further, in response to the global growth in demand in the data center market, NTT Group has established a data center investment company (NTT Global Data Centers Corp.), which oversees investment and asset-ownership functions for data center construction. The Group's aim in establishing this company is to support core infrastructure that underpins the Group's comprehensive strategy.

In addition, NTT has established NTT Venture Capital, L.P., which is a fund tasked with facilitating global innovation, and established a global procurement company, NTT Global Sourcing, Inc., with a view to reducing NTT Group's overall procurement costs.

NTT Group will enhance its competitiveness and profitability in the global market by bolstering global governance and by conducting business management that swiftly incorporates the knowledge and experience of personnel with expertise in the global market.

Drive Self-Digital Transformation in Domestic Business

Aiming to achieve further growth itself, NTT Group will forge ahead with its own digital transformation. In August 2018, major Group companies appointed chief digital officers, who will spearhead the digitalization measures of a working group that spans Group companies laterally. NTT Group will increase the efficiency of its work processes by using such technologies as AI. Moreover, the Group will build connected value chains that link a series of processes, including those of partner companies outside the Group. In this way, we will realize labor-saving, smart operations for a range of processes.

In the period through to June 2019, NTT DOCOMO, NTT East, NTT West, and NTT Communications, in principle, introduced automation to increase the efficiency of the operations of help desks that receive telephone inquiries about service issues in Japan. For example, we guide customers to websites that enable customers to diagnose issues themselves, and we use chat bots to provide consultations on issues. Plans call for extending these initiatives to include NTT West.

Digitalize Own Operating Processes (Realize Connected Value Chains by Leveraging AI)

Achieve Efficiency through Smart Operations Not Requiring Labor

- Apply NTT Group's RPA*1 (WinActor®) to operating processes
➡ Further expand scope of work
- Optimize enterprise service processes from service order / delivery with IT*2
- Optimize construction / maintenance-related processes with IT (in collaboration with partner companies)*3

15 thousand robots
850 operating processes
(as of the end of June 2019)

Productivity 2 times
(FY2025)*4

Productivity 1.5 times
(FY2025)*4

Diversification / Optimization of Web Service Order Procedures to Enhance Customer Convenience

- Reduce wait / attendance time at docomo Shops

Cut by half
(FY2019)*5

*1 RPA = Robotic process automation

*2 NTT East, NTT West, NTT Communications

*3 NTT DOCOMO, NTT East, NTT West, NTT Communications

*4 Compared with FY2017

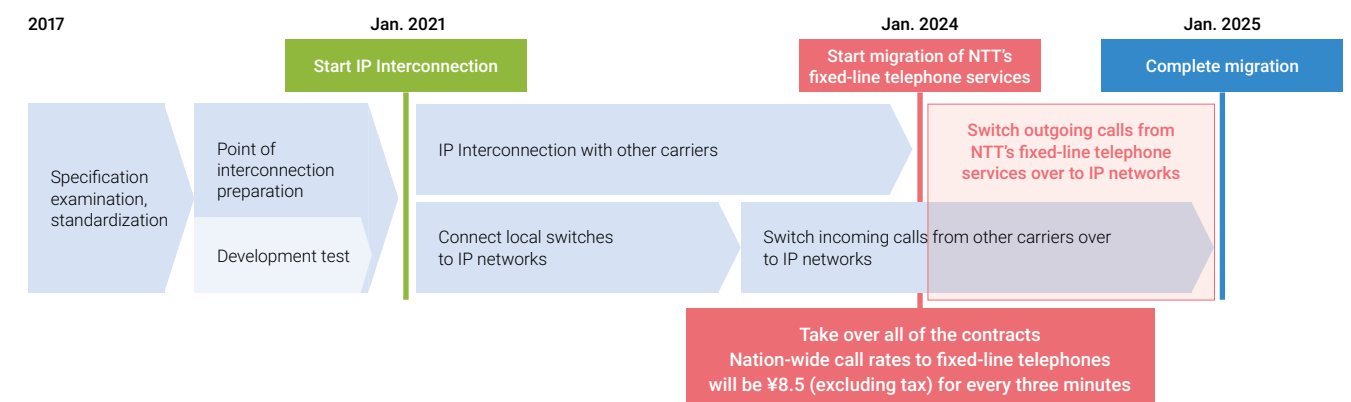
*5 Reduced by half during FY 2019 compared with 2018 survey

We are steadily introducing robotic process automation (RPA). Since November 2018, when we announced our medium-term management strategy, we have increased the number of robots by 3,000, to 15,000, and the number of work processes for which RPA is used by 350, to 850.

Further, digitalizing our own operations will enable us to realize new services. For corporate clients, we will offer such services as *Cognitive Foundation*®, which integrates and optimizes the management of ICT resources. As for individuals, we will provide personal solutions based on digital marketing.

Migrate PSTN to IP Networks

The Group plans to complete the migration from public switched telephone networks—which are operated by NTT East and NTT West—to Internet Protocol (IP) networks by January 2025. Accordingly, IP interconnection will begin among carriers from January 2021. Further, in January 2024 nationwide call rates to fixed-line telephones will be uniformly revised to ¥8.5 (excluding tax) for every three minutes.



Leverage Talent, Technologies, and Assets

Enhance and Globalize R&D

To advance innovative research and development that drives changes worldwide and to step up basic research, plans call for the establishment of research centers overseas, the global rollout of the results of R&D, and the globalization of research targets. Also, the Group will strengthen joint research with a varied range of research bodies, actively utilize the latest external technologies, and increase investment in research on new growth fields.

Over the five years beginning from the fiscal year ending March 31, 2020, the Group will invest ¥2 trillion in R&D in new fields, an increase of 10% compared with the previous level of investment. Also, we will invest ¥1 trillion in the building of 5G infrastructure to accelerate business growth.

For details on specific R&D initiatives, please see "Special Feature: Research and Development" on pages 26 to 31.

Create New Lines of Business (Real Estate, etc.)

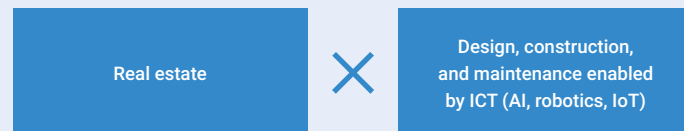
The NTT Group will take maximum advantage of its real estate, ICT, and technologies related to energy and the environment to advance new urban development and digitalization projects that go beyond conventional real estate development.

Further, we will create new businesses, such as the smart energy business and the medical science business, and invigorate regional communities and economies.

Urban Solutions Business

Advancing NTT Group's Differentiated Urban Development

Taking maximum advantage of the Group's real estate, ICT, and technologies related to energy and the environment



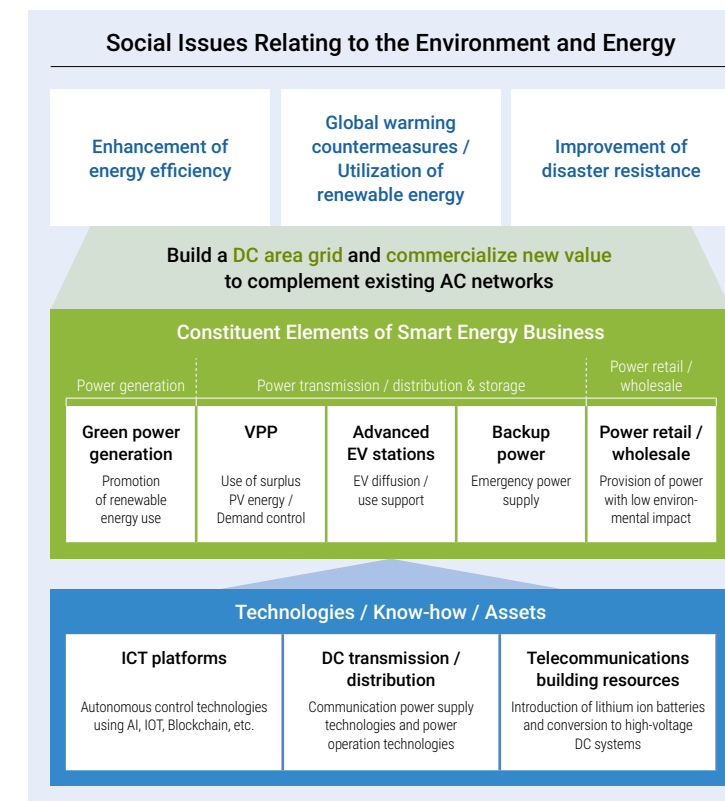
Advancement of new urban development that goes beyond conventional real estate development (urban digitalization)



NTT Urban Solutions, Inc., began business operations in July 2019. The company will utilize NTT Group's telephone exchanges and other real estate while laterally drawing on the Group's real estate- and energy-related personnel and technologies. The Group will make maximum use of its assets in a concerted effort to advance collaborative urban development projects with companies and municipal authorities. Through these initiatives, we aim to grow the sales of the urban solutions business to ¥600 billion by the fiscal year ending March 31, 2026.

NTT Group will advance differentiated urban development and contribute to the realization of Society 5.0, which will be centered on local communities full of individuality.

Smart Energy Business

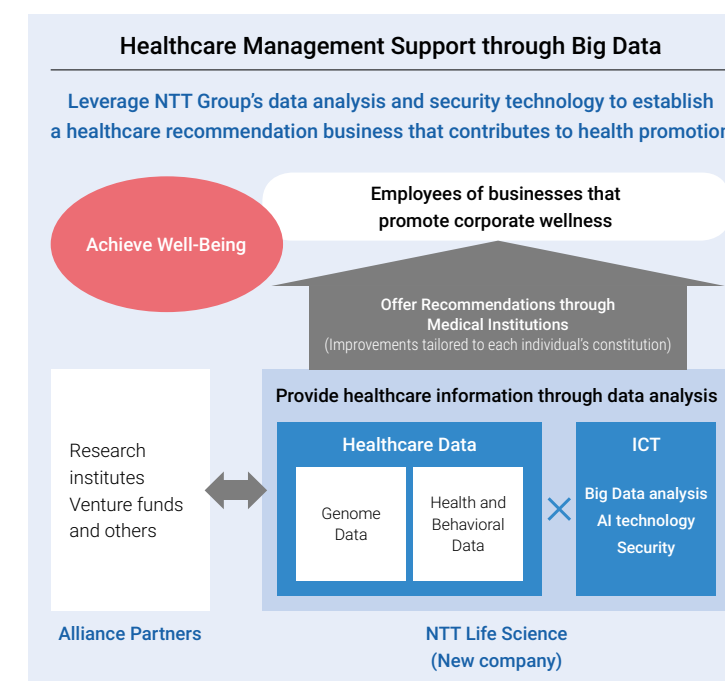


The maintenance of telecommunications equipment and facilities and the operation of such facilities as data centers by NTT Group account for close to 1% of Japan's commercial electricity consumption. With this in mind, we are proactively addressing environment- and energy-related social issues by taking measures to reduce our environmental burden. Moreover, we aim to utilize the know-how that this gives us to create new businesses.

To this end, in June 2019 we established NTT Anode Energy Corporation, which began operations in September 2019. The company will develop a smart energy business that fully capitalizes on NTT Group's assets, including ICT, such power source technologies as direct current (DC) power transmission technologies, and storage batteries. This business will concentrate on three power-related fields: generation; transmission, distribution, and storage; and retail and wholesale. The business will provide new value, such as improved energy efficiency and enhanced disaster resiliency in relation to coping with such eventualities as power blackouts during disasters.

NTT Group will advance the smart energy business with the aim of doubling the sales of energy-related businesses to ¥600 billion by the fiscal year ending March 31, 2026.

Medical Science Business



As well as accumulating various information related to health and medicine, NTT Group will analyze health and medical big data to create new value. In July 2019, we established NTT Life Science Corporation. The company will leverage the Group's technologies—such as big data analysis, AI, and security technologies—to analyze healthcare data that includes genome data and health data. This analysis will enable the company to develop a medical science business that recommends lifestyle changes and other health improvement methods suited to the constitution of each individual.



Promote ESG Management and Enhance the Returns of Shareholders to Improve Corporate Value

Promote ESG Management

NTT Group conducts business management in a manner that deals appropriately with environmental, social, and governance issues. We believe that this approach enables the sustained enhancement of corporate value by increasing business opportunities while minimizing business risks.

► For details on specific ESG measures, please see pages 32 to 65.

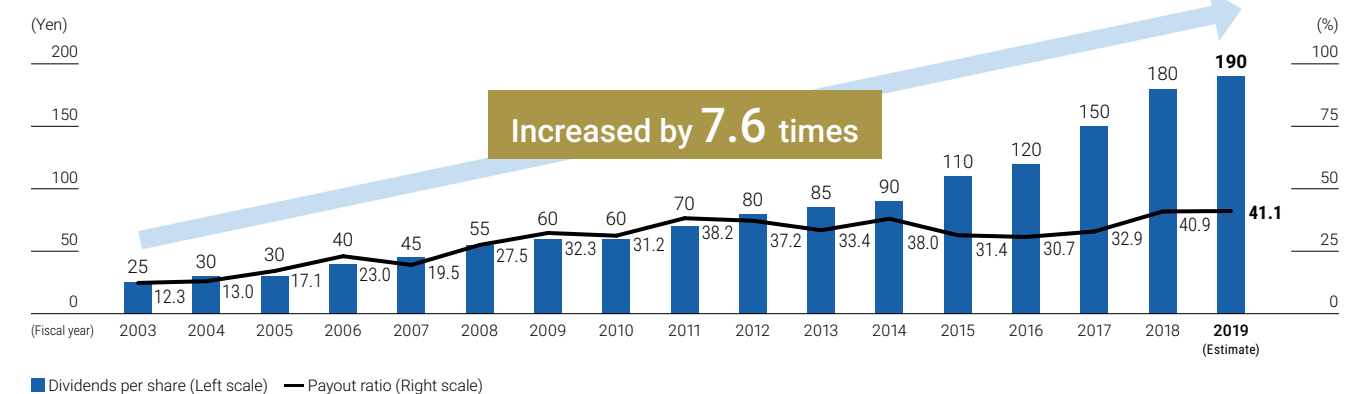


Enhance the Returns of Shareholders

With regard to dividends, our basic policy is to steadily increase dividends. Also, we flexibly acquire treasury stock to improve capital efficiency.

In the fiscal year ending March 31, 2020, we plan to pay an annual dividend of ¥190 per share, up ¥10 per share year on year. This will mark the ninth consecutive fiscal year in which we have raised the annual dividend. This increase will raise dividends per share 7.6 times higher than their level in the fiscal year ended March 31, 2004. In the fiscal year ending March 31, 2020, the Company had acquired approximately 100 million shares of treasury stock worth roughly ¥500 billion as of the end of September. Including this acquisition, the Company has cumulatively acquired shares of treasury stock worth approximately ¥4 trillion. Moreover, we regularly retire the shares of treasury stock that we acquire. Over the past 10 years, we have retired about 30% of the number of shares outstanding. This has contributed to the growth of earnings per share (EPS), which have grown at annual average rate of more than 10%.

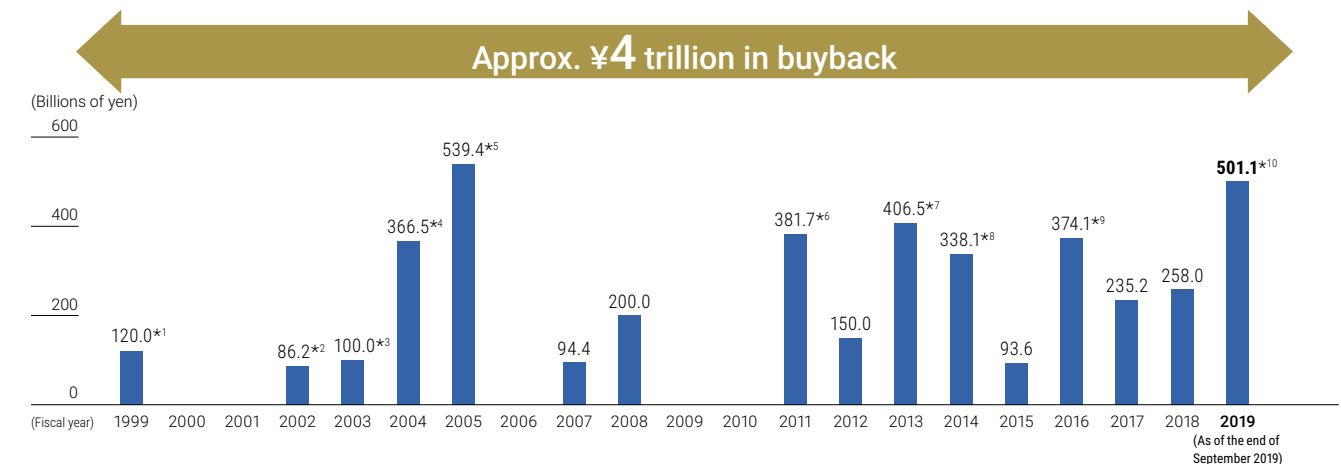
Changes in Dividends



Notes: 1. Dividends have been adjusted to reflect the two-for-one stock split carried out on July 1, 2015.

2. U.S. GAAP were applied for fiscal years up to and including the fiscal year ended March 31, 2018, while International Financial Reporting Standards (IFRS) have been applied for fiscal years from and including the fiscal year ended March 31, 2019.

Share Buybacks



Note: Other than those stated below, all share buybacks were from the market.

*1 Gov't ¥72.0 billion

*2 Gov't ¥39.6 billion

*3 Gov't ¥45.9 billion

*4 Gov't ¥366.5 billion

*5 Gov't ¥539.4 billion

*6 Gov't ¥381.7 billion

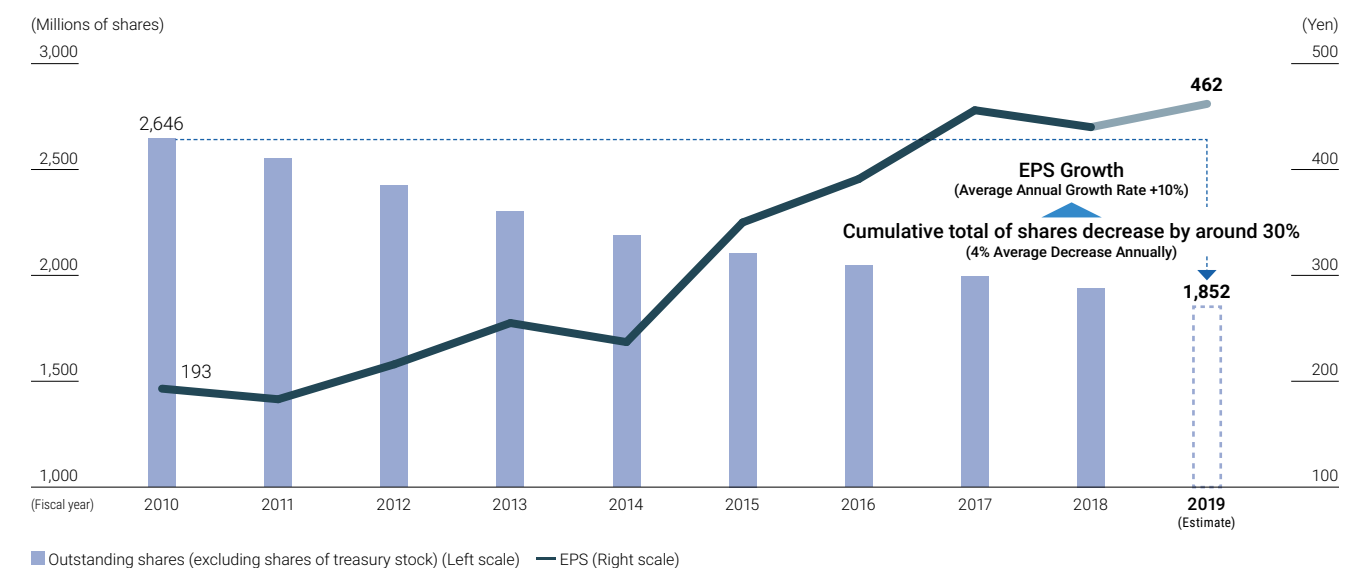
*7 Gov't ¥153.3 billion

*8 Gov't ¥236.9 billion

*9 Gov't ¥267.2 billion

*10 Gov't ¥249.5 billion

Changes in EPS and Outstanding Shares (excluding shares of treasury stock)



■ Outstanding shares (excluding shares of treasury stock) (Left scale) — EPS (Right scale)

Note: U.S. GAAP were applied for fiscal years up to and including the fiscal year ended March 31, 2018, while International Financial Reporting Standards (IFRS) have been applied for fiscal years from and including the fiscal year ended March 31, 2019.

Special Feature: Research and Development

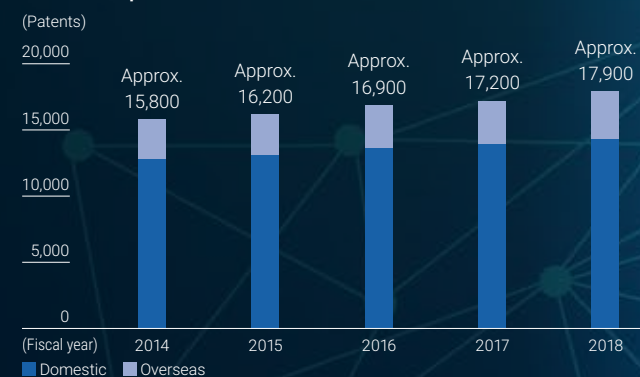
Under our medium-term management strategy, "Your Value Partner 2025," we are pursuing innovative research and development aimed at transforming the world. In this special feature, we introduce initiatives that we are undertaking together with players in various fields and industries. Our aim is to generate new sources of value creation in diverse areas by enhancing industrial competitiveness and solving social issues.

Researchers: Approx. **2,500**

(Number of personnel engaged in basic research at NTT Laboratories)

Patents held: Approx. **17,900**

Number of patents worldwide



Clarivate Analytics
Derwent Top 100 Global Innovators 2018-2019 Award
(8th consecutive year)

Research and Development to Promote the B2B2X Model

Counducting Commercial Performances of New Kabuki Using ICT

Shochiku Co., Ltd. and NTT concluded a business alliance for the three-year period from 2019 to 2021 for jointly conducting commercial performances of a new form of kabuki that incorporates state-of-the-art ICT such as *Kirari!*®. The first of these collaborations, hosted jointly by "NTT-Shochiku Partners," a voluntary partnership established by both companies, was held in August 2019 as the "Minamiza Reopening Commemorative Event 'August Minamiza Chokabuki'" at the Kyoto Minamiza Theatre.

Through the performance, the two companies have accumulated knowledge in the entertainment field to enable them to respond to various business opportunities in new markets such as inbound visitors to Japan and the younger generation. We will continue to study the business potential of this venture through joint performances during the period up to 2021, and aim to expand the business by combining ICT with kabuki and other forms of entertainment.

► For details about *Kirari!*® please refer to page 28.



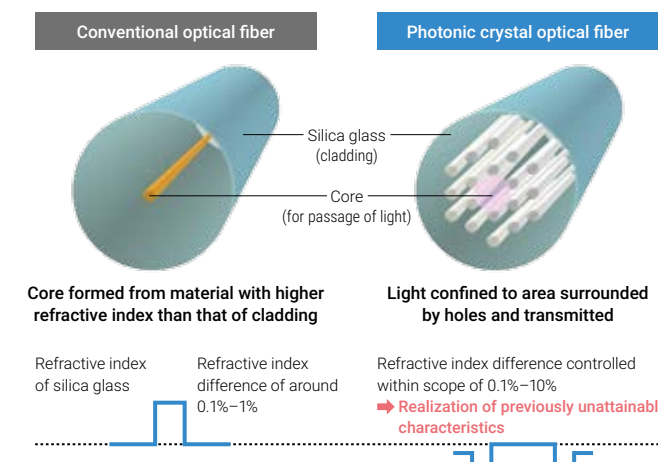
Contributing to Manufacturing through Optical Fiber Technology —Successful Long-Distance Transmission of High-Quality Laser-Processing Light

We have been working together with Mitsubishi Heavy Industries, Ltd., to promote the transformation of manufacturing technology in the social infrastructure industry. By applying communication-grade optical fiber technology with laser processing, we have succeeded in transmitting high-power single-mode laser light suitable for high-precision processing over distances of up to several hundreds of meters without loss of quality. Conventionally, such transmissions have been possible only up to several meters.

This research success opens the door to higher efficiency and precision in laser processing, while expanding the fields for its application. The technology is expected to spark innovation in manufacturing.

	Cutting	Welding
Processing examples		
Multi-mode laser	 Rough surface Wide width Shallow cutting	 Welded section Wide welding Shallow welding Wide thermal effect Thermally affected region
Single-mode laser light	 Smooth surface Sharp width Deep cutting	 Welded section Spot welding Sharp welding Less thermal effect Thermally affected region
Merit of single-mode laser	<ul style="list-style-type: none"> • Faster processing speed • Less material damage 	<ul style="list-style-type: none"> • High processing accuracy • High energy efficiency

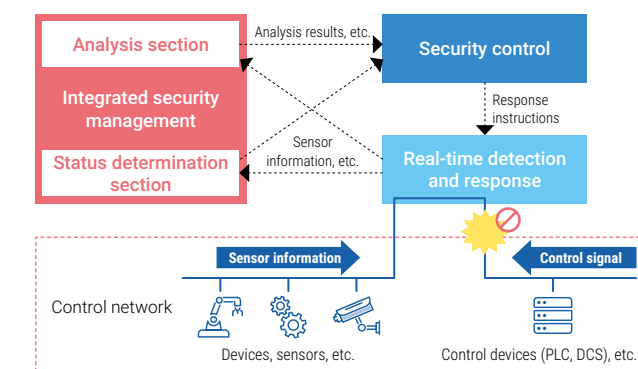
The features of photonic crystal optical fiber



Cybersecurity Technology "InterSePT®" Commercialized

We have developed cybersecurity technology with Mitsubishi Heavy Industries, Ltd., for control systems such as critical infrastructure. The technology can detect anomalies caused by unknown cyberattacks and respond in real time. Mitsubishi Heavy Industries has commercialized the technology as "InterSePT®" and it is now available for sale. It features the ability to control communication in accordance with operation status and to isolate only the abnormal locations to remove harm, realizing a cybersecurity system that allows the system to continue operating.

Features of InterSePT® Cybersecurity Technology for Continuous System Operation



Research and Development Aimed at Achieving Immersive and Natural Worlds

Further Evolving of Ultrahigh-Immersive Telepresence *Kirari!*®

NTT has further evolved its “*Kirari!*” processing technology, which aims to create worlds that provide “just like being there,” ultrahigh-immersion experiences in real-time that can be accessed anywhere. The newly developed techniques not only enable the acquisition and transmission of the images of subjects from video broadcasts, along with 3D positioning information, but also allow them to be reproduced at the destination in a pseudo-3D display that generates the sensation that the subjects also move toward and away from the viewer. This results in the achievement of an audience experience in which the subjects appear to move in three dimensions at the destination.

For example, in a sports match, the technology can project a pseudo-3D display of an athlete onto a stage and give a real sense of the projected athlete moving nearer or further away through synchronization with the movements of the athlete in the actual event being broadcast. Further, collecting and synthesizing sounds from the event venue and using rows of speakers for sound output create auditory localization, whereby sound seems to “jump out” in front of the speakers. This effect, together with a multiangle image display that surrounds both sides of the stage, instantly creates a real sensation of “being there” as the match progresses.



For details about *Kirari!*®, please refer to the following website.
<https://www.ntt.co.jp/activity/en/innovation/kirari/>



Launching New “Point of Atmosphere” Research Program

NTT has also started a new “Point of Atmosphere” program of research that allows not only electronic terminals but also various everyday objects to be used as devices to convey information more naturally. This research will promote digital transformation (DX) without interfering with original human activities through natural interactions that harmonize with people and the environment. For example, several ICT devices in a room work together and provide an illusion that a raincoat hung on the wall appears to be trembling and the floor looks wet, thereby letting the resident know in this natural manner that it is going to rain today.

Natural Living Spaces as Envisaged by Point of Atmosphere Project

ICT is incorporated into everyday products, enabling anyone to receive support in a natural way.



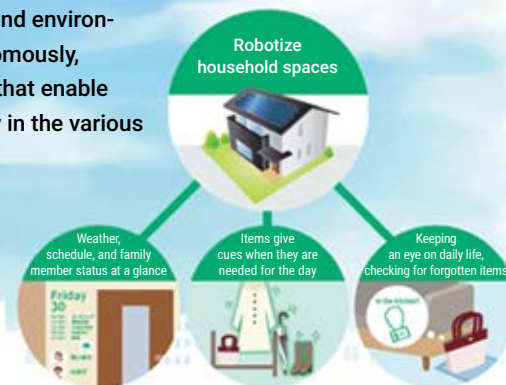
Human emotions and intentions are interpreted by peripheral AI, and spaces are robotized.



In addition to voice communication, light and images are used to provide support.



Envisaging natural living spaces where all surrounding devices and environments coordinate autonomously, naturally providing cues that enable efficient, creative activity in the various scenes of daily life



We are working to create technologies that make life a little smarter and more interesting by conveying human emotions and intentions naturally to the surroundings in a device-free world.

Promoting Cutting-Edge Research

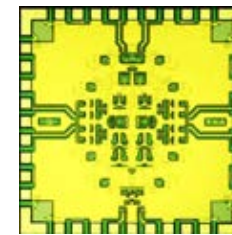
Increasing the Capacity of Networks

With the full-scale uptake of IoT and 5G services, increasing the capacity of mission-critical optical fiber communication networks has become an economic necessity. We have developed new proprietary technology for digital signal processing and ultrawide area optical devices, increasing the channel capacity per wavelength to the point that transmission speeds achieve a level more than 10 times that of current commercial systems, and achieving a global first of 1 terabit/sec of capacity in long-distance wavelength-division multiplexed transmission trials. Furthermore, we also succeeded in developing an ultrahigh-speed compact optical front-end module with integrated compact, wide-band InP optical modulator.

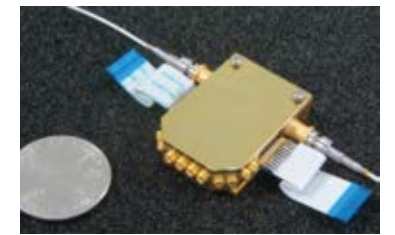
As another accomplishment, we realized high-capacity wireless transmissions at approximately 10 times the speed of LTE and Wi-Fi, and five times that of 5G, by using two technologies.

First, we succeeded in wireless transmissions at rates of 100 Gb/sec by using a method devised by NTT combining a principle called “OAM multiplexing” with MIMO technology. This generates multiple radio waves of different frequencies so that they can transmit simultaneously without interfering with the each other. The result is a dramatic increase in the volume of data that can be transmitted simultaneously, enabling large-capacity communications.

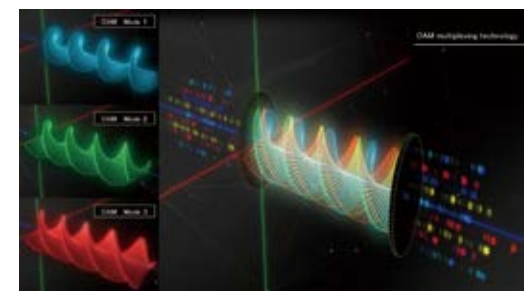
The second is the joint development with the National University Corporation Tokyo Institute of Technology of a technology that enables wireless transmissions of 100 Gb/sec in the 300 GHz band. It is easier to expand the transmission bandwidth or terahertz waves, including the 300 GHz band, although they require high-performance devices. We developed an ultrahigh-speed integrated chip (IC) for wireless front-end devices, leading to the world’s first 100 Gb/sec wireless transmission in the 300 GHz band.



AMUX chip



Ultrahigh-speed compact optical front-end module

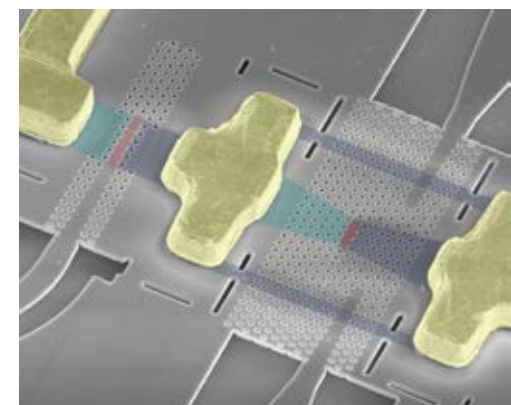


For details about OAM multiplex transmission technology, please refer to the following website.
<https://www.youtube.com/watch?v=jKLBzmHmX1Y>



Optical Transistor Capable of High-Speed Operation with Ultralow Power Consumption

As Moore’s law approaches its limit in electronic circuits, there are expectation for a new, high-speed, energy-saving computing platform that incorporates optical technology. Achieving this requires technologies that have hitherto been considered difficult to achieve with low energy consumption, such as opto-electronic signal conversion and high-speed signal processing in the optical area. NTT has been developing a semiconductor nanostructure called photonic crystals with which to realize various tiny optical devices. In this work, we used our nanotechnology to realize a nano electro-optic modulator (E-O converter) and a nano photodetector (O-E converter) with extremely small capacitance and low energy consumption. Moreover, through their integration, we also realized an O-E-O conversion optical transistor. These nano-optical technologies have opened the way to realizing high-speed, low-energy integrated opto-electronic information processing.



Optical transistor capable of high-speed operation with ultralow power consumption (Featured in *Nature Photonics*)

Looking to the Future

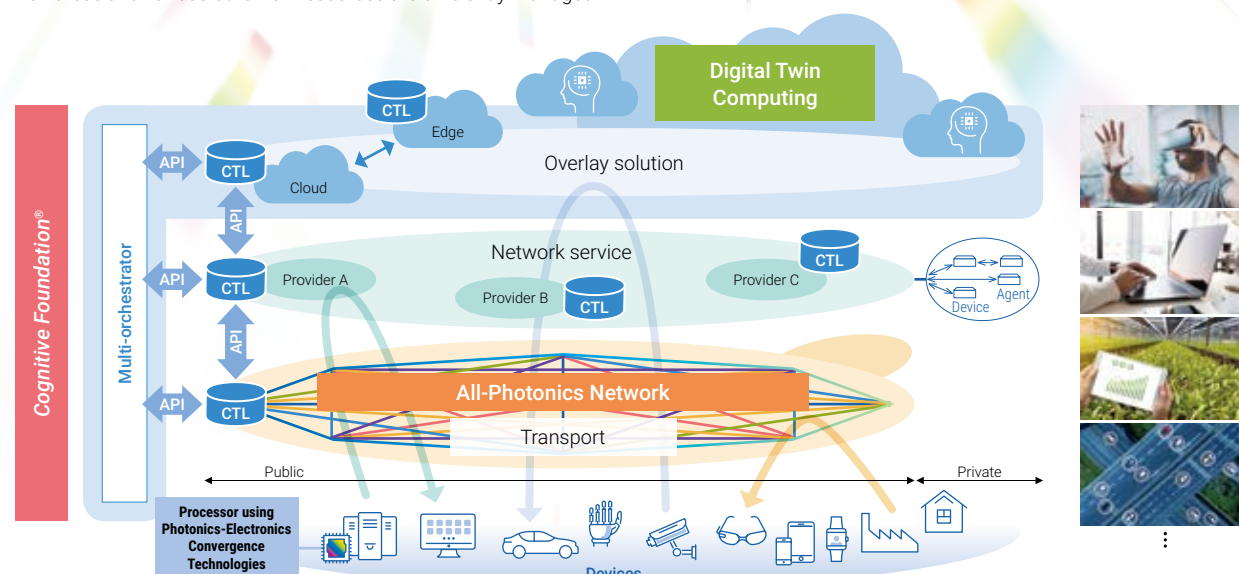
IOWN

NTT R&D is envisaging the arrival of new smart societies that are not yet possible with today's Internet, with features such as mobility as a service (MaaS) for extreme failsafe systems and entertainment services offering deep immersion. To realize such smart societies, we will require innovation that cannot be achieved merely by extending the trajectory of current technologies; we will need to realize ultralow power consumption, high-speed signal processing, and the fusion of virtual worlds that can equal or surpass reality with sophisticated prediction technologies. NTT Group has proposed the "Innovative Optical and Wireless Network" (IOWN) concept to realize new smart societies, and we are making a committed effort to realize this concept.

What's IOWN?

IOWN is a concept for realizing new smart societies that are not yet possible with today's Internet.

IOWN comprises three main technology components: "all-photonics network" that uses optical processing on not only networks but also device processing; "digital twin computing" that enables high-speed, real-time interaction between things and people in cyberspace; and *Cognitive Foundation*[®], in which these and various other ICT resources are efficiently managed.



All-photonics network incorporates new optical technologies at every level, from networks to devices, and even inside chips, to enable ultralow power consumption, ultra-high speed processing that has not been possible until now.

By allocating different wavelengths to different functions in a single optical fiber, it becomes possible to provide multiple functions that support social infrastructure without mutual interference, including information communication functions such as Internet and sensing functions.

NTT Group aims to solve social issues by aiding the shift from electronics into the world of photonics.

Low power consumption	Large capacity, high quality	Low Latency
100 times electrical efficiency*	Transmission capacity 125 times	End-to-end latency 1/200*
Transmission medium: Optical fiber cable Transmission equipment: Light (wavelength) passes through Information processing base: Opto-electronic elements	• Wavelength (optical signal) Independent Light → Light → Light → Wavelength Optical fiber 1000 [Tbps/fiber]	• Transmit by wavelength • No waiting processing necessary • No data compression necessary Wavelength A: Large-volume movie (uncompressed) Wavelength B: No latency Sound
Various information communication services are provided using 1/100th of power consumption.	In an instant (0.3 sec), 10,000 two-hour movies can be downloaded (with 5G, one movie can be downloaded in three seconds).	Video is transmitted in real-time without the latency experienced with digital TV or satellite broadcast.

* Target electrical efficiency for portion where photonic technologies are applied

* Latency target value in video traffic not requiring compression in the same prefecture

NTT Group will advance with new technology development with an eye on the more distant future, while taking steps to strengthen its research and development structure.

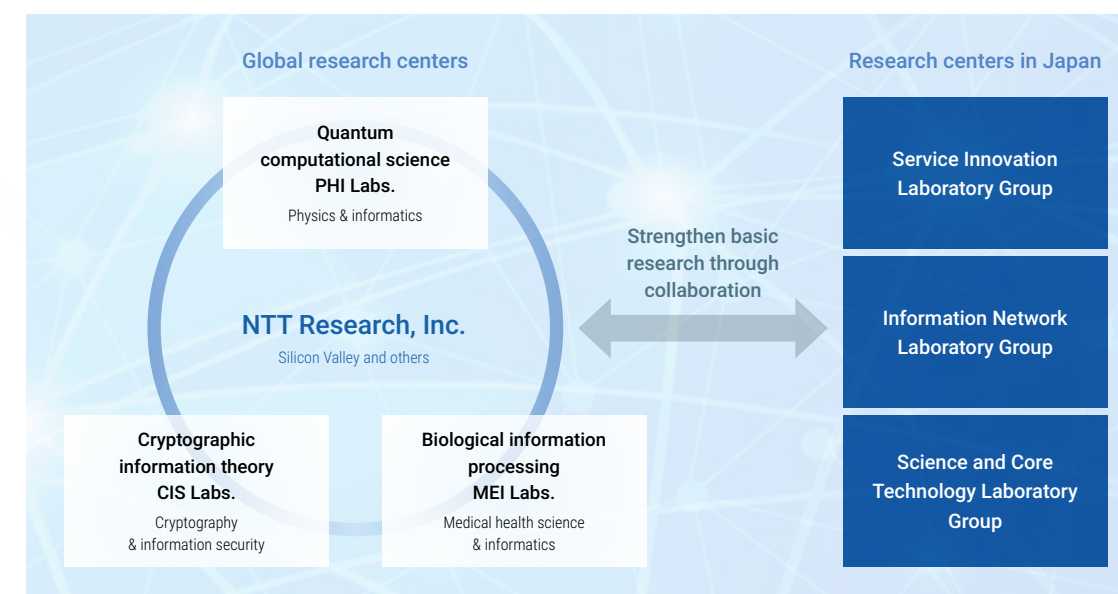
Digital twin computing is a significant advance in existing digital twin technology. By performing calculations such as conversions, combinations, and replications for various digital twins representing things and people in the real world, and having those digital twins interact, this new paradigm allows free interactions between people and things to be recreated and tested. This can be used to build virtual societies at a level of precision that has never been achieved before, enabling us to run prediction and testing on large-scale, highly accurate futures, and to provide high-level communications offering new value. The technology is expected to solve various social problems around the world and lead to the creation of innovative new services.

IOWN is set to change our world in new and exciting ways.

Establishment of Overseas Basic Research Centers

In July 2019, we opened the overseas basic research center NTT Research, Inc., in Silicon Valley in the United States. NTT Research operates three research laboratories and works to reinforce basic research as the source of innovation, coordinating with research laboratories in Japan.

Each research laboratory has a team and manager made up of globally active researchers. The laboratories are engaged in not only closed research for NTT research laboratories but also proactive joint research with universities and research institutes worldwide, as well as with the laboratories of other companies. We aim to achieve the peak of basic research and produce unrivaled world-class results that contribute to innovation. We will continue to globalize our research and development even further, by opening research centers in areas around the world, starting with Silicon Valley.



Quantum Science & Computing Laboratories (PHI Labs.)

A quantum computing research laboratory, PHI explores the interdisciplinary areas between physics and information science, and promotes basic research on quantum theory of open-dissipative systems and its application to information processing, in order to pursue basic physical science research for building a completely new theory.

Cryptography & Information Security Laboratories (CIS Labs.)

CIS is engaged in basic research on cryptography theory corresponding to advanced functions and security theory in distributed environments such as Blockchain.

Medical & Health Informatics Laboratories (MEI Labs.)

MEI is NTT's first medical and biological research laboratory. It researches biological information processing, such as data accumulation and analysis using AI to realize precision medicine.

For information about NTT's R&D aspirations, including IOWN, refer to "NTT Technology Report for Smart World."
<https://www.ntt.co.jp/RD/e/techtrend/index.html>

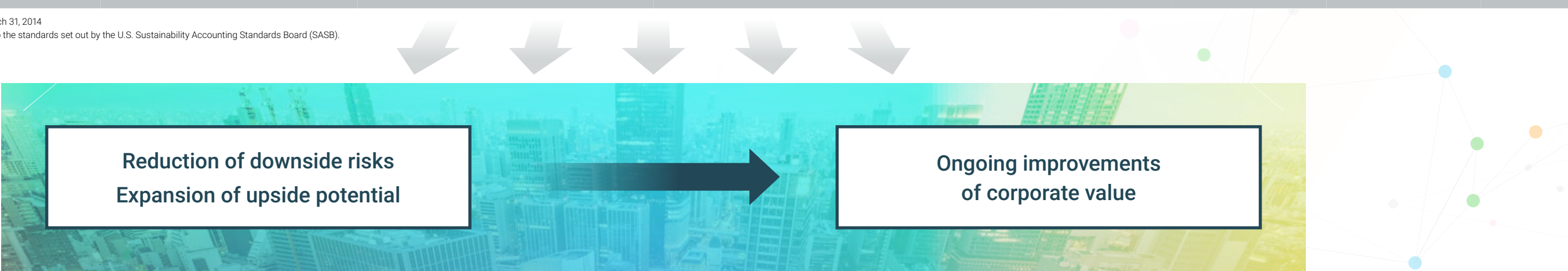


Initiatives Aimed at Promoting ESG Management

NTT Group promotes environmental, social, and governance (ESG) management to address ESG-related issues appropriately. In doing so, we reduce downside risks while expanding upside potential and driving sustainable increases in corporate value. Thinking of our influence on society and the maintenance of our management base, we have identified five material issues and set numerical targets for each of them to guide our initiatives.

	Material Issues	Status of Initiatives for the Medium-Term Management Strategy	Major Initiatives	Targets	Relevant Sustainable Development Goals	Relevant Management Resources
Environmental	Reduction of Environmental Impact	<ul style="list-style-type: none">Reduce environmental impactLeverage ICT to contribute to the environment	<ul style="list-style-type: none">Contribution to reducing society's CO₂ emissionsImprovement of electricity efficiencyPromotion of e-mobility ➡ P.35Promotion of smart energy business ➡ P.37	<ul style="list-style-type: none">Contribution to reduction of CO₂ emissions of society 10 times the Company's own CO₂ emissions or more (by FY2030)Electricity efficiency of telecommunications business 10 times or more (by FY2030)*Conversion rate of general Company-use vehicles in Japan to EVs 100% (by 2030)Final disposal ratio of waste Under 1% (by FY2030)		
Social	Strengthening of Security	<ul style="list-style-type: none">Protect personal informationSupport customers in reinforcing information security	<ul style="list-style-type: none">Maintenance of security promotion systems ➡ P.41Promotion of security business ➡ P.42	<ul style="list-style-type: none">Number of incidents of personal information leaks: 0		R&D Capabilities Human Resources Brand Image ICT Infrastructure Financial Base Customer Base
	Utilization of Diverse Human Resources	<ul style="list-style-type: none">Promote diversity	<ul style="list-style-type: none">Empowerment of women in the workforce ➡ P.45Revision of compensation system for research personnel ➡ P.46	<ul style="list-style-type: none">Ratio of female managers: More than 10% (by FY2025)Ratio of persons with disabilities: 2.2%Employee satisfaction: Higher than in the previous fiscal year		
	Strengthening of Disaster Countermeasures	<ul style="list-style-type: none">Strengthen disaster countermeasures	<ul style="list-style-type: none">Securing of stability and reliability of communication services ➡ P.48	<ul style="list-style-type: none">Stable service provision rate: 99.99%Number of major accidents: 0		
Governance	Reinforcement of Governance for Sustainable Growth	<ul style="list-style-type: none">Enhance structure on the basis of the intent of Japan's Corporate Governance CodeStrengthen global corporate governance	<ul style="list-style-type: none">Composition of the Board of Directors ➡ P.51Evaluation of Board of Directors' effectiveness ➡ P.55			

* Compared with the fiscal year ended March 31, 2014
Note: Underlined numerical targets relate to the standards set out by the U.S. Sustainability Accounting Standards Board (SASB).



Material ESG Issue 1 Reduction of Environmental Impact

We view reducing CO2 emissions and otherwise lowering our environmental impact as an important issue needing to be addressed internationally in order to create a sustainable society. Moreover, given its pursuit of sustainable business development over the medium to long term, NTT Group considers it absolutely essential to reduce its environmental impact in order to grow further.

NTT Group is therefore committed to reducing the environmental impact of its business activities while working together with stakeholders to create a future in which people and the planet are in harmony through the development and proliferation of ICT services and cutting-edge technologies.

Internal Factors

- Large amount of electric power required for operation of telecommunications equipment, etc., accounting for close to 1% of Japan's commercial electric power consumption
- Procurement of many products and materials required for global business operations
 - Since global business operations use a large amount of energy and natural resources, they incur a significant cost and have a major effect on the Company's environmental load.

Social Demand

- Climate change caused by global warming, resource depletion associated with global population increase and economic development, loss of biodiversity through global environmental changes
 - Corporations are required to use energy efficiently, use resources effectively, and co-exist with nature. For the communications industry in particular, there is an expectation to promote services that will replace resource use, as well as a demand to make use of smart energy solutions.

Relevant Laws, Regulations, and Global Trends

- Transition to a carbon-free society with the adoption of the Paris Agreement by COP21 and the Paris Agreement Implementation Guidelines by COP24, etc.
- Transition to a recycling-based society with the establishment of plastic resource-recycling strategies, etc.

Business Risks Arising from Materiality Factors

- Increase in costs due to rise in electricity prices and regulatory tightening around greenhouse gas emissions
- Increase in maintenance cost for telecommunications equipment and data centers due to temperature rise
- Increase in expenses stemming from high resource prices
- Stall in social activity due to ecosystem collapse

Business Opportunities Arising from Materiality Factors

- Expansion of smart energy business
- Expansion of business continuity solutions business using ICT

Targets

- Contribute to reducing the CO2 emissions of society by at least 10 times more than the Company's own emissions
- Increase power efficiency of the telecommunications business by at least 10 times
- Convert 100% of fleet of general Company-use vehicles to electric vehicles
- Final disposal rate for waste of 1% or lower
 - Refer to page 35

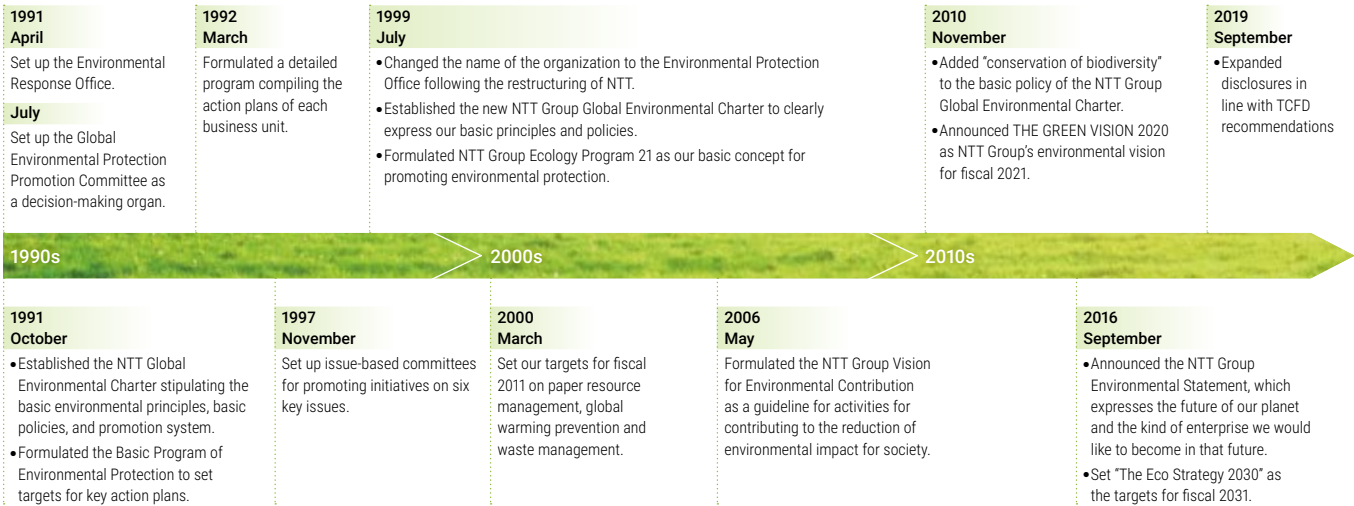
We disclose important information related to governance, strategy, risk management, and indicators and targets, as recommended by the Task Force on Climate-related Financial Disclosures (TCFD). The relevant items of information are marked with the TCFD symbol for confirmation.



History and Engagement Policy for Environmental Activities

Since the inception of our business, we have continuously considered and acted in response to the environmental impact of our business activities along with ways to help address environmental issues.

History of Environmental Activities



The NTT Group Environmental Statement



The Eco Strategy 2030

Realizing a Low Carbon Future

We will contribute to reducing the CO2 emissions of society by at least 10 times more than the NTT Group's own emissions.

We will raise power efficiency per data transmission in our telecommunications businesses by at least 10 times compared to fiscal 2014 levels.

We will play our part in adapting to climate change by actively promoting initiatives through all our activities and by collaborating with our stakeholders.

Implementing Closed Loop Recycling

We will achieve zero emissions* with regard to the final disposal rate for waste discharged from the NTT Group.

Planning a Future of Natural Harmony

We will play our part in preserving ecosystems by actively promoting initiatives through all our activities and by collaborating with our stakeholders.

* Zero emissions: NTT Group considers a final disposal rate of 1% or less to satisfy zero emissions conditions.

More information on NTT Group Environmental Statement and 2030 Environmental Targets can be found on NTT Group Sustainability Report, "Protect the Global Environment" https://www.ntt.co.jp/csr_e/index.html



Goals for the Reduction of Environmental Burden

	Goals	Quantitative Indicators	KPIs	Goal Achievement Time	Results		
					FY2016	FY2017	FY2018
Use ICT to contribute to the environment	While reducing CO2 emissions of the Company, contribute to the reduction of CO2 emissions of all society, including value chains, through the utilization of ICT	Amount of contribution to the reduction of CO2 emissions of all society	At least 10 times the Company's emissions	FY2030	8.9 times	10.1 times	10.8 times
Reduce environmental impact of business operations	Improve power efficiency to reduce the environmental impact of business operations	Power efficiency of communications services (Power efficiency per unit of communications volume)	At least 10 times higher than in FY2013	FY2030	2.7 times	3.6 times	4.5 times
			At least 2 times higher than in FY2017*	2025	—	—	1.2 times
		Electric vehicles as a percentage of general vehicles in Japan*	100% 50%	2030 2025	—	—	0.34%
Effectively use resources	Control the final disposal ratio of waste and work toward the effective use of resources	Final disposal ratio of waste	Zero emissions (under 1%)	FY2030	1.03%	1.18%	0.91%

* Newly established in the fiscal year ending March 31, 2020.

Initiatives Aimed at Promoting ESG Management



Impact of Climate Change on Businesses

Through the maintenance of telecommunications equipment and the operation of data centers and other facilities, NTT Group accounts for close to 1% of Japan's commercial electricity consumption. Taking into account the effects of climate change, we have compiled the following summary of risks in our business operations as well as the measures we are taking in response to such risks and other related information.

Potential Risks

The risk of an increase in costs due to changes in statutory laws and regulations, such as rises in power prices resulting from the feed-in tariff scheme for renewable energy (FIT) and environmental tax, is actualizing. The FIT tax burden is increasing with each passing year, and there is a possibility that power prices will continue rising going forward. Further, an increase in power consumption volume arising from air-conditioning needed for the normal operation of telecommunications equipment and facilities and equipment for data centers in environments with high outside air temperatures is possible. In addition, there is a risk that such natural disasters as torrential rain or typhoons could damage access networks, which could give rise to physical and economic losses.

- With respect to the aforementioned risks, we are implementing the following measures.
- Consolidating telecommunications equipment and facilities, which account for most of NTT Group's power use and upgrading to equipment with higher levels of energy efficiency (including carrying out upgrades ahead of schedule)
 - Introducing high-voltage direct current (HVDC) systems
 - Installing systems for the analysis of power use status
 - Introducing an air conditioner optimal control system (Smart DASH®), which saves energy by automatically controlling air conditioners in response to temperatures detected by wireless temperature sensor modules that we install
 - Maintaining appropriate temperature settings for air conditioners by preventing hotspots through such measures as installing diffusers to efficiently release exhaust heat from equipment, installing blank panels, and optimally laying out double flooring
 - Securing the stability and reliability of telecommunications services in anticipation of large-scale natural disasters
- For details on the strengthening of disaster countermeasures, please see page 48.

* Scale of assumed risks: Effect of increases in environmental tax (¥720 million per year), effect of FIT (¥19.0 billion–¥22.6 billion per year), and effect of increases in outside air temperature (¥650 million–¥2.0 billion per year)
* In the fiscal year ended March 31, 2019, invested approximately ¥8.1 billion in measures for reducing power use, including those related to air-conditioning equipment and facilities (service life of measures: 15 years)

Potential Opportunities

- A further increase in demand for the smart energy business in relation to its provision of ICT-enabled energy management and other services and for low-power-consumption data centers due to growing demand for efficient energy use in areas, buildings, and homes
- For details on the smart energy business, please see page 37.
- Expansion of the business continuity solutions business enabled by ICT and cloud technologies



Organization for Environmental Management

We established the NTT Group Global Environmental Protection Promotion Committee as an internal unit under the CSR Committee to discuss and determine the environmental activities policies for the entire Group.

The NTT Group Global Environmental Protection Promotion Committee, which meets twice a year, is chaired by the NTT director and general manager of the NTT Environmental Protection Office (Head of Research and Development Planning) with membership comprising heads of environmental departments at six major Group companies (NTT East, NTT West, NTT Communications, NTT DOCOMO, NTT DATA, and NTT FACILITIES). Also, this committee oversees the Climate Change Actions Committee, the Closed-loop Recycling Committee, and the Natural Harmony Working Group and drafts basic policies, manages targets, and addresses issues related to environmental protection.

Further, risks and opportunities identified as having a significant impact on business, such as laws, regulations, and systems related to the environment, are presented to the Business Risk Management Committee, which identifies Companywide risks, and to the Board of Directors.

In addition to working with the environmental departments, the committee cooperates with other departments to pursue related initiatives. Particularly with regard to electricity use, which accounts for more than 90% of NTT Group's CO₂ emissions, the committee collaborates with the High Performance Energy Use Promotion Committee, which is responsible for promoting the Total Power Revolution (TPR) campaign, NTT Group's energy conservation activities. As for the risks and opportunities presented by environmental issues to our facilities and equipment, monitoring and assessment are conducted through a collaborative effort between staff in charge of environmental issues and those responsible for facilities, and these individuals are appointed for every Group company.

NTT Anode Energy Corporation Envisions Smart Energy Business

With a view to addressing social issues related to the environment and energy, in June 2019 the Group established NTT Anode Energy Corporation, which will conduct a smart energy business that advances such operations as a green power generation business.

The aim of the NTT Anode Energy Corporation's smart energy business is to establish a commercial business based on the new value resulting from the construction of direct-current area grids. At present, alternating current is the power type used generally. In the telecommunications field, however, direct current is used for its efficiency and reliability. We aim to utilize technology and expertise developed in telecommunications to construct direct-current grids on an area basis that are controlled by ICT. In this way, we will build a system that supplements alternating-current grids. These initiatives will enable us to supply power during blackouts caused by disasters and to use storage batteries for the enhancement of the stability of power supplies from renewable energy sources.

Components of the Business

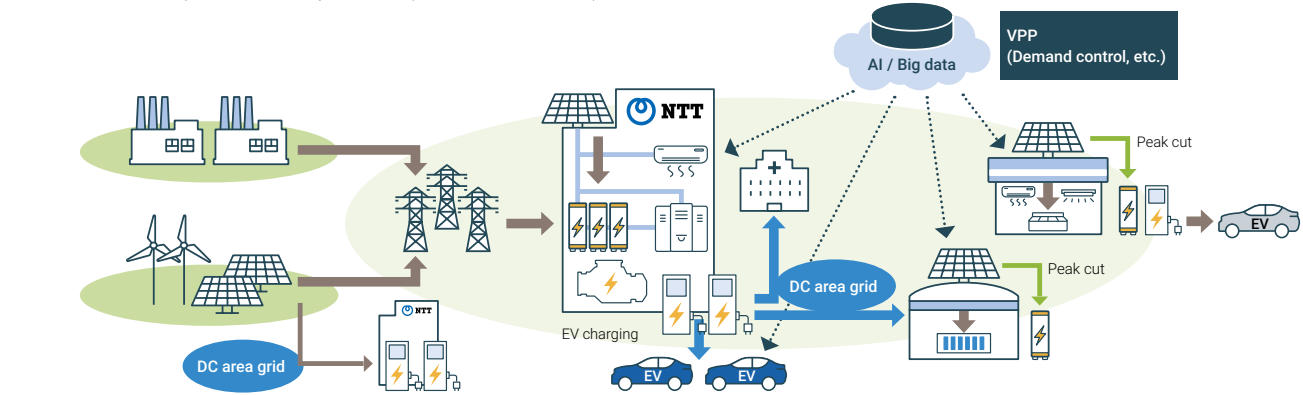
We conduct five projects in the three areas of power generation; power transmission and distribution and storage; and retail and wholesale. NTT Group aims to double the sales of its energy-related businesses by the fiscal year ending March 31, 2026.

Power Generation	(1) Green power generation business: Power supply solutions using renewable energy
Power Transmission and Distribution and Storage	(2) VPP (virtual power plant) business: Supply and demand coordination solutions through control of dispersed power sources* * Functions such as generation by solar, water, and wind power, power supply by electric discharge from storage batteries (including EV), and control of supply and demand by power storage in storage batteries.
	(3) Advanced EV station business: Advanced EV charging infrastructure solutions using storage batteries and chargers* * Plan to provide services in the future combining power supply from EV to buildings and grids (V2B: vehicle to building; V2G: vehicle to grid)
	(4) Backup power source business: Optimal emergency power supply solutions according to the type of disaster
Retail and Wholesale	(5) Electric power retail and wholesale business: Electric power supply with low environmental impact

Overview of the Business

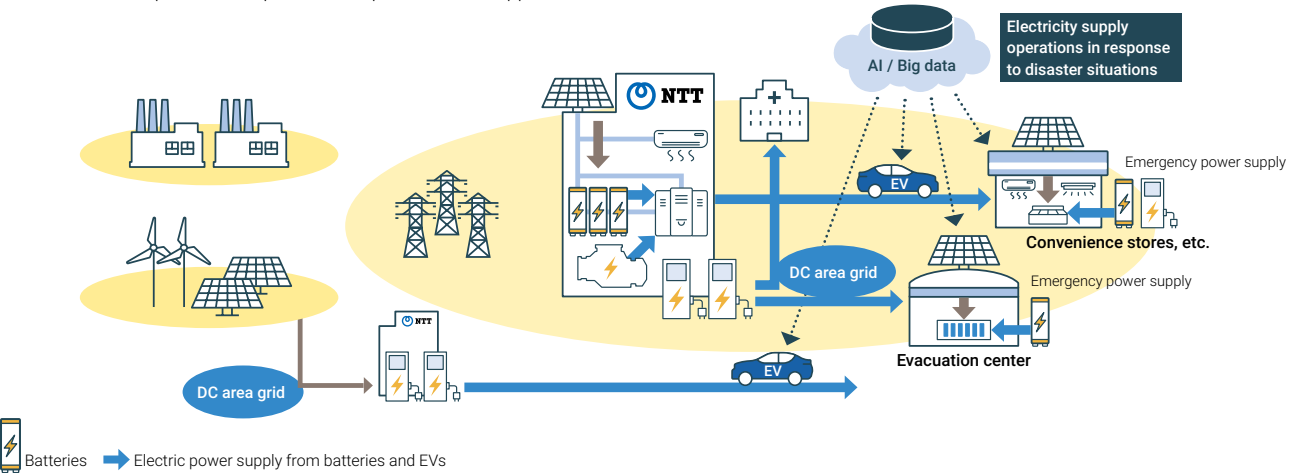
During Ordinary Times

Contribute to CO₂ emissions reduction by charging batteries using green power, then using them to supply power to facilities
Use batteries to charge EVs and carry out VPP (demand control, etc.)



During Disasters

During power outages, supply green power and power stored in batteries via privately operated DC lines and through use of EVs
Make disaster response headquarters independent and support evacuated residents



Material ESG Issue 2 Strengthening of Security

With a full-fledged digital society fast approaching, various risks and opportunities are emerging. Against this backdrop, the role of security is expanding. It is no longer simply a defensive measure that protects information assets and gives rise to expenses. Security is also a target for strategic investments aimed at transforming and growing businesses and forming new markets. As a global ICT corporate group that believes in the potential of digital society, NTT Group is committed to contributing to global cyber-resilience. Further, we will proactively help realize cybersecurity worldwide by providing cybersecure ICT services.

Internal Factors

- ▶ Across a range of fields, such as electric power, life sciences, and agriculture, development of diverse smart businesses based on ICT services
- ▶ One of the world's leading telecommunications and ICT services client platforms
 - ➡ It has become necessary to steadily pursue digital businesses through the protection of information assets and the securing of safe ICT platforms.

Social Demand

- ▶ Increasing sophistication and diversity of cyberattacks
- ▶ Reports of the vulnerability of old and new ICT devices
 - ➡ Due to the importance of cyber-resilience, companies are expected to enhance their technologies, while companies in the ICT industry are expected to strengthen the security of their own products and solutions as well as the security of society overall.

Relevant Laws, Regulations, and Global Trends

- ▶ Growing awareness of security as an important infrastructure and as an issue for the continuity of ICT infrastructure
- ▶ Establishment of laws related to the treatment of personal information (enforcement of the General Data Protection Regulation in Europe)
- ▶ Initiatives by respective countries and regions focused on the safety of digital platforms, including IT, operational technology, and the Internet of Things (the EU Cybersecurity Act, various collaborative public-private sector measures for sharing threat information, etc.)

Business Risks Arising from Materiality Factors

- ▶ Delay in the digitalization of the socio-economy due to a loss of trust in digital infrastructure
- ▶ Loss of intellectual properties due to cyberattacks
- ▶ Loss of trust in us as an ICT company due to being perceived as a company with inadequate security measures

Business Opportunities Arising from Materiality Factors

- ▶ Increase in market opportunities because clients' management teams view investments in security as contributing to the management of business risks as well as to digital growth
- ▶ Overall increase in opportunities to provide ICT services due to being perceived in Japan and overseas as an ICT company with outstanding security
- ▶ Establishment of competitive superiority by using safe and secure ICT infrastructure to develop solutions

Specific Measures

- ▶ Leveraging of progressive research and development to strengthen the security of our services and the provision of security solutions
- ▶ Use of advanced technology for early detection of and responses to security threats
- ▶ Hiring and development of security personnel
- ▶ Distribution of pioneering knowledge through participation in and contribution to global communities

Policies on Initiatives in the Security Field

Digital society remains in its initial phase, while cybersecurity is in its infancy. Precisely because cybersecurity is in its infancy, rather than wait for the industry to take shape, NTT Group will be in the vanguard of efforts to take the initiative and create the industry.

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graph LR; A[Initiatives for the security of NTT Group] --> B[Development of personnel, technologies, and expertise]; B --> C[Initiatives for strengthening the security of clients]; C --> D[Research and Development]; D --> E[Contribution to cybersecurity worldwide]; E --> F[Formation of a sound digital society];
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As the socio-economy digitalizes and the international situation changes, cyberattacks and other security threats are becoming increasingly advanced and serious. In such conditions, NTT Group's responsibility is to protect the infrastructure of ICT services as well as clients' information assets and to provide sound platforms with a view to the growth of the digital economy. In accordance with the medium-term management strategy, NTT Group has defined its mission as supporting the infrastructure of the digital economy and contributing to the construction and development of free, open, and safe ICT platforms. NTT Group must realize its own digital transformation and those of clients in a reliable, safe manner. Moreover, these capabilities should be the reason why NTT Group is the first choice of clients. In other words, our vision is for clients to choose us because we offer security.

Shinichi Yokohama
Chief Information Security Officer (CISO)
NTT

Vision

NTT Group will become the enabler both of its own digital transformation and those of clients.
The Group will be the first choice of clients because it ensures security.

Differentiation Strategy

Provision of comprehensive security solutions based on development and verification that leverage business scale

Demand

Growing demand for comprehensive security

Superiority

Unique position that allows the provision of a wide range of ICT-related services on a global scale

Specific strategies

Development of "verified by NTT" solutions that take advantage of the Company's global operating environment, value chain, and digital transformation

Early Detection of and Rapid Responses to Security Threats

Demand

Shift in focus toward demand for damage minimization, which is arising from an increased awareness that 100% protection is impossible

Superiority

Advanced analysis capabilities, such as SIEM engine, and personnel with a high level of integrity

Specific strategies

Advanced analysis systems and professional support provided by analysts

Development of a Security Workforce with Common Values

Superiority

More than 3,000 advanced and intermediate cybersecurity personnel who have a shared sense of integrity and are committed to realizing a secure digital society

Specific strategies

Creation a system that uses formal and informal methods to attract, hire, and develop personnel

Cooperation with Stakeholders Aimed at Leading the Dissemination of Knowledge and at Developing a Digital Society

Superiority

The only Japanese company with a dedicated cyber-advocacy team (a team that makes policy recommendations and society-related recommendations)

Specific strategies

Proactive formation of cooperative relationships with major global companies

We will demonstrate leadership with a view to the sound development of an international digital society and prepare the groundwork for expansion of the ICT services market. At the same time, we will move forward with the rollout of security solutions that leverage advanced technologies and personnel.

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Initiatives Aimed at Promoting ESG Management

Initiatives Aimed at Strengthening Security

Strengthening of the Security of Our Services

We aim to provide safe and secure ICT services, which are an integral part of society's infrastructure and underpin the digitalization of the socio-economy. Therefore, we are strengthening the security of all our services, including our telecommunications equipment, IT service environments, and services related to smart cities and buildings.

Global Coordination

Given the integration of our global businesses, we are also advancing global coordination with respect to security. To facilitate coordination within NTT Group, which spans a variety of different businesses and regions, the Group has introduced a risk-based management approach, built a framework founded on the recommendations of the U.S. National Institute of Standards and Technology, and established common Group standards for identification, protection, detection, responses, and recovery.

Participation in and Contribution to Global Communities

Centered on the United States and Europe, we participate in government and industry initiatives aimed at strengthening cybersecurity and share information on security threats and best practice. Also, we are working with companies and organizations to form communities based on mutual trust.

Progress of Initiatives

- ▶ Participation in communities in Japan and overseas for the sharing of information on cyber-threats and best practice
 - ICT-ISAC Japan,*1 organization that facilitates information sharing, collaboration, and coordination in Japan's ICT industry
 - The global CSIRT community FIRST*2
 - CTA,*3 an association for the sharing of information on global cyber-threats
- ▶ Establishment with ICT companies worldwide of CSDE,*4 an international council for the realization of a secure digital economy
 - Issuance of the IABG*5
- ▶ In three countries and regions worldwide, coordination with bodies that conduct collaborative efforts aimed at sharing information on and neutralizing cyber-crime
 - Europe: EC3,*6 the United States: NCFTA,*7 Japan: JC3*8

*1 ICT-ISAC Japan: ICT Information Sharing and Analysis Center Japan
*2 FIRST: Forum of Incident Response and Security Teams
*3 CTA: Cyber Threat Alliance
*4 CSDE: Council to Secure the Digital Economy
*5 IABG: International Anti-Botnet Guide
*6 EC3: European Cyber Crime Centre
*7 NCFTA: National Cyber-Forensics and Training Alliance
*8 JC3: Japan Cybercrime Control Center

Training of Security Experts

We aim to increase the quality and number of security personnel. In these efforts, Group companies are advancing personnel development measures designed for respective personnel categories and ranks. The rise in cybersecurity threats attendant on the holding of international events necessitates even more countermeasures. Therefore, we are strengthening our security monitoring capabilities and stepping up personnel development. Thanks to these initiatives, we had approximately 44,000 certified cybersecurity personnel as of March 31, 2019. Of these personnel, 3,000 have become certified as advanced and intermediate cybersecurity personnel by acquiring additional knowledge and practical work experience. Thus, we believe that we have the capabilities to respond as needed when major events are held.

NTT Group's Security Personnel Hierarchy

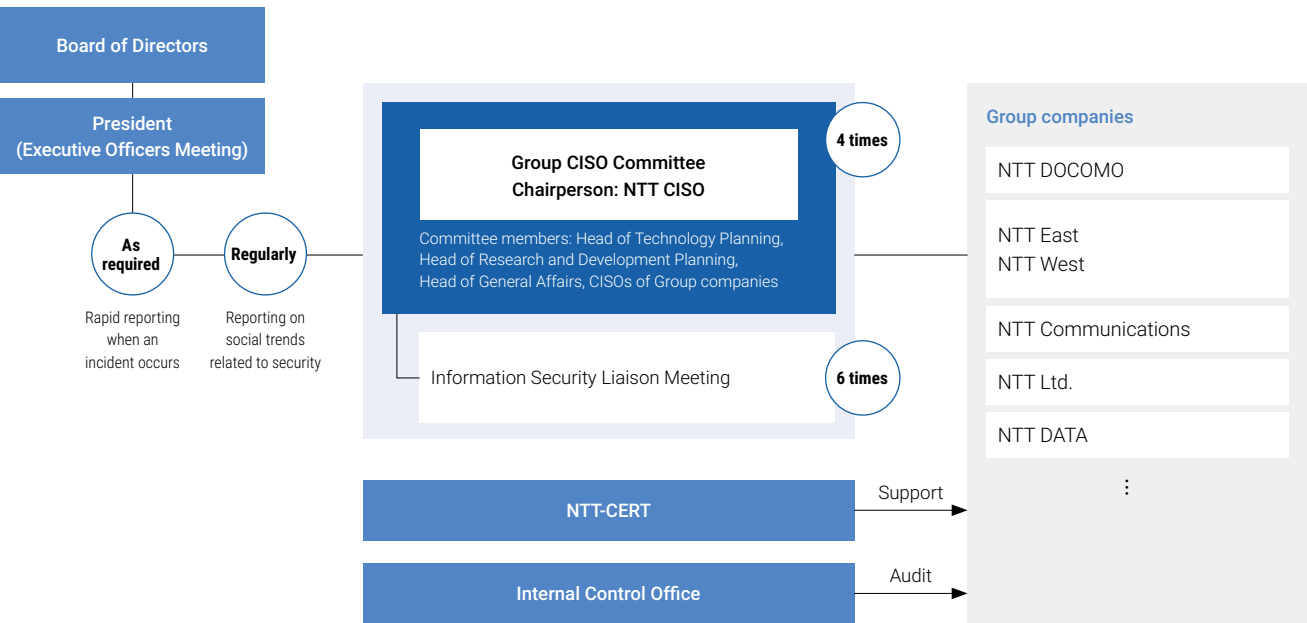
		Job classification	
		Title	Security management consulting / Security operation / Security development
Level	Advanced	Security master / Security principal	Produce first-rate experts with best performance in the industry
	Intermediate	Security professional	Reinforce the pool of specialists with deep experience and judgment
	Beginner	Security expert	Raise the level of workers who can do their work with the required knowledge

Research and Development Initiatives

As well as the development of technologies for the security of our services, we are focusing efforts on the development of security element technologies. Further, in Palo Alto in the United States, we have established a new global research center, where pioneering, world-class researchers are tackling projects focused on cybersecurity and encryption technologies.

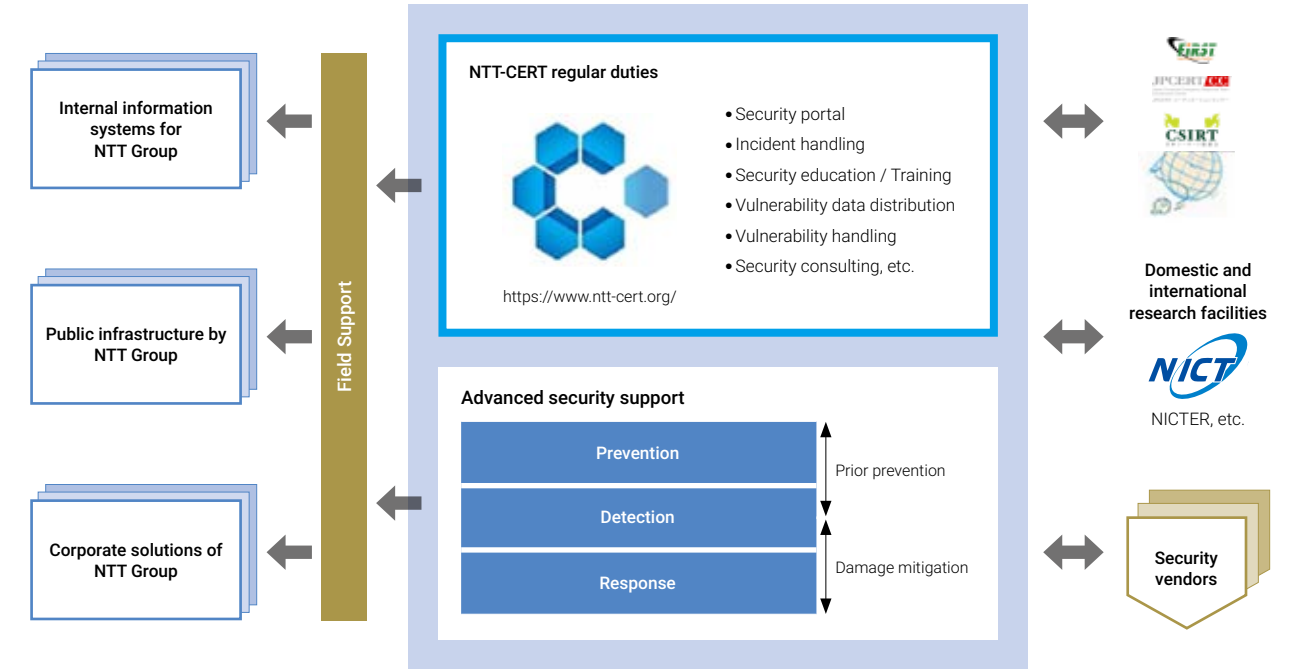
Security Promotion Systems and Management Systems

The Group CISO Committee leads the construction of a governance system that coordinates the activities of Group companies. In the fiscal year ended March 31, 2019, the Group CISO Committee convened four times, while the Information Security Liaison Meeting met six times. In addition, systems have been put in place for dialogue with the senior management team, which receives regular reports on security trends in society at the Executive Officers Meeting. Also, the president receives timely reports when security incidents occur.



* The numbers of times in the chart indicate the number of implementations in the fiscal year ended March 31, 2019.

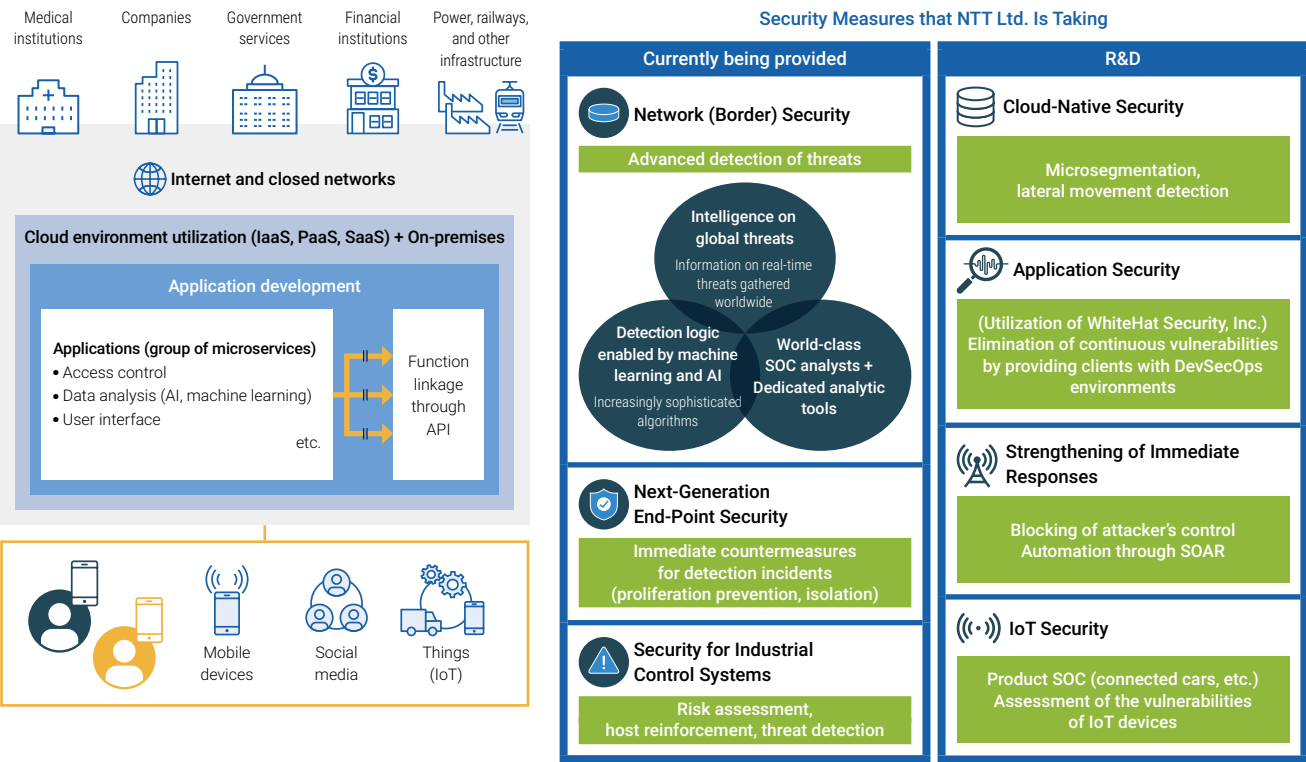
Further, in 2004 we established NTT-CERT as an organization for responding to security incidents. NTT-CERT functions as the core of NTT Group's security efforts and belongs to a Group research center specializing in cybersecurity. Because it can take full advantage of the center's knowledge, the organization has outstanding technological expertise at its disposal. Moreover, the organization has built networks with cybersecurity organizations in regions worldwide, affording it rapid access to information on global trends and new threats. NTT-CERT informs NTT Group companies about such information, thereby strengthening the security of NTT Group and its clients.



Security Business for Major Corporate Clients

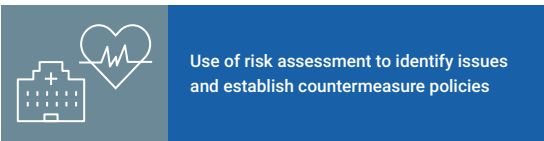
As digital transformation diversifies ICT environments, cyber-threats are becoming ever-more sophisticated, boosting demand for zero-trust security measures that assume internal penetration.

NTT Group's global operating company (NTT Ltd.) continuously develops and introduces cybersecurity measures that support leading-edge digital transformation. These include the advanced detection of cyber-threats through managed security services and immediate responses to threats through managed detection and response. Further, the company offers DevSecOps, which provides both security and the flexible agile development of applications that are important for digital transformation, as well as micro-segmentation-enabled security technologies, which determine the lateral movement of threats that have penetrated from outside or inside (including insiders) and realize access control or isolation on a segment or terminal basis.

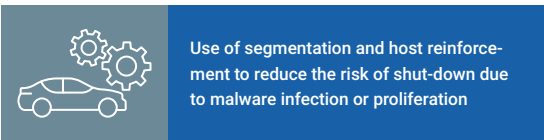
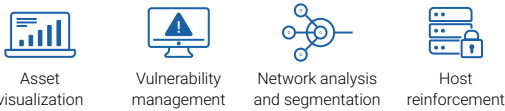


Also, in response to the increase in cyber-threats to critical infrastructure, factories, plant equipment, and building automation systems, we are rolling out advanced security solutions catering to industrial control systems and IoT that have unique system compositions, specifications, and environments. By forming specialized teams in regions worldwide, we are able to offer solutions to clients in a wide range of industries. We resolve clients' security issues by providing services that cover risk assessment and countermeasures based on leading-edge technologies through to managed security services that detect threats in real time and respond to incidents.

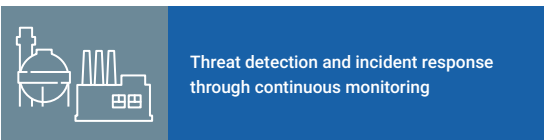
Identification of Issues and Policy for Countermeasures



Application of Leading-Edge Technologies



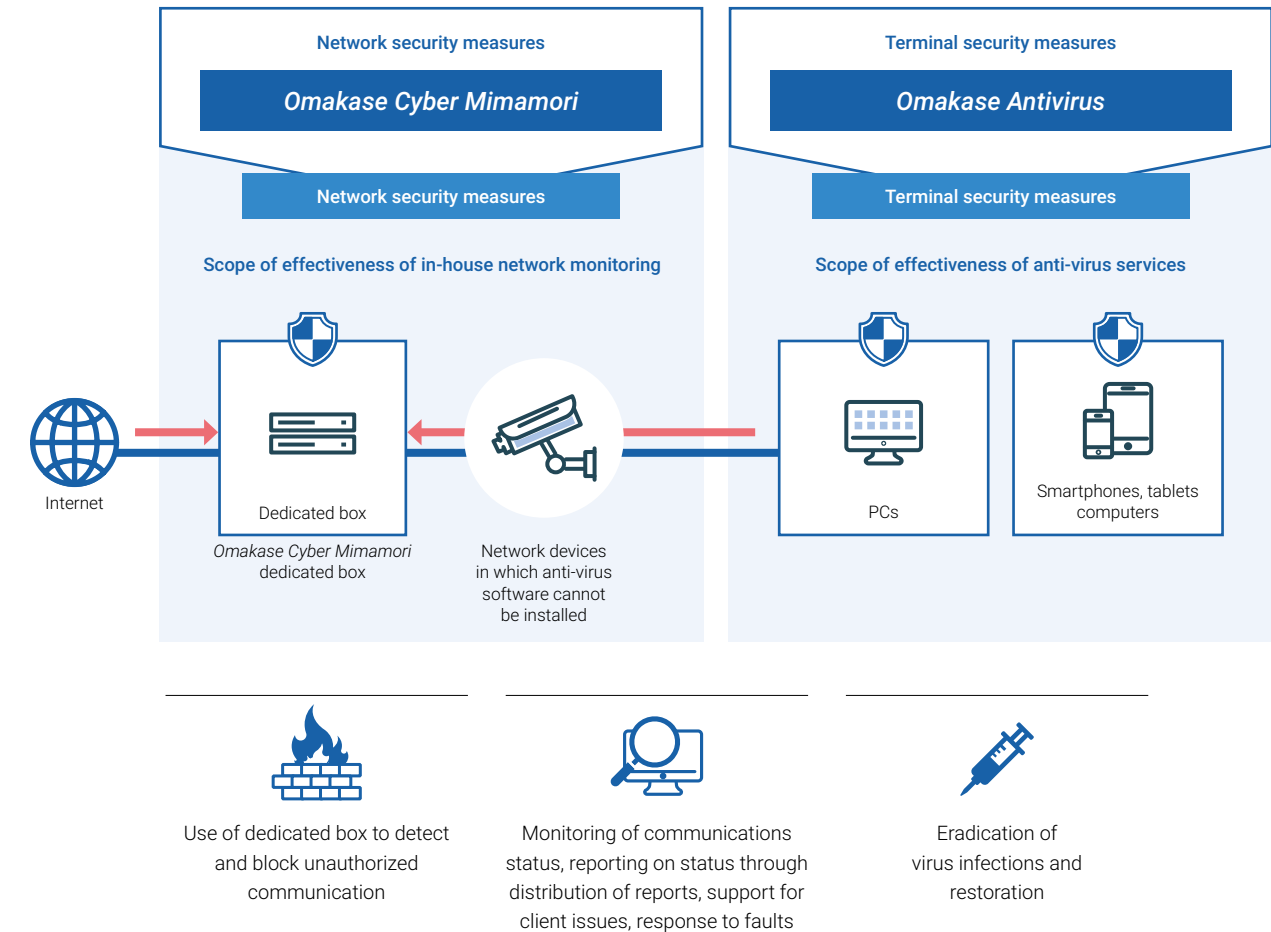
Real-Time Monitoring and Operation



Security Business for Small and Medium-Sized Enterprises

IT is becoming indispensable for businesses. At the same time, regardless of whether their businesses are large or small, all kinds of companies are facing increasing security risks. In particular, many small and medium-sized enterprises lack specialized security personnel. Consequently, some clients are anxious because they feel that their security measures may be inadequate and they do not have anyone to consult with regarding security measures. Given this situation, NTT Group provides comprehensive security solutions that perform the role of a specialized security manager for clients. Specifically, we provide clients with wide-ranging support that covers everything from normal operations through to the occurrence of incidents. As well as detecting and blocking unauthorized communications, the Group's services monitor communications status, report on status through the distribution of reports, and support restoration if virus infections occur. Our lineup of services includes *Omakase Cyber Mimamori*, *Omakase Antivirus* (NTT East), *Security Omakase Plan* (NTT West), and *Security Support Desk* (NTT Communications). The number of contracts for such *omakase*-type security services has been growing in recent years. (In Japanese, *omakase* means "leave it to us.") Going forward, we will continue creating safe, reliable ICT environments for clients.

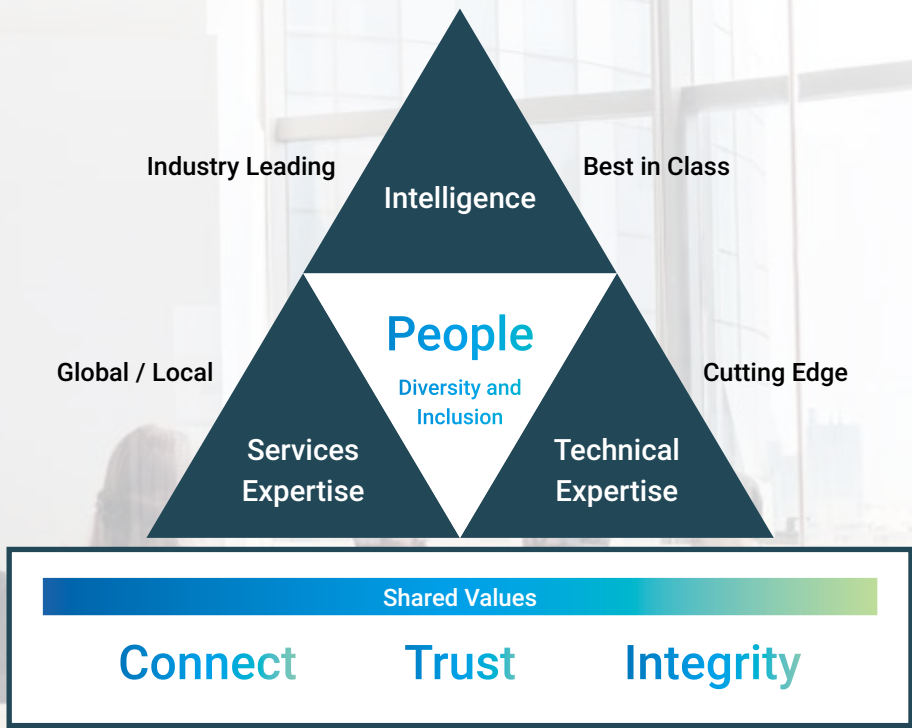
Examples of NTT East's Security Solutions



Material ESG Issue 3 Utilization of Diverse Human Resources

Human resources (employees) will play a central role in becoming “Your Value Partner” that customers continue to select, which is our vision. By respecting and utilizing employees’ diverse values, we will realize innovation.

The expansion of its businesses has given NTT Group a workforce that is dispersed all over the world. Moreover, these employees have various nationalities, genders, lifestyles, and values. While respecting each employee’s individuality, we will share common values as “One NTT” and realize our vision.



Utilization of Diverse Human Resources

Conversion of non-permanent employees into permanent employees	LGBT individuals, etc.	Persons with disabilities	Breakdown of employees by region
More than 40,000 employees*1 during eight years (2012–2019)	Expansion of systems for spouses to all same-gender partners (2018)	2.43%*2 * Statutory employment percentage: 2.2% (FY2018)	Overseas 40%*3 (120,000 of 300,000 employees) (FY2018)

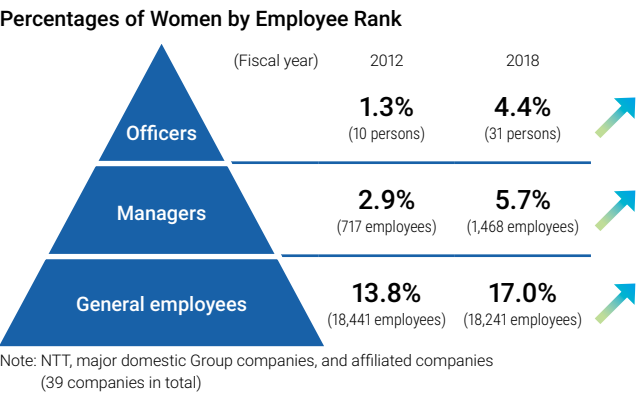
Improvement of Work Efficiency and Workstyle Reforms

RPA	Working from home	Total work time	Paid vacation	Male employees using childcare leave
Introduction of 15,000 robots*1 (June 2019)	27,000 employees*1 (FY2018) Participation of 109 companies in Telework Days * Fact-finding survey of workstyle diversity conducted by the Tokyo Metropolitan Government Percentage of companies in Tokyo that have introduced working-from-home systems: Approximately 19%	1,836 hours*4 (FY2018) * Fact-finding survey of work time, etc., conducted by the Japan Business Federation: 1,998 hours (FY2018)	96.4%*4 used (FY2018) * Comprehensive survey of labor conditions conducted by the Ministry of Health, Labour and Welfare: Approximately 51%	58%*5 used (December 2018) * Basic survey of employment equality conducted by the Ministry of Health, Labour and Welfare: Average use of childcare leave by male employees: Approximately 6%

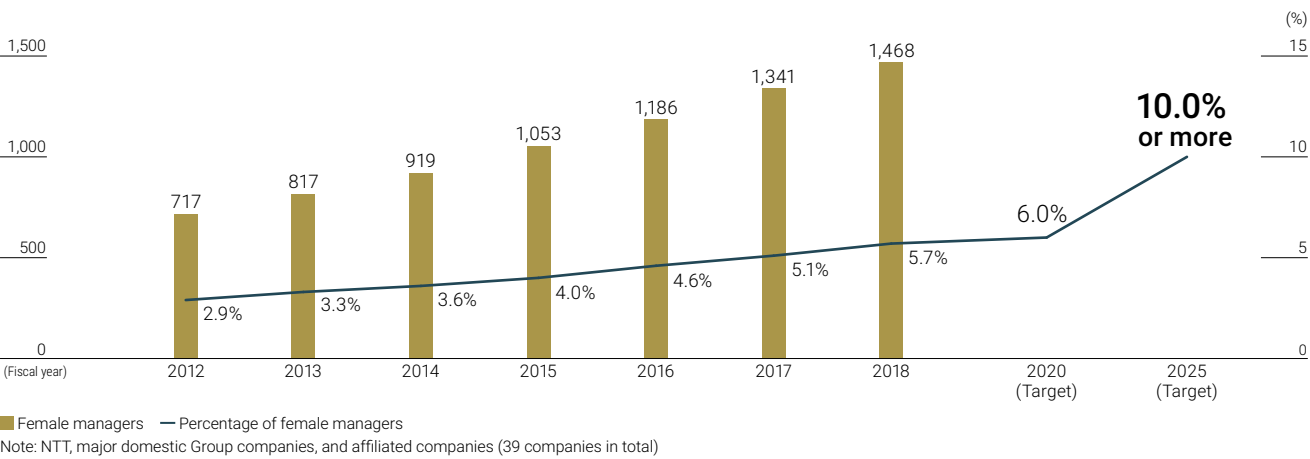
*1 Domestic Group companies
*2 Domestic Group companies (more than 45.5 employees)
*3 All Group companies
*4 NTT, major domestic Group companies, and affiliated companies (26 companies in total)
*5 NTT

Empowerment of Women in the Workforce

As one facet of personnel diversification, we are focusing on gender and taking steps to empower women. In the fiscal year ended March 31, 2013, when women accounted for 2.9% of our managers, we prepared a plan for a twofold increase in the number of female managers. The plan called for lifting this percentage to 6.0 % by the fiscal year ending March 31, 2021. Given that we were already close to reaching this target in the fiscal year ended March 31, 2019, when women accounted for 5.7% of managers, beginning from the fiscal year ending March 31, 2020, we have set raising the percentage to at least 10% by the fiscal year ending March 31, 2026, as a new target. Based on this target, we will redouble efforts to empower women.

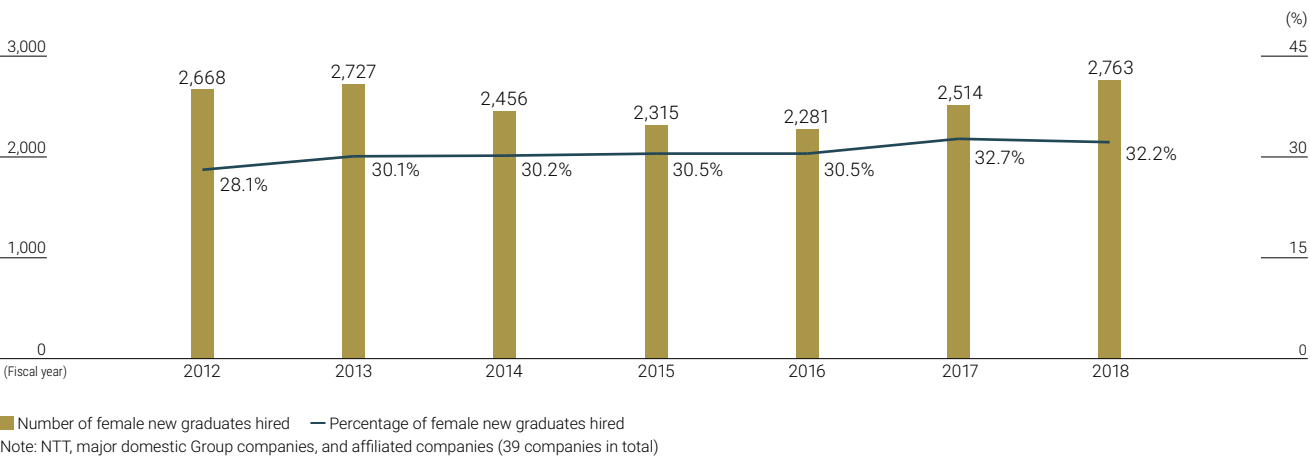


Number of Female Managers



To heighten the percentage of female managers, we need to create a larger pool of candidates by increasing the number of female employees. Accordingly, when we announced the plan for doubling the number of female managers, we also set ourselves the target of ensuring that women account for at least 30% of new graduate hires. Consequently, during the hiring season we are employing a higher percentage of women with each passing year. In the fiscal year ended March 31, 2019, the percentage rose to 32%, marking the sixth consecutive fiscal year since the fiscal year ended March 31, 2014, that the Group has reached the target.

Hiring of Women (New Graduates)



By advancing workstyle reforms through the establishment of workplace conditions and systems that help employees achieve a work-life balance, including the meeting of such commitments as child-rearing and family-care, we are creating an environment that enables even more women to play important roles in our organization. Further, NTT Group conducts career development training for women and promotes women to important positions so that business management reflects a wider variety of opinions.
► For details on the appointment of female Members of the Board, please see page 60.

Initiatives Aimed at Promoting ESG Management

Formulation of an Employee Value Proposition


With a view to strengthening the competitiveness of its global businesses by securing and retaining talented personnel overseas, the Group is taking lateral measures across its organization.


In 2018, we examined the type of employee value proposition we could offer NTT Group employees based on the “One NTT” Shared Values, namely, “Connect,” “Trust,” and “Integrity.” Through workshops, interviews, and surveys, the Group collected and consolidated feedback from employees working at its overseas companies. In light of this feedback, we defined a Groupwide Employee Value Proposition. Also, we prepared a video and a tagline to communicate the proposition to employees in a readily understandable manner.

NTT Group is using the video and tagline to ensure all Group employees fully understand the Employee Value Proposition. Further, we are incorporating the proposition into training for new Group employees.



Held in four cities, our workshops were attended by 94 employees.

The Employee Value Proposition video can be viewed at the link below.
<https://www.youtube.com/watch?v=7HilEXBG6R0>



Revision of Compensation System for Research Personnel

With a view to producing innovative research results and securing and deploying personnel who will ensure that we can compete with other world-class research bodies and companies, in Japan we have introduced a new compensation system that reflects medium-to-long-term research results and revised career tracks. These changes promise to encourage even better research results and to enable us to retain talented research personnel.

Also, overseas we have well-established compensation systems that flexibly reflect conditions in respective countries and the abilities of talented personnel.

Details of Revision

- Establishment of a new compensation system for research personnel (senior research fellows and research fellows) that is separate from the current personnel system
- Regardless of position or age, rigorous investigation of research results, and selection and promotion of talented research personnel
- Evaluation of research results on a medium-to-long-term basis rather than a yearly basis and compensation that clearly reflects outstanding results

Human Resource System for Top-Class Researchers



Enhancement and Expansion of Systems

Childcare and Family Care Support Systems

In addition to issuing five days of leave for every five years of continuous service, we conduct a Life Plan Leave Program, which enables employees to accumulate each year up to three days of annual leave that would otherwise become invalid (with an upper limit of 40 days). Also, this program allows employees to take leave for childcare and family care that is separate from annual leave. NTT has set having employees take at least 80% of their child-rearing leave as a target for the fiscal year ending March 31, 2021. We are creating systems and conditions that make it easier for employees to take child-rearing leave. Moreover, we are encouraging not only female employees but also male employees to avail of leave. In the fiscal year ended March 31, 2019, 58% of male employees with children under three years of age took child-rearing leave, including those using the aforementioned Life Plan Leave Program.

Work	Life plan leave (childbirth by partner, childcare, family care, participation in child's school events, fertility treatment), nursing-care leave, childcare leave, family care leave
	Shorter working hours for employees engaged in childcare or family care, limit on or exemption from overtime work, reemployment of personnel who retired to engage in childcare or family care
Welfare	One-time payment for childbirth and nursing (health insurance), childcare and family care concierge, childcare and family care subsidy, office for advice on in-house systems

Systems for LGBT Individuals and Other Sexual Minorities

With respect to the approximately 200,000 employees of NTT Group companies in Japan, in April 2018 we began the application, in principle, of all systems for spouses to same-gender partners who have the equivalent of spousal relationships with employees.

Salary	Allowance for dependent, allowance for working away from home, expenses of returning home, relocation expenses (family relocation expenses)
Work	Special leave (marriage, bereavement), life plan leave (childbirth by partner, childcare, family care, participation in child's school events, fertility treatment), nursing care leave, childcare leave, family care leave, shorter working hours for employees engaged in childcare or family care, limit on or exemption from overtime work, reemployment of employees who resigned due to the relocation of their spouse's job
Welfare	Congratulatory/condolence payments (special payments for marriage, condolence payments), company housing, company housing subsidy, home loan repayment subsidy
Work overseas	Family members included in the calculation of cost-of-living in home country, spouses in receipt of empty home allowance, handling of relocation expenses of family members of employees working overseas

Advancement of Workstyle Reforms

In June 2017, NTT Group made a workstyle reform declaration, which represented the shared sentiments of all NTT Group managers and employees. We are currently pursuing improvements in overall work processes together with business partners while implementing workstyle and leave habit reforms and advancing initiatives for helping employees maintain good physical and mental health and for encouraging self-transformation among individuals.

As part of Telework Days 2019, more than 100 NTT Group companies participated in special cooperative groups, implementation groups, or supporting groups and implemented flexible workstyles.

Further, with the aim of prompting employees to actively use various types of leave, NTT is conducting the Value-Up Friday campaign, which encourages managers to take at least a half-day of leave on one or more Fridays each month.

Systems supporting flexible workstyles	Flextime systems, discretionary work systems for specialists, working-from-home systems, etc.
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Use of Working-from-Home System, Number and Percentage of Paid Leave Days Taken

(Fiscal year)	2016	2017	2018
Number of employees using the working-from-home system*	3,955	15,046	26,719
Percentage of paid leave days taken (%)	96.4	98.4	96.4

Aggregation of domestic Group companies
* Excluding the NTT DATA Group only in 2016



Material ESG Issue 4

Strengthening of Disaster Countermeasures

As well as ensuring the stability and reliability of telecommunications services by anticipating the potential damage resulting from large-scale disasters, in the event of disasters NTT Group helps clients restore their operations and achieve business continuity.

Stable and Reliable Telecommunications Services in Preparation for Large-Scale Disasters

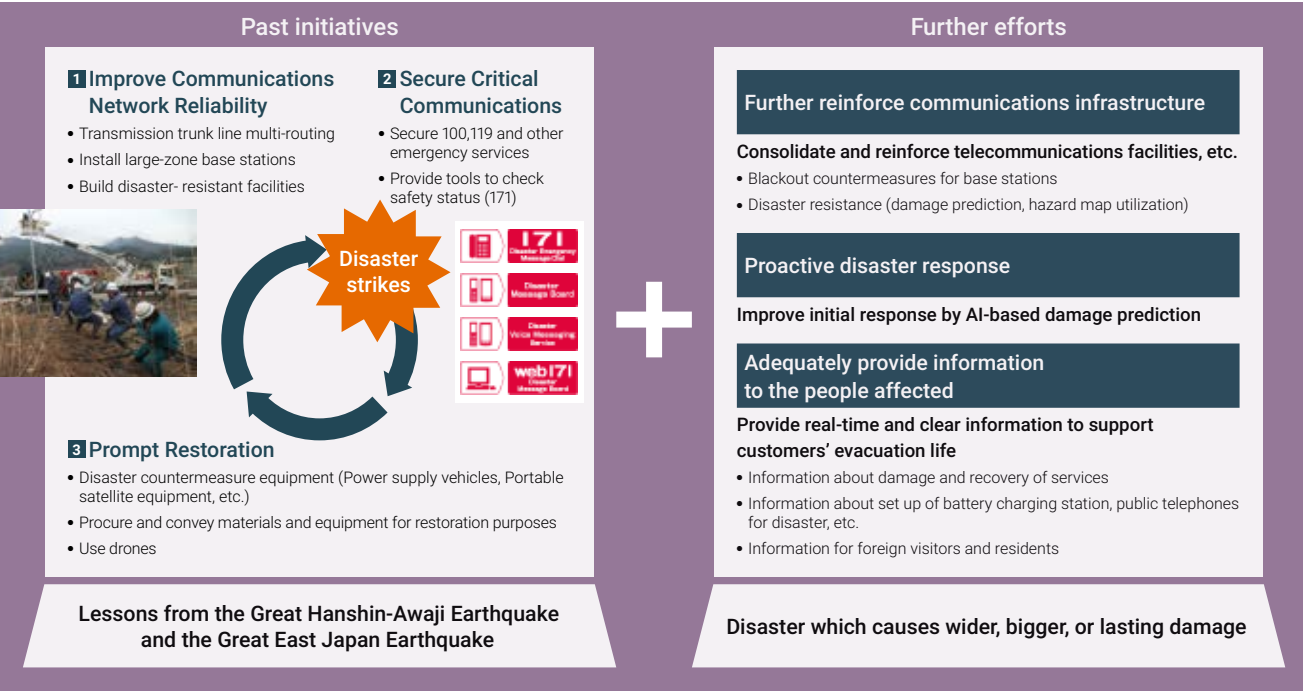
NTT Group has defined three key themes for disaster countermeasures—improving the reliability of communications networks, securing critical communications systems, and promptly restoring telecommunications services. We have been strengthening efforts based on these themes since the Great East Japan Earthquake.

Specifically, we are taking measures to improve the reliability of our telecommunications infrastructure. To ensure that our telecommunications services operate without interruption at all times, we employ transmission trunk line multi-routing, have enacted blackout countermeasures for communications buildings and base stations, and are making communications buildings more disaster resistant. In addition, we are expanding the assortment of power supply vehicles and other disaster response equipment that we have positioned throughout Japan and are continuously conducting training to prepare for major natural disasters. Furthermore, we are making a daily effort to guarantee that, in the event of a disaster, we are able to immediately set up a Disaster Countermeasures Office and other emergency preparations and make the necessary emergency and critical communications as a public institution as designated by the Basic Act on Disaster Control Measures.

Further, as additional measures in response to the greater scale and extent of damage in recent years, the Group is strengthening facilities and increasing the deployment of disaster countermeasure equipment based on new hazard maps. Moreover, we have begun measures that use AI-enabled projections of disaster damage to bolster our initial recovery activities (proactive disaster countermeasures). Meanwhile, with respect to the distribution of information to clients affected by disasters, we are introducing visualization based on maps and making more use of social networking services. In addition, for visitors to Japan we are introducing the provision of multilingual information.

In the fiscal year ended March 31, 2019, no serious telecommunications disruptions*1 occurred at four telecommunications business companies (NTT DOCOMO, NTT East, NTT West, and NTT Communications), while service stability was maintained at 100.00%,*2 under normal circumstances.

*1 Number of disruptions that led to a stop of or lowered the quality of telecommunications services and that fulfill the following conditions:
• Voice services usable for emergency reports (110, 119, etc.): Service impacted for more than one hour with more than 30,000 people affected
• Voice services not usable for emergency reports: Service impacted for more than two hours with more than 30,000 people affected or service impacted for more than one hour with more than 100,000 people affected
• Internet-related services (free): Service impacted for more than 12 hours with more than 1,000,000 people affected or service impacted for more than 24 hours with more than 100,000 people affected
• Other services: Service impacted for more than two hours with more than 30,000 people affected or service impacted for more than one hour with more than 1,000,000 people affected
*2 $[1 - \text{total hours under the impact of serious disruptions (number of affected users} \times \text{hours of serious disruptions)} / \text{total hours of major service provision (number of users} \times 24 \text{ hours} \times 365 \text{ days})] \times 100\%$



Support for Customers' Post-Disaster Restoration of Operations and Business Continuity

NTT Group has continued to provide telecommunications services in Japan, which cannot be allowed to be interrupted in the event of a disaster, for over 100 years.

We are leveraging our track record of reliability and the associated expertise accumulated over our history to develop a solution business for supporting customers in maintaining business continuity. We anticipate significant business opportunities to arise in this regard going forward.

Damage from natural disasters, such as heavy rains and more frequent typhoons, is becoming increasingly common due to recent climate change. As a result, there is a growing risk of water and lightning damage and power outages, which now threaten to cause extensive damage should they occur. Many companies need to take measures to ensure that, if emergency situations such as disasters occur in the future, the organizations are able to continue important operations and restore order quickly. These measures are necessary to provide support to disaster victims and facilitate swift recovery.

For this reason, NTT Group will help customers restore operations and maintain business continuity after disasters by developing business continuity solution operations in a wide range of fields. Specifically, NTT Communications Corporation and NTT DATA CORPORATION are providing data center services and cloud services, while NTT FACILITIES, INC., and NTT Anode Energy Corporation are providing technologies and services related to buildings and electricity.

Provision of Multilingual Information on Service Disruptions Due to Disasters

To give visitors to Japan and non-Japanese nationals who live in Japan access to important information during disasters, we are proceeding with efforts to provide information in multiple languages. NTT West Corporation's official website provides information in six languages, including English, Chinese, and Korean, while the official websites of NTT DOCOMO and NTT East issue information in English. Moreover, respective Group companies use social networking services to issue information in English on service disruptions due to disasters. As a result, we are now able to swiftly release readily understandable information on the impact of disasters on communications, when services are expected to be restored, the introduction of free public telephone services, the installation of free public Wi-Fi, and the provision of disaster answering services. In this way, NTT Group is strengthening its responses to disasters.



Material ESG Issue 5
Reinforcement of Governance for Sustained Growth

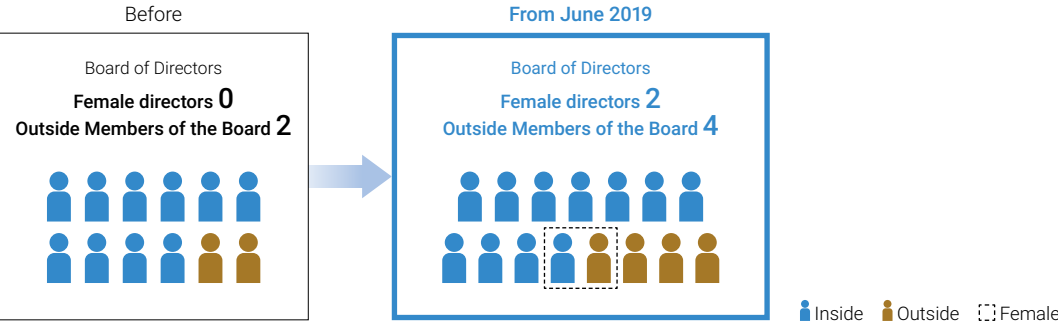
NTT strives to meet the expectations of various stakeholders, including its shareholders and other investors as well as customers, business partners, and employees. The Company also recognizes the need to strengthen its corporate governance system based on the intent of the principles of Japan's Corporate Governance Code. NTT is in conformity with all 78 principles of Japan's Corporate Governance Code.

A History of Strengthening Corporate Governance

1985 Establishment of NTT			
Establishment of a foundation for corporate governance		Strengthening of supervisory function and improvement of corporate governance transparency	Strengthening of information disclosure with an awareness of dialogue with stakeholders
Further reinforcement of oversight function by enhancing diversity Advancement of disclosure			
Business Execution / Supervisory Systems	1985 •Appointment of multiple outside Members of the Board	2003 •Increase in number of Audit & Supervisory Board Members: from 4 members (2 inside members, 2 outside members) → 5 members (3 inside members, 2 outside members)	2006 •Increase in number of outside Audit & Supervisory Board Members: from 2 members → 3 members •Appointment of financial expert as Audit & Supervisory Board Member
	2005 •Establishment of Appointment and Compensation Committee	2011 •Appointment of first female corporate officer (1 outside Audit & Supervisory Board Member)	2015 •Response to Corporate Governance Code •Establishment of independence standards for independent Members of the Board and independent Audit & Supervisory Board Members
		2018 •Establishment of NTT, Inc. (strengthening of the governance of the global business), appointment of three foreign-national directors •Conducting of evaluation questionnaire on the effectiveness of the Board of Directors	
		2019 •Appointment of two female directors (one inside and one outside), a Company first •Increase in the number of outside Members of the Board: 2 → 4 •Strengthening of the reflection of KPIs in performance-linked compensation	
Internal Control / Risk Management	2002 •Establishment of Business Risk Management Committee •Establishment of Corporate Ethics Committee •Establishment of NTT Group Corporate Ethics Charter •Establishment of Groupwide Corporate Ethics Help Line	2006 •Establishment of Internal Control Office •Establishment of Basic Policies Concerning the Development of Internal Control Systems	2018 •Establishment of the IT Strategy Office •Improvement of the management and operation of the Groupwide Corporate Ethics Help Line (establishment of a reporting route to Audit & Supervisory Board Members that is separate from reporting routes to the senior management team)
		2010 •Establishment of Risk Management Rules	
Information Disclosure	2003 •Commencement of disclosure of quarterly information •Establishment of Disclosure Committee	2006 •Commencement of disclosure of Corporate Governance Report	2015 •Commencement of ESG information disclosure in annual report •Commencement of issuance of sustainability reports •Commencement of disclosure of the notices of convocation before they are sent (henceforth, 42–45 days before the date of the convening of the Ordinary General Meeting of Shareholders, in Japanese and English on the same date)
	2005 •Commencement of issuance of CSR reports		2017 •Introduction of notices of convocation that are viewable via smartphones
External evaluations	2014–2017 Dow Jones Sustainability Index Asia Pacific Index	2018–2019 Dow Jones Sustainability Index World Index	
	2016–2019 FTSE4Good Index	2017–2019 FTSE Blossom Japan Index 2017–2019 MSCI Japan ESG Select Leaders	

Qualitative enhancement by improving the execution of duties and expanding disclosure

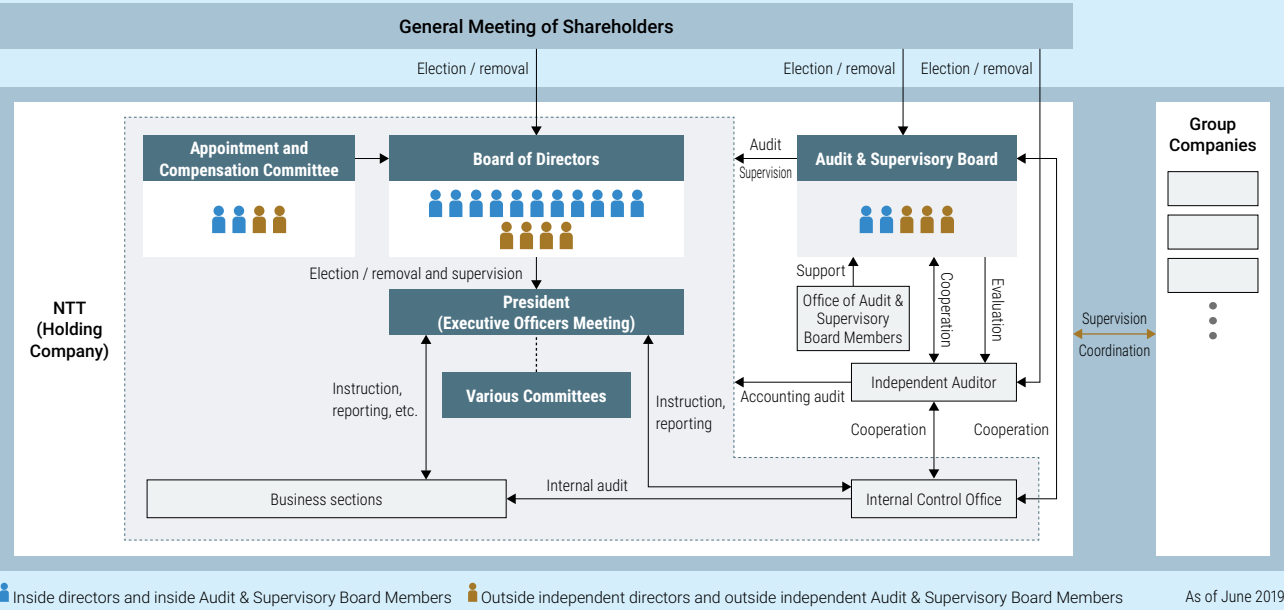
Composition of the Board of Directors



Corporate Governance System

NTT, in order to strengthen functions for appropriately supervising business execution, appoints several outside independent Members of the Board and has established the Audit & Supervisory Board, of which outside independent Audit & Supervisory Board Members make up a majority to strengthen its auditing system. Additionally, NTT has voluntarily established the Appointment and Compensation Committee, which consists of four members, including two outside independent Members of the Board, to further increase the objectivity and transparency of decisions related to appointments and compensation.

In addition, NTT has established various meetings and committees as has been deemed necessary to discuss important matters related to corporate management and Group management, in order to ensure that appropriate decisions are made for facilitating Group management.



Executive Officers Meeting

Important corporate matters to be decided are, in principle and in advance, discussed by the Executive Officers Meeting, which comprises the president, senior executive vice presidents, full-time directors, and the heads of staff organizations. The Executive Officers Meeting is held about once a week. To improve the transparency of management decision-making, one Audit & Supervisory Board Member participates in the Executive Officers Meeting.

Various Committees

A number of committees have been established below the Executive Officers Meeting to discuss specific issues related to corporate and Group management strategies. Major committees include the Technology Strategy Committee, which deliberates on the Group's R&D vision and technology development strategy; the Investment Strategy Committee, which examines investment projects that are larger than a certain scale; and the Finance Strategy Committee, which discusses basic financial strategies and financial issues. These committees, which are convened as necessary throughout the year, are, in principle, chaired by the president or a senior executive vice president and are attended by relevant Members of the Board and others.

Board of Directors

For career summaries, please see page 100.

Members of the Board



Hiromichi Shinohara

Chairman of the Board
Years Served as Member of the Board: 10
Shares Owned: 19,600
1978 Joined Nippon Telegraph and Telephone
Public Corporation
2018 Chairman of the Board of the Company

Jun Sawada

President and Chief Executive Officer
Years Served as Member of the Board: 5
Shares Owned: 15,400
1978 Joined Nippon Telegraph and Telephone
Public Corporation
2018 President and Chief Executive Officer



Akira Shimada

Senior Executive Vice President
Chief Financial Officer
Chief Compliance Officer
In charge of business strategy and risk management
Years Served as Member of the Board: 7
Shares Owned: 9,804
1981 Joined Nippon Telegraph and Telephone
Public Corporation
2018 Senior Executive Vice President



Motoyuki Ii

Senior Executive Vice President
Chief Technology Officer
Chief Information Officer
Chief Digital Officer
In charge of technical strategy and
international standardization
Years Served as Member of the Board: 1
Shares Owned: 6,900
1983 Joined Nippon Telegraph and Telephone
Public Corporation
2018 Senior Executive Vice President

Tsunehisa Okuno

Executive Vice President
Head of Global Business
Years Served as Member of the Board: 7
Shares Owned: 6,300
1983 Joined Nippon Telegraph and Telephone
Public Corporation
2018 Executive Vice President



Hiroki Kuriyama

Executive Vice President
Head of Strategic Business Development
In charge of 2020 Project
Years Served as Member of the Board: 5
Shares Owned: 5,170
1985 Joined the Company
2019 Executive Vice President



Takashi Hiroi

Senior Vice President
Head of Finance and Accounting
Years Served as Member of the Board: 4
Shares Owned: 4,500
1986 Joined the Company
2015 Senior Vice President



Eiichi Sakamoto

Senior Vice President
Head of General Affairs
Years Served as Member of the Board: 3
Shares Owned: 4,000
1986 Joined the Company
2018 Senior Vice President



Katsuhiko Kawazoe

Senior Vice President
Head of Research and Development Planning
Years Served as Member of the Board: 1
Shares Owned: 2,200
1987 Joined the Company
2018 Senior Vice President



Ryota Kitamura

Senior Vice President
Head of Corporate Strategy Planning
Years Served as Member of the Board: 1
Shares Owned: 1,800
1988 Joined the Company
2018 Senior Vice President

Sadayuki Sakakibara

Outside Independent Member of the Board
Years Served as Member of the Board: 7
Shares Owned: 9,500
2012 Member of the Board of the Company
2019 Outside Director of SHIMANO INC.
2019 Outside Director of Nitori Holdings Co., Ltd.



Ken Sakamura

Outside Independent Member of the Board
Years Served as Member of the Board: –
Shares Owned: 300
2002 Director of YRP Ubiquitous Networking
Laboratory
2014 President of Vitalizing Local Economy
Organization by Open Data & Big Data
2017 Professor and Dean of Faculty of Information
Networking for Innovation and Design of
Toyo University
Head of collaboration Hub for University and
Business of Toyo University
2017 Emeritus Professor of the University of Tokyo
2019 Member of the Board of the Company



Atsuko Oka

Senior Vice President
Head of Technology Planning
Years Served as Member of the Board: –
Shares Owned: 0
1988 Joined the Company
2019 Senior Vice President



Katsuhiko Shirai

Outside Independent Member of the Board
Years Served as Member of the Board: 7
Shares Owned: 4,300
2012 Member of the Board of the Company
2016 Honorary Advisor of Waseda University



Keiko Takegawa

Outside Independent Member of the Board
Years Served as Member of the Board: –
Shares Owned: 0
2019 Professor of Showa Women's University
2019 Member of the Board of the Company
2019 Audit & Supervisory Board Member of
MITSUI MINING & SMELTING CO., LTD.

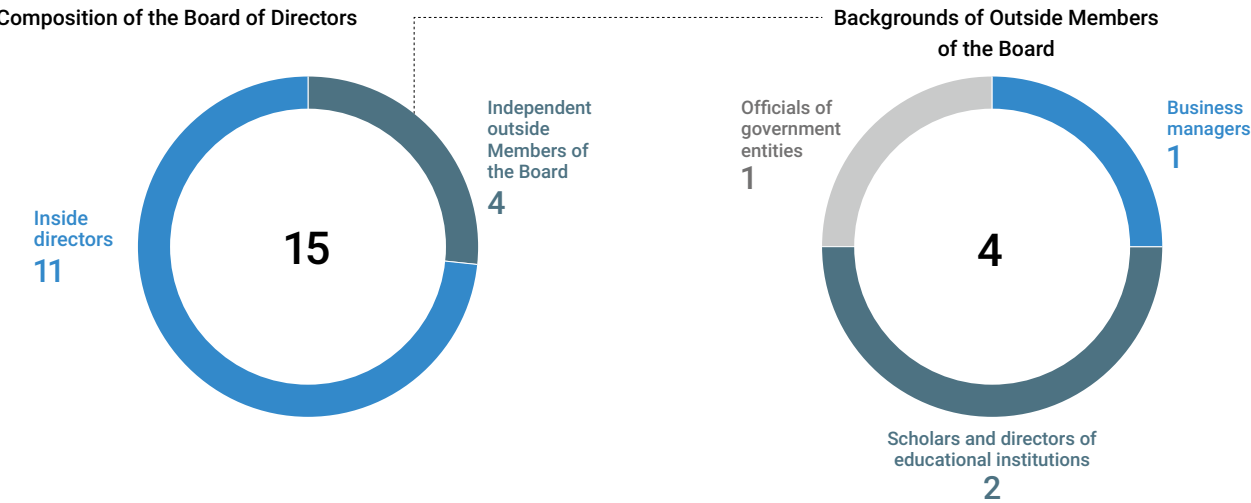


* As of June 30, 2019

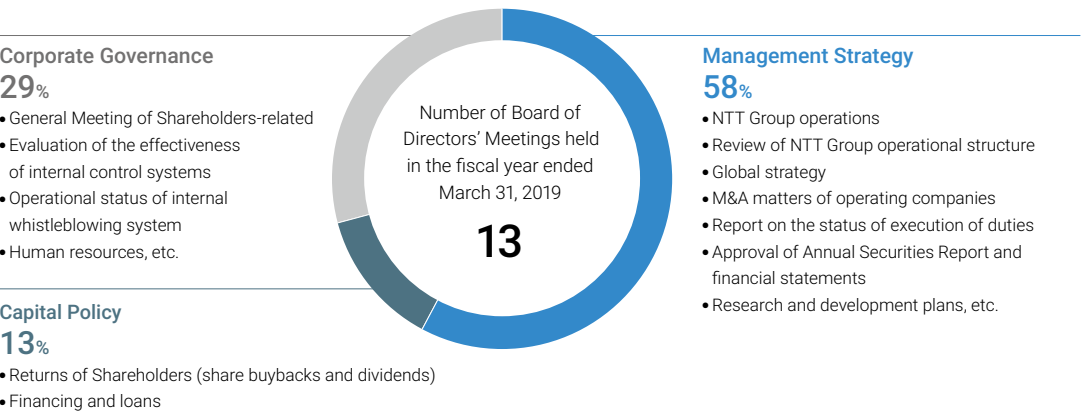
Initiatives Aimed at Promoting ESG Management

Composition and Activities of the Board of Directors

The Board of Directors of the Company decides on important matters pertaining to items stipulated by law and items related to the Group's management that have been deliberated on by the Executive Officers Meeting, which is made up of the president, senior executive vice presidents, full-time directors, and the heads of staff organizations, as well as reviewed by various committees, which are chaired by the president or senior executive vice presidents and attended by the relevant directors. At the same time, the Board of Directors monitors the status of the execution of duties by individual directors. In the fiscal year ended March 31, 2019, the Board of Directors held lively discussions that focused on such matters as the formulation of medium-term management strategies and business integration geared toward global business expansion.



Breakdown of Agenda Items Presented to the Board of Directors



Status of Activities of Independent Outside Members of the Board (FY2018)

Name	Statements made at Board of Directors' meetings	Rate of attendance at Board of Directors' meetings
Katsuhiko Shirai	Outside Member of the Board Katsuhiko Shirai made comments mainly concerning the circumstances of Group management and global strategies from his perspective as an operational director of an educational institution with extensive experience.	13 / 13 (100%)
Sadayuki Sakakibara	Outside Member of the Board Sadayuki Sakakibara made comments mainly concerning the circumstances of Group management and capital policies from his perspective as a corporate executive with extensive experience.	13 / 13 (100%)

Note: Mr. Ken Sakamura and Ms. Keiko Takegawa were appointed as outside Members of the Board on June 2019 and therefore do not have records of activities for the fiscal year ended March 31, 2019.

Further, with a view to deepening the understanding of outside independent Members of the Board in relation to NTT Group's businesses, we implement a variety of measures.

- In addition to providing prior explanations of agenda items, explanations of near-term issues and the progress of examinations are provided by the Representative Member of the Board, and details to be focused on in execution and the aims of initiatives are clarified.
- We facilitate exchanges of opinion with Audit & Supervisory Board Members, the Representative Member of the Board, the senior management teams of major subsidiaries, and the outside independent Members of the Board of respective companies.
- NTT enables participation in exhibitions related to its R&D.



Evaluation of the Effectiveness of the Board of Directors

► Overview of Evaluation

Participants	All Member of the Board (12)
Evaluation Implementation	March 2019
Questionnaire Format	Anonymous surveys comprised 24 questions involving 4-level rankings as well as open-ended questions
Major Subjects	Roles and responsibilities of Members of the Board and of the Board of Directors itself, composition of the Board of Directors, operation of the Board of Directors, support systems for outside independent Members of the Board
Results Aggregation and Analysis Method	Aggregation by third-party organization, analysis by Board of Directors' organizing office, and then sharing of results and discussion of issues and improvement measures at Board of Directors' meeting

► Evaluation Results

In the fiscal year ended March 31, 2019, an evaluation was implemented for the first time. Positive responses were received for around 80% of questions, indicating that the Board of Directors is effectively fulfilling its important expected roles and responsibilities. Particularly high evaluations were received with regard to the appropriateness of agenda items discussed at Board of Directors' meetings and the Company's proactive provision of opportunities for exchanges of opinion between outside independent Members of the Board and other officers outside of Board of Directors' meetings. Conversely, opinions were provided on the need for improvements with a view to further strengthening governance. For example, opinions were received that advised increasing the linkage between compensation of directors and business results. In addition, opinions were received on the composition of the Board of Directors, with such points as the low number of outside directors and the need to ensure diversity by appointing more female directors and taking other measures being mentioned. Also, opinions were received concerning procedural methods, such as the need to secure sufficient time to discuss and analyze items that are of great importance for business management.

► Future Response Measures

In response to the three tasks identified through the evaluation, the Company will take the measures stated below and endeavor to heighten the effectiveness of the Board of Directors.

Officer Compensation Systems

Responses	Changed to method of calculating bonuses based on degree of accomplishment of targets for key performance indicators linked to the medium-term management strategy
	Examined possibility of expanding portion of compensation represented by performance-linked compensation

Composition of the Board of Directors

Responses	Appointed two additional outside independent Members of the Board (2 → 4), Appointed first two female directors (June 2019)
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Board of Directors' Operation Practices

Responses	Allowed for flexible setting of Board of Directors' meeting schedule based on agenda items and secured time for discussions
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Messages from Outside Independent Members of the Board



Katsuhiko Shirai
Outside Independent Member of the Board

Assumed the position of Outside Member of the Board of the Company in June 2012

Based on my experience in science and engineering education and as the director of an educational institution, I have focused on providing advice from a technical standpoint as well as advice for strengthening the function of supervising business execution.

IoT, AI, and other ICT are becoming increasingly widespread and deeply entrenched in social foundations. Against this backdrop, the social role to be played by NTT's business will be ever more important. Fulfilling this role and improving corporate value will require the Company to bolster its R&D capabilities and to leverage these capabilities on a global scale. Particularly important will be NTT's ability to become an appealing company that can attract R&D personnel from across the globe along with its flexibility and speed in examining and resolving employee issues. In my capacity as an outside independent Member of the Board, I hope to provide advice and support to help NTT tackle these challenges. NTT is promoting "smart energy" as a solution to social issues pertaining to the environment and to energy. I understand the significance of this venture, and I seek to make appropriate decisions with this regard after posing questions at Board meetings on the soundness and competitiveness of this venture, discussing these matters, and confirming potential risks and response scenarios.

I also have a focus on compliance, which forms the foundation supporting sound business execution. At NTT, the checks on management provided by outside independent Members of the Board, through means such as monitoring the status of business execution by directors, are being sufficiently utilized. Moreover, brisk discussions take place between the executive team and outside independent Members of the Board, the results of which are reflected in Group management.

In the future, I will continue to encourage NTT to take the risks necessary for growth while monitoring management's activities in a flexible and ongoing manner. I thereby hope to help ensure appropriate business operations and contribute to improved corporate value.



Sadayuki Sakakibara
Outside Independent Member of the Board

Assumed the position of Outside Member of the Board of the Company in June 2012

Digital transformations centered on the ICT industry are being advanced around the world, and society, the activities of companies, and the lives of people are also transforming at blinding speed.

Between my time at Toray Industries, Inc., and at the Japan Business Federation (Keidanren), I have been involved in corporate management for many years. With this experience, I have worked to contribute to the reinforcement of corporate governance at NTT, and in these efforts I have sought ways for the Company to respond swiftly and accurately to the aforementioned changes and to contribute to the resolution of social issues through its business. At meetings of the Board of Directors, I have engaged in deep discussions on topics including governance of global operations, monitoring of M&A transactions, acquisition of international R&D personnel, joint urban development efforts with national governments and other organizations, and shareholder returns. At times, I have even been quite critical of the Company.

In my seven years as an outside independent Member of the Board, I have watched as NTT has charted a course toward ongoing improvements in corporate value from a long-term perspective and transformed as necessary for following this course. As we move ahead, I look forward to witnessing NTT continue to evolve together with the times as it unites its diverse businesses to create value in a balanced manner for a wide range of stakeholders through its medium-term management strategy.

From my perspective as an outside independent Member of the Board, I hope to help guide NTT in improving corporate value through increased transparency of the Board of Directors, stronger corporate governance, and management aligned with the United Nations Sustainable Development Goals.

In the past, I was involved in the development of an open architecture with the TRON (The Real-time Operating system Nucleus) real-time OS as its core. The software created through this project was distributed throughout the world in an open and free format. I also had a hand in advocating such concepts as ubiquitous computing and IoT in the 1980s and in making these concepts a reality.

Today, everything is connected via the Internet, and society would cease to function if these connections were to be severed. In this environment, AI and IoT technologies are used to innovate corporate activities on a daily basis, sparking fierce competition across regional and country lines. Meanwhile, companies are being forced to overcome new challenges, such as combating cyberattacks, complying with new business regulations, and responding to the standardization of the concept of privacy and of information ethics.

Realizing digital transformations against this backdrop will require NTT to leverage its various management resources, including its R&D capabilities, ICT foundations, and human resources, while also collaborating with its partners. I believe that NTT is more than capable of resolving complex social issues with various partners while conforming to the concepts of a smart world and Society 5.0. As an outside independent Member of the Board, I hope to spur NTT forward in the implementation of its medium-term management strategy through advice based on the experience I have accumulated thus far.

In terms of corporate governance, I am committed to exercising my function of supervising business execution, and I will strive to contribute to improved corporate value through appropriate decisions and evaluations and by taking part in the operation of the Board of Directors from a fair and impartial perspective.




Ken Sakamura
Outside Independent Member of the Board

Assumed the position of Outside Member of the Board of the Company in June 2019

As a public servant, I have built my career around public relations and diversity promotion. Heading up the Cabinet Office's Gender Equality Bureau, I promoted diversity in terms of the empowerment of women in various sectors. Efforts in the economic sector included encouraging companies to advance initiatives that utilized public financing and ESG investment. I also held training for cultivating women with the potential to become corporate officers with the aim of making it easier for women to be appointed to such positions.

In scientific and technological fields, diversity is an important driver of innovation. In Japan, participation by women in the workforce is still low in comparison with other countries, and progress is slow on this front. If we continue at this pace, this issue will still be around 50 years from now. For this reason, steadfast efforts fueled by conviction are crucial. This is especially true in the highly volatile ICT industry, where innovation is imperative to survival. There is thus a pressing need for this industry to incorporate new perspectives and values by encouraging participation by women.

NTT Group boasts a wealth of human resources and other management resources as well as a business of a highly public nature, which represents a responsibility toward society. In my position as an outside independent Member of the Board, I will capitalize on my background in diversity to make decisions and provide advice to help NTT determine how it will remain a global leader in the ICT industry and how it will resolve social issues by making people's lives more fulfilling and convenient and bettering society as "Your Value Partner." I thereby aim to further the sustainable growth of the Company by ensuring the effective functioning of corporate governance.



Keiko Takegawa
Outside Independent Member of the Board

Assumed the position of Outside Member of the Board of the Company in June 2019

Audit & Supervisory Board

Members of the Audit & Supervisory Board

For career summaries, please see page 101.



Akiko Ide
Years Served as Audit & Supervisory Board Member: 5
Shares Owned: 10,200
1977 Joined Nippon Telegraph and Telephone Public Corporation
2014 Full-Time Audit & Supervisory Board Member



Takao Maezawa
Years Served as Audit & Supervisory Board Member: 3
Shares Owned: 9,704
1978 Joined Nippon Telegraph and Telephone Public Corporation
2016 Full-Time Audit & Supervisory Board Member

Takashi Iida
Outside Independent Audit & Supervisory Board Member
Years Served as Audit & Supervisory Board Member: 5
Shares Owned: 3,200
1974 Registered as Attorney-at-Law (Daini Tokyo Bar Association) (registration up-to-date)
2012 Established Kowa Law Office Corporate Auditor (Part-Time) for Shimadzu Corporation
2013 Outside Director of Alps Electric Co., Ltd. (currently registered as Alps Alpine Co., Ltd.)
2014 Outside Audit & Supervisory Board Member of the Company



Hideki Kanda
Outside Independent Audit & Supervisory Board Member
Years Served as Audit & Supervisory Board Member: –
Shares Owned: 0
2016 Professor of Professional School of Law (Law School) of Gakushuin University
2016 Emeritus Professor of the University of Tokyo
2017 Director of Sumitomo Mitsui Trust Bank, Limited
2019 Outside Audit & Supervisory Board Member of the Company

Kaoru Kashima
Outside Independent Audit & Supervisory Board Member
Years Served as Audit & Supervisory Board Member: –
Shares Owned: 0
1985 Registered as a Certified Public Accountant (registration up-to-date)
2019 Outside Audit & Supervisory Board Member of the Company
2019 Director of Sumitomo Mitsui Trust Bank, Limited



* As of June 30, 2019

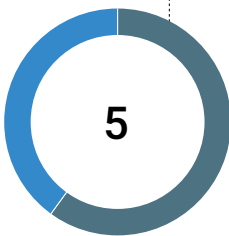
Composition and Activities of the Audit & Supervisory Board

The Audit & Supervisory Board comprises three outside independent Audit & Supervisory Board Members (one of whom is female) who have experience and knowledge in wide-ranging professions—as a certified public accountant, university professor, and lawyer—and two inside Audit & Supervisory Board Members (one of whom is female). We conduct effective audits by combining the independent perspective of outside Audit & Supervisory Board Members with the superior information collection capabilities of inside Audit & Supervisory Board Members. Among the board members, inside Audit & Supervisory Board Member Takao Maezawa has experience in the accounting division of NTT and its affiliated companies, while outside independent Audit & Supervisory Board Member Kaoru Kashima, a certified public accountant, has considerable knowledge in the areas of finance and accounting.

Audit & Supervisory Board Members attend meetings of the Board of Directors and other important meetings. In addition, Audit & Supervisory Board Members meet periodically with Representative Members of the Board and Members of the Board to exchange ideas and opinions and hold discussions on various topics. In this way, Audit & Supervisory Board Members maintain an understanding of the execution of duties by Members of the Board and provide their opinions as needed.

Composition of the Audit & Supervisory Board

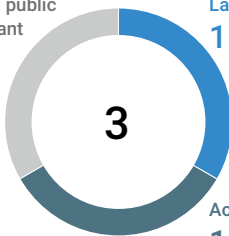
Inside Audit & Supervisory Board Members
2



Outside independent Audit & Supervisory Board Members
3

Backgrounds of Outside Audit & Supervisory Board Members

Certified public accountant
1



Lawyer
1
Academic
1

Number of Audit & Supervisory Board Meetings in the Fiscal Year Ended March 31, 2019: 24

Summary of Opinion Exchanges	
Exchanges with Representative Members of the Board	6
Discussions with Representative Members of the boards of Group companies	37
Exchanges with Independent Auditor	9
Exchanges with the Internal Control Office	12
Number of major domestic bases visited	18

In addition, the Audit & Supervisory Board received reports on audit results from the auditors of major groups and exchanges opinions.

Status of Activities of Outside Independent Members of the Audit & Supervisory Board (FY2018)

Name	Statements made at Board of Directors' meetings and Audit & Supervisory Board meetings	Attendance rate	
		Board of Directors' meetings	Audit & Supervisory Board meetings
Michiko Tomonaga	Audit & Supervisory Board Member Michiko Tomonaga made comments mainly concerning accounting audits based on the professional perspective fostered through her extensive experience as a certified public accountant.	13 / 13 (100%)	24 / 24 (100%)
Seiichi Ochiai	Audit & Supervisory Board Member Seiichi Ochiai made comments mainly concerning corporate governance based on the professional perspective fostered through his extensive experience as a university professor and a lawyer.	11 / 13 (85%)	23 / 24 (96%)
Takashi Iida	Audit & Supervisory Board Member Takashi Iida made comments mainly concerning corporate governance based on the professional perspective fostered through his extensive experience as a lawyer.	13 / 13 (100%)	24 / 24 (100%)

*1 Ms. Michiko Tomonaga and Mr. Seiichi Ochiai retired from their positions at the conclusion of the Ordinary General Meeting of Shareholders held on June 25, 2019, due to the expiration of their terms of office.
*2 Mr. Hideki Kanda and Ms. Kaoru Kashima were appointed as outside independent Members of the Audit & Supervisory Board in June 2019 and therefore do not have records of activities for the fiscal year ended March 31, 2019.

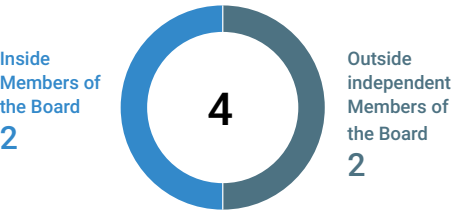
In the fiscal year ended March 31, 2019, an evaluation of the effectiveness of the Audit & Supervisory Board was conducted for the purpose of evaluating audit activities, reflecting the evaluation's results in audit plans for the next fiscal year, improving the quality of audits performed by the Audit & Supervisory Board, and other matters. This evaluation was implemented through discussions and verifications regarding effectiveness among all Audit & Supervisory Board Members, based on the results of a self-assessment questionnaire taken by each Audit & Supervisory Board Member. As a result, we evaluated that the effectiveness of the Audit & Supervisory Board is being ensured, and we will work to further improve the board's effectiveness going forward.

Appointment and Compensation Committee

Composition and Activities of the Appointment and Compensation Committee

For the purpose of improving the objectivity of and transparency in decisions regarding the appointment of and compensation for Members of the Board, NTT has established on a non-statutory basis the Appointment and Compensation Committee, which consists of four Members of the Board, including two outside independent Members of the Board, as a preliminary review institution of the Board of Directors, and is increasing the effectiveness of governance. In the fiscal year ended March 31, 2019, in addition to holding meetings of the Appointment and Compensation Committee three times, committee members met to exchange opinions and ideas on multiple occasions and engaged in active discussions.

Composition of the Appointment and Compensation Committee




Number of Appointment and Compensation Committee Meetings in the Fiscal Year Ended March 31, 2019: 3

Nomination of Directors

Nomination Policy

In terms of the composition of the Company’s Board of Directors, the nomination of executives is based on the “NTT Group Personnel Policy,” and personnel with the skills to resolve issues recognized by NTT Group are nominated broadly from inside and outside of the Group. Outside Members of the Board and outside Audit & Supervisory Board Members are elected with the expectation that they can provide opinions based on a broad management perspective or as an expert. Furthermore, both inside and outside Members of the Board are elected in line with NTT Group’s promotion of diversity. In June 2019, NTT increased the number of outside independent Members of the Board by two and, at the same time, appointed two female Members of the Board for the first time, thereby raising the ratio of outside independent Members of the Board to 26.7%.

NTT Group Personnel Policy



► **Basic Policy**

NTT Group strives to contribute to the resolution of social issues and the realization of a safer, more secure, and more affluent society. To accomplish this goal, the Group acts as a trusted “Your Value Partner” that customers continue to select in order to provide them with new value on a global basis. NTT has established the policy of positioning individuals that share these ideals in the upper ranks of NTT Group’s management, and NTT is electing such individuals from both inside and outside the Group.

► **Nomination of Candidates for Members of the Board**


In regard to Member of the Board candidates, individuals are elected based on the broad-ranging perspectives and experience, superior management skills and leadership, business senses and motivation necessary to contribute to the overall development of NTT Group in order to facilitate the improvement of the Group’s corporate value. The Board of Directors is of a size appropriate to the Group’s business, and the composition of the Board of Directors takes into account a balance of specialties and diversity. From the perspective of strengthening the function of supervising business execution, for outside independent Members of the Board, NTT elects individuals who present no risk of a conflict of interest with general shareholders. In principle, NTT appoints several outside independent Members of the Board.

► **Nomination of Candidates for Audit & Supervisory Board Members**


NTT has the policy of electing candidates for Audit & Supervisory Board Members who have the capacity to provide audits based on specialized experience and insight. From the perspective of guaranteeing fair audits of the execution of duties by Members of the Board, with respect to outside independent Audit & Supervisory Board Members NTT elects individuals who present no risk of a conflict of interest with general shareholders. In accordance with the Companies Act, NTT ensures that outside independent Audit & Supervisory Board Members make up half or more of the Audit & Supervisory Board.

Reason for Nomination and Nomination Procedure for Outside Members of the Board and Outside Audit & Supervisory Board Members

From the perspectives of strengthening supervisory functions for execution and guaranteeing appropriate audits of the execution of duties by Members of the Board, NTT has a policy of selecting individuals to serve as outside Members of the Board and outside Audit & Supervisory Board Members who do not represent risks of conflicts of interest with general shareholders. NTT designates outside Members of the Board and outside Audit & Supervisory Board Members who fulfill both the independence criteria stipulated by Tokyo Stock Exchange, Inc., and NTT’s own independence standards as outside independent Members of the Board or outside independent Audit & Supervisory Board Members.



To see NTT’s independence standards, please refer to the NTT corporate website.
https://www.ntt.co.jp/ir/mgt_e/governance/04.html



Succession Plan

With respect to successor candidates for the CEO position, NTT views it as important to secure successor candidates who can respond to technological innovation, market trends, and the speed of changes in the business environment. By securing the diversity of candidates through offering experience of a broad range of jobs and appointments to important posts, NTT is cultivating personnel for promotion who, in addition to possessing integrity and insight, are exceptionally well-suited to the times. The decision regarding the appointment is made by the Board of Directors after it has been presented for deliberation to the Appointment and Compensation Committee, which consists of four Members of the Board, including two outside independent Members of the Board.

Compensation of Members of the Board and Audit & Supervisory Board Members

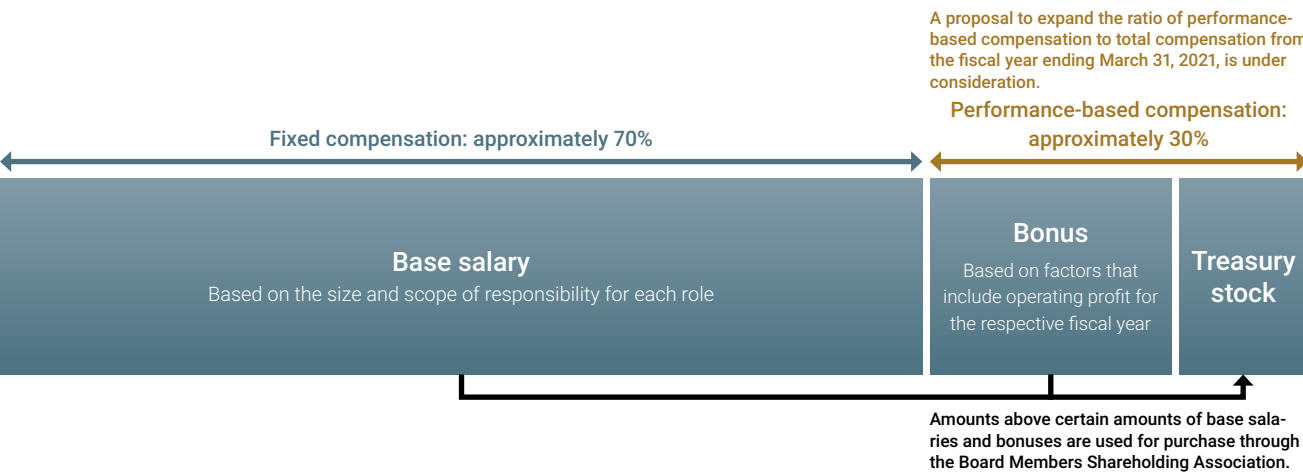
With regard to compensation policy and the composition and levels of compensation of Members of the Board of NTT, in order to improve objectivity and transparency, NTT established the Appointment and Compensation Committee, comprised of four Members of the Board, including two outside independent Members of the Board. Compensation matters are decided by the Board of Directors after deliberation by this committee. In the fiscal year under review, in addition to holding meetings of the Appointment and Compensation Committee three times, committee members also met to exchange opinions and ideas on multiple occasions.

Compensation of Members of the Board (excluding outside Members of the Board) consists of a base salary and a bonus. The base salary is paid monthly on the basis of the scope of each Member of the Board’s roles and responsibilities. The bonus is paid taking into account factors including the degree of achievement of performance indicators, such as operating profit for the fiscal year ended March 31, 2019. Also, Members of the Board make contributions of a certain defined amount or more from their base salary and bonus for the purchase of NTT shares through the Board Members Shareholding Association in order to reflect NTT’s medium- to long-term business results in compensation. Purchased shares are to be held by the Members of the Board throughout their terms of office. The composition ratio of compensation in a case where standard business results are achieved is roughly 70/30 of fixed compensation to performance-related compensation.

Also, with the aim of realizing a stronger awareness of achieving the medium-term management strategy, sustainable growth, and medium- to long-term improvement in corporate value, NTT is considering paying a bonus in accordance with the degree to which the KPIs linked to the medium-term management strategy are achieved from fiscal 2019, and expanding the ratio of overall compensation occupied by performance-related compensation from fiscal 2020.

In order to maintain a high level of independence, compensation of outside Members of the Board consists of a base salary only, and is not linked to NTT’s business results.

Compensation of Audit & Supervisory Board Members is determined by resolution of the Audit & Supervisory Board and consists of a base salary only, for the same reasons as those cited above with respect to outside Members of the Board.



Total Compensation of Members of the Board and Audit & Supervisory Board Members (Fiscal Year Ended March 31, 2019)

Position	Number of persons	Total compensation
Members of the Board	15	¥ 577 million
Audit & Supervisory Board Members	5	¥ 119 million
Total	20	¥ 696 million

Notes:

1. Compensation amounts shown above include compensation paid to three Members of the Board who retired on June 26, 2018, at the conclusion of the 33rd Ordinary General Meeting of Shareholders.
2. Maximum limits on total annual compensation of Members of the Board and Audit & Supervisory Board Members were set at ¥750 million for Members of the Board and ¥200 million for Audit & Supervisory Board Members at the 21st Ordinary General Meeting of Shareholders held on June 28, 2006.
3. Total compensation of Members of the Board includes ¥112 million in bonuses for the fiscal year ended March 31, 2019.
4. In addition to the above, an aggregate of ¥17 million is to be paid to Members of the Board who are also employees as bonuses for their service as employees.

Training for Members of the Board and Audit & Supervisory Board Members


NTT Group works to cultivate candidates suitable for top management who are able to respond to the rapidly changing management environment, by creating a range of training opportunities in areas including domestic and overseas economic and social issues, compliance, and risk management, and by allowing employees to accumulate new job experiences. Additionally, outside independent Members of the Board can gain a deeper understanding of NTT Group's businesses through opportunities to deepen their understanding of the business trends of NTT Group companies and of the latest R&D results at the research facilities of NTT.

Strategic Shareholdings


NTT does not hold so-called "cross-shareholdings" to create stable shareholders, and has no plans to do so in the future. However, NTT's policy is to make strategic shareholdings, as needed, in order to pursue collaboration and open innovation with partners in various industries to contribute to medium- to long-term improvement in corporate value. With regard to the shares held pursuant to these policies, the Investment Strategy Committee evaluates the appropriateness of holding individual stocks by comprehensively taking into consideration the contribution to the medium- to long-term results of NTT, the progress of business collaborations, future considerations concerning business collaborations, performance trends of the investment targets and future business strategies of NTT. With respect to exercising voting rights of strategic shareholding, NTT exercises voting rights acquired through share ownership, as it sees fit, from the perspective of sustainable growth of the companies NTT invests in and improving corporate value for both NTT and the companies.

Internal Control

NTT has established the Basic Policies Concerning the Maintenance of Internal Control Systems for NTT Group, which was approved via resolution by the Board of Directors. Based on these policies, NTT Group has established the Internal Control Office, which oversees the establishment of internal control rules and frameworks. In addition, NTT Group evaluates the effectiveness of the internal control systems based on audit reviews and uniform audits regarding high-risk matters affecting the entire Group. Necessary improvements will be implemented accordingly. In regard to internal control systems for financial reporting based on the Financial Instruments and Exchange Act, the Company takes appropriate measures to ensure the reliability of its financial reporting. To facilitate these measures, tests and evaluations are performed on the implementation status of pertinent internal control systems.




More information on the Basic Policies Concerning the Maintenance of Internal Control Systems for NTT Group can be found on NTT's corporate website.
https://www.ntt.co.jp/ir/mgt_e/governance/06.html




Compliance

In regard to compliance systems, NTT has formulated the NTT Group Corporate Ethics Charter to guide all employees in practicing legal compliance and acting based on high ethical standards. We take steps to improve employee understanding of this charter, including conducting employee training programs and posting examples of the charter's implementation on the Company intranet. In addition, we have set up the Groupwide Corporate Ethics Help Line. Available to employees of all Group companies, this help line allows for employees to seek consultation or issue reports regarding wrongful acts or scandals.



For more details, please refer to the Governance section of *NTT Group Sustainability Report 2019*.
https://www.ntt.co.jp/csr_e/index.html

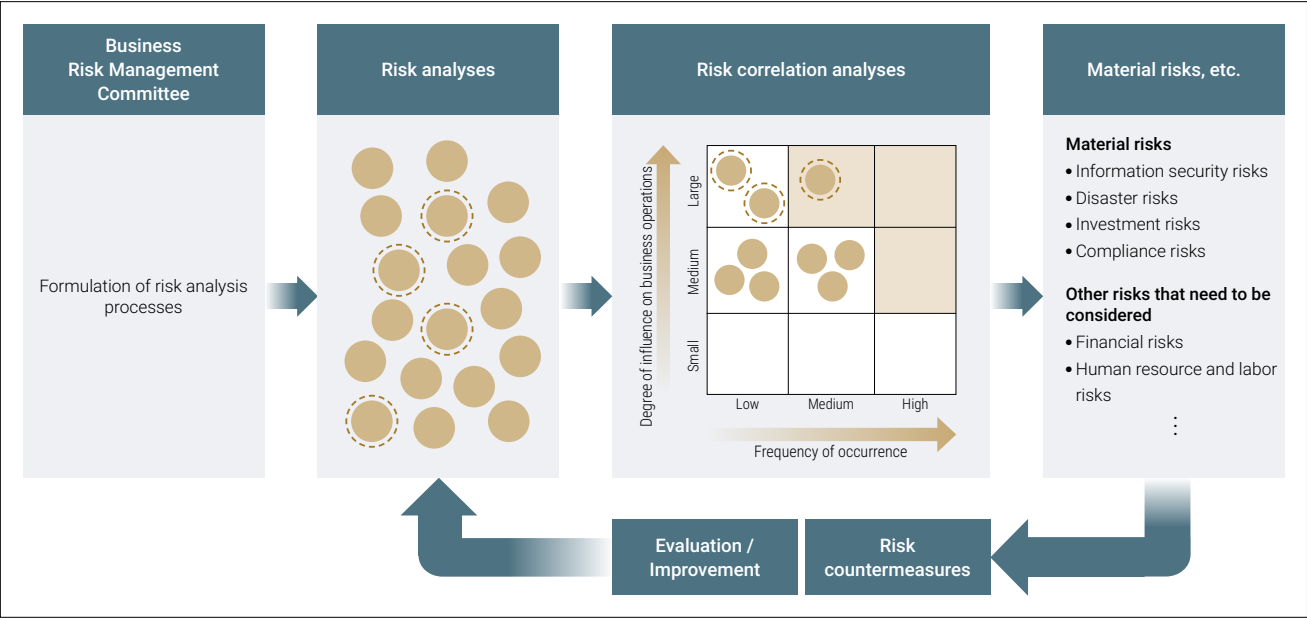


Promotion of Risk Management

With respect to business risk management, NTT has established Risk Management Rules stipulating basic policies on risk management with the aims of, among others, anticipating and preventing the materialization of potential risks and minimizing losses if any risk materializes. Chaired by a senior executive vice president, the Business Risk Management Committee spearheads efforts to develop and operate a PDCA cycle for managing risks. During the fiscal year ended March 31, 2019, the committee held one meeting during which discussions involved identifying risks that could potentially have a Companywide impact, policies for managing such risks, and other such matters. NTT has also formulated the NTT Group Business Risk Management Manual and distributed it to each Group company, in order to facilitate Groupwide risk management initiatives. On the basis of the manual, which stipulates matters that include proactive measures for potential risks, collaborative Groupwide approaches and policies for addressing risks that materialize, and pathways for communicating information, systems have been developed and implemented that enable swift action to be taken.


Identification of Risks and Specified Material Risks

From time to time, NTT reviews assumed risks and management policies based on changes in the social environment. In the identification of risks, the Business Risk Management Committee plays the central role. Analysis processes for the risks faced by NTT Group are formulated, and risk analyses are periodically implemented in accordance with these processes. In this way, Companywide risks are identified. In addition, correlation analyses are implemented for these risks. Those risks with the potential to have the greatest influence are specified as material risks, and countermeasures are formulated.




Designated Priority Risks for the Fiscal Year Ended March 31, 2019

System failure, network failure, and related risks	Damage to network caused by major disasters
	Indirect damage caused by major disasters
	Service level compromised or other damage caused by cyberterrorism
Domestic and overseas investments not producing expected returns	Investments do not produce expected returns
Domestic and overseas scandals, contractual issues, and related risks	Loss of social trust and damage to income stemming from compliance violations



For more information on risk factors, please refer to NTT's corporate website.
https://www.ntt.co.jp/ir/mgt_e/risks_factors.html



Stakeholder Engagement

With its ever-more global and complex value chain, NTT Group provides products and services to a diverse range of stakeholders across the globe. These stakeholders have a wide variety of needs and expectations regarding our operations. Stakeholder engagement serves as a means of understanding and taking into consideration the needs and expectations of our stakeholders in the way we conduct our business.

Customers (Enterprises and Individuals)



Aiming to become "Your Value Partner" that customers continue to select, we will strive to increase customer satisfaction by providing safe, secure services that are high in quality and convenient from the customer's standpoint.

Examples of Engagement

- ▶ Venues for customer inquiries
- ▶ Conducting of customer satisfaction surveys
- ▶ Utilization of websites and social media

Shareholders and Investors



We will return profits to shareholders while maintaining a sound financial standing and enhancing our corporate value. Furthermore, we will communicate proactively to provide the information needed to make investment decisions.

Examples of Engagement

- ▶ General Meetings of Shareholders, financial results announcements
- ▶ Explanatory presentations for individual investors (17 times, including 2 webcast presentations)
- ▶ Explanatory presentations for institutional investors (Over 400 individual consultations and 7 conferences)
- ▶ Publication of yearly reports (annual reports, etc.)

Business Partners



Through the procurement of products that consider the environment and human rights, and the creation of fair partnerships, we fulfill our social responsibility as a company and aim to grow sustainably with our business partners.

Examples of Engagement

- ▶ Creation of inquiry forms
- ▶ Disclosure of procurement policies and guidelines, etc.
- ▶ Surveys for suppliers
- ▶ Explanatory presentations for suppliers

ICT Companies and Industry Associations



We will further our discussions on the direction and initiatives of the information and telecommunications industry, taking the global market into account, aiming to stimulate the entire industry and to promote solutions for various social issues.

Examples of Engagement

- ▶ Participation in industry groups and initiatives
- ▶ Participation in committees, etc.



Employees (Employees, Their Families, and Retired Employees)



We will support employees' lives and promote the creation of workplaces that enable employees to work with confidence, thereby enabling each employee to realize their full potential and work with a high awareness of CSR.

Examples of Engagement

- ▶ Conducting of employee satisfaction surveys
- ▶ Regular interviews
- ▶ Communication between management and employees
- ▶ Groupwide Corporate Ethics Help Line
- ▶ CSR conferences

Local Communities



We will contribute to the creation of abundant local communities, understanding local issues and contributing to their resolution in multiple ways through our businesses.

Examples of Engagement

- ▶ Support and collaboration through social contribution activities
- ▶ Negotiation with local community residents when constructing or installing equipment
- ▶ Donations, sponsorship, and other support

Central Government and Administrative Agencies



We will respond appropriately to the policies of the central and local governments, conducting appropriate business activities and contributing to solutions for social issues facing citizens and local governments.

Examples of Engagement

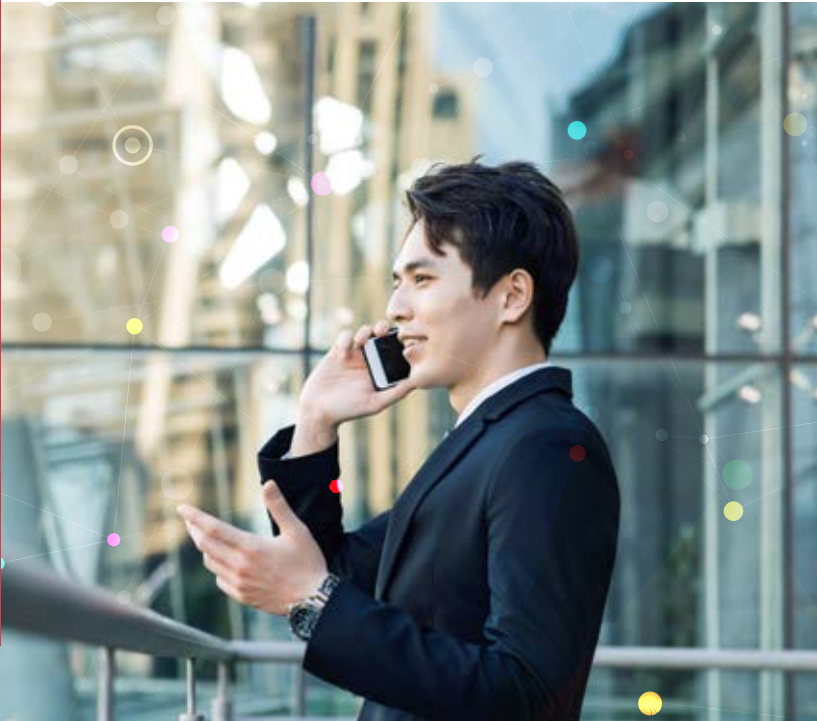
- ▶ Compliance with laws and regulations
- ▶ Suggestions for government policy
- ▶ Participation in public-private partnership projects

Mobile Communications Business

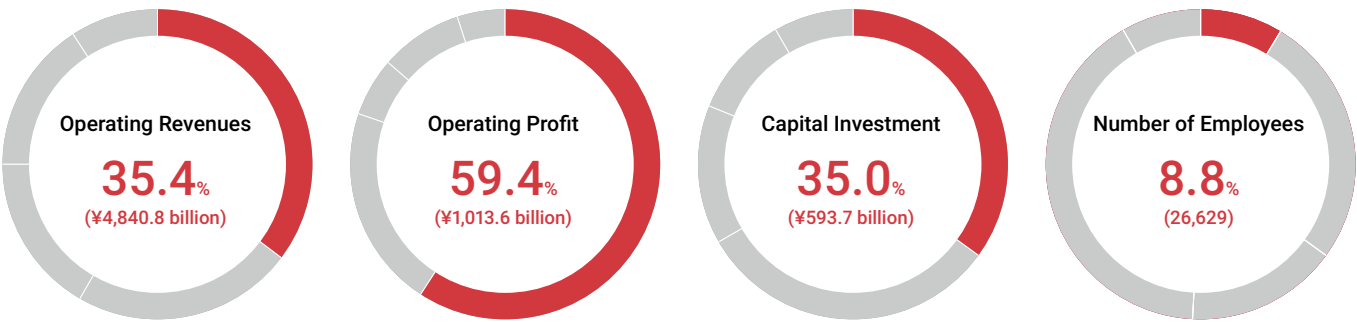
In the Mobile Communications Business Segment, NTT Group worked to promote sales of mobile phone services and “docomo Hikari” and also collaborated with various business partners in an effort to provide new value-added services in the smart life area.

Competitive Advantages

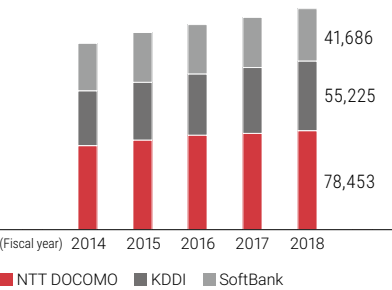
- ▶ A stable communication network that can be used comfortably anytime, anywhere
- ▶ Top-notch research and development capabilities
- ▶ Large market share and stable customer base



Composition by Segment for the Fiscal Year Ended March 31, 2019

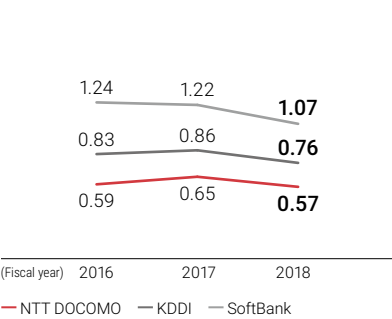


Number of Subscriptions by Mobile Network Operator
(Thousand subscriptions)



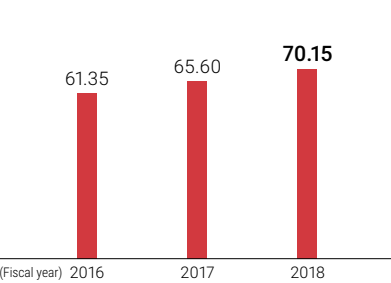
* Created by NTT based on data published by the Telecommunications Carriers Association. KDDI figures include UQ mobile subscriptions. SoftBank figures include Y!mobile subscriptions (excluding PHS).

Churn Rate (%)



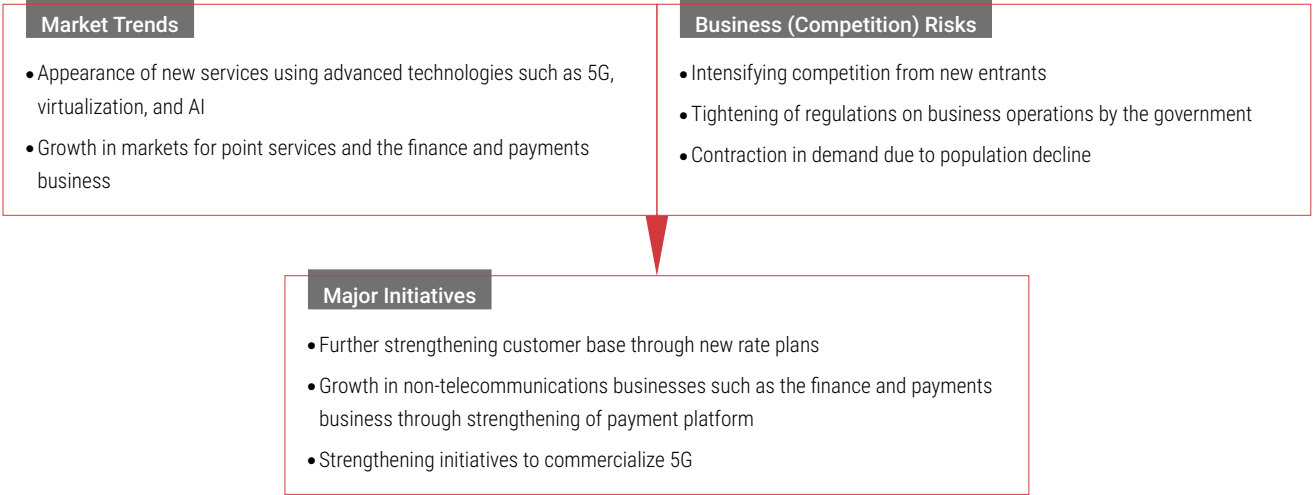
* Created by NTT based on published financial results of each company.

Number of d POINT CLUB Members
(Million members)



Business Environment

Market Trends and Risks



Topics

- ▶ We worked to expand the number of retail outlets using the new *d Pay* smartphone payment service, which uses bar codes and QR codes, and to increase the number of retail outlets utilizing *d POINT*s both in Japan and overseas. As a result, the number of *d POINT CLUB* subscribers reached 70.15 million, while the number of registered *d POINT CARD* subscribers came to 33.72 million.
- ▶ By increasing the number of booked appointments to stores, revising explanation methods, and strengthening our web presence, we made efforts to reduce customer waiting times and support times at docomo Shops.
- ▶ By establishing systems whereby the information obtained from smartphones is used by AI to show recommended insurance plans, we aim to drive an evolution from “insurance for mobile phones” to “insurance entrusted to mobile phones,” and to this end, we have come to an agreement with Tokio Marine & Nichido Fire Insurance Co., Ltd. to start studies on the “use of AI for insurance recommendation” and the “full digitalization of insurance processes.”
- ▶ For customers who are hard of hearing, we have begun offering the *Mieru Denwa* (literally “visible telephone”), in which the content of the other party’s speech is shown as characters on a screen.
- ▶ In collaboration with AGC Inc., we became the first in the world to develop a glass antenna that can be fixed onto the inner surface of existing window glass to transmit and receive radio waves without disrupting screen visibility.

Focus

Simple, Value-Priced New Rate Plans “Gigaho” and “Gigalight”

In June 2019, NTT DOCOMO launched its new rate plans, “Gigaho” and “Gigalight,” which feature simple structures and great value. NTT DOCOMO has also strived to improve the returns to customers, introducing the “Zutto DOCOMO Tokuten” program that offers special privileges to long-term or heavy use customers. The total number of “Gigaho” and “Gigalight” applications* as of June 30, 2019, was 2.75 million, of which 1.46 million were subscriptions.

* The number of applications is the total number of subscriptions and reservations (including the number of cancellation) of “Gigaho,” “Gigalight,” “Ketai Plan,” “Kids Ketai Plan,” and “Data Plus.”

Regional Communications Business

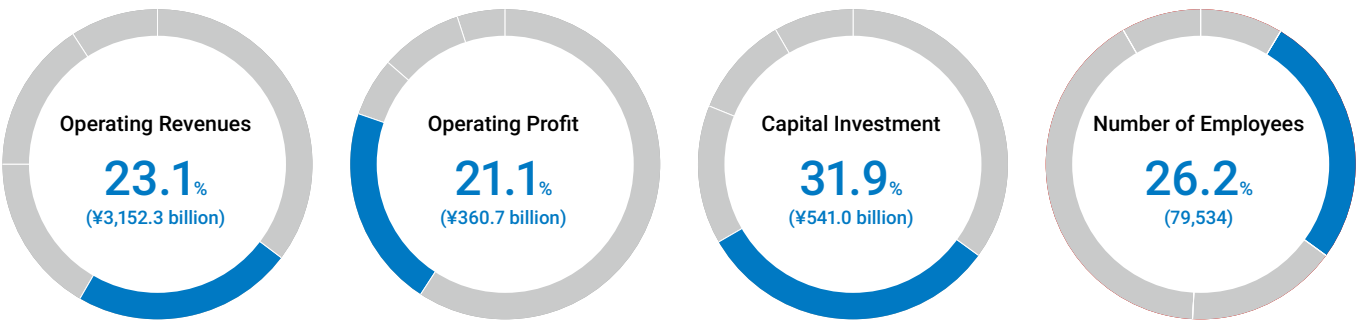
In the Regional Communications Business Segment, NTT Group worked on the *Hikari Collaboration Model*, which provides wholesale fiber-optic access services, among other things, to various service providers, as well as strengthening its solutions business with the aim of revitalizing local communities and regional economies.

Competitive Advantages

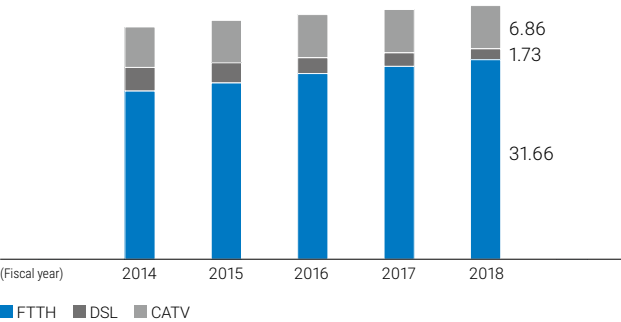
- ▶ Secure, highly reliable, stable communication network
- ▶ Provision and support of ICT solutions with strong local ties
- ▶ Large market share and stable customer base



Composition by Segment for the Fiscal Year Ended March 31, 2019

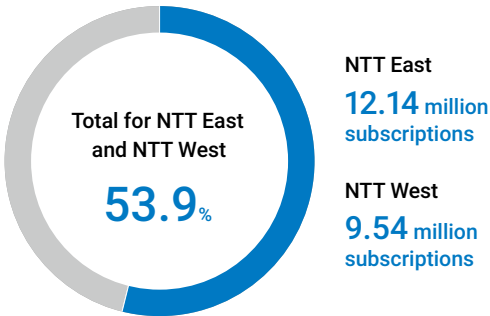


Fixed-Line Broadband Services Subscriptions
(Million subscriptions)



* Created by NTT from materials published by the Ministry of Internal Affairs and Communications.

Number and Share of Subscriptions for Fixed-Line Broadband Services
(Million subscriptions)



* Created by NTT from materials published by the Ministry of Internal Affairs and Communications. Includes subscriptions related to provision of wholesale telecommunications services.

Business Environment

Market Trends and Risks

Market Trends

- Advance of population aging and decline in the working population
- Government-led regional revitalization and workstyle reforms, etc.
- Expansion of use of AI, big data, IoT, etc.

Business (Competition) Risks

- Change in market structure, including diversification of services by over-the-top (OTT) service providers
- Contraction in demand due to population decline
- Tightening of regulations on business operations by the government

Major Initiatives

- Supporting customers' digital transformations with close relationships to local communities
- Contributing to revitalization of local communities through ICT solutions

Topics

- ▶ In the *Hikari Collaboration Model*, we have developed a business model whereby we provide social infrastructure operators with an integrated service for end users that includes electricity, gas, and fiber-optic services, to be used when opportunities arise, such as when end users are relocating, thus increasing our collaborations with other industries. Through such initiatives, the number of service providers providing wholesale services was approximately 750 companies at the end of the fiscal year ended March 31, 2019, while under the same model, the number of subscriptions to fiber-optic access services came to 12.69 million.
- ▶ We have begun offering IoT packages for factories that enable the visualization of production sites. The adoption of such packages enables the accumulation of operating data from production machinery, the use of alerts to allow the early discovery of abnormal stoppages, and the use of network cameras to record images from the time at which abnormal stoppages occurred. By combining these packages with such efforts as revising operating processes and ensuring the generational hand-down of employee skills, we have achieved improved productivity at production sites, reductions in labor used, and development of human resources.
- ▶ As a first step toward the realization of the "Regional Revitalization Clouds" concept, we have begun a collaboration with Microsoft Japan Co., Ltd., to develop and deploy cloud service platforms for local governments, with the aim of supporting local government-led industrial revitalization, generating employment and dealing with population aging, as well as delivering the improvements in work efficiency demanded by regional companies, which tend to struggle with labor shortages.

Focus

Establishment of NTT Group's First "Agriculture × ICT" Specialist Company Aimed at Promoting Regional Revitalization and Urban Development through Agriculture

In July 2019, NTT East established NTT AgriTechnology, aiming to promote regional revitalization and urban development through the fusion of agriculture and ICT.

Today, agriculture in Japan is facing a declining workforce due to the aging of agricultural producers and other factors, while the number of corporations in this sector is on the rise due to advances in development of agricultural corporations and the entry of general companies into the field. At the same time, there are calls to implement efficient management through concentration of cultivated areas and increases in scale. The Ministry of Agriculture, Forestry and Fisheries is also promoting the expansion of next-generation facility horticulture to achieve high productivity and large-scale management using ICT.

Against the backdrop, NTT AgriTechnology plans to begin operating its own farm in Yamanashi Prefecture from fiscal 2020, in order to conduct field trials aimed at establishing next-generation facility horticulture solutions by concentrating advanced technologies in agriculture. NTT AgriTechnology's farm will use advanced environmental control using IoT and AI; yield prediction through analysis of environmental and crop-raising data; and systems that integrate and mutually link data from each business process, such as production, sales, labor management, and accounting.

Moreover, we will strive to maximize synergies through use of NTT Group's AI technology, energy management, and urban development expertise, collaborating with local governments and other members of the community to develop new towns centered on agriculture × ICT.



Overview of next-generation facility horticulture

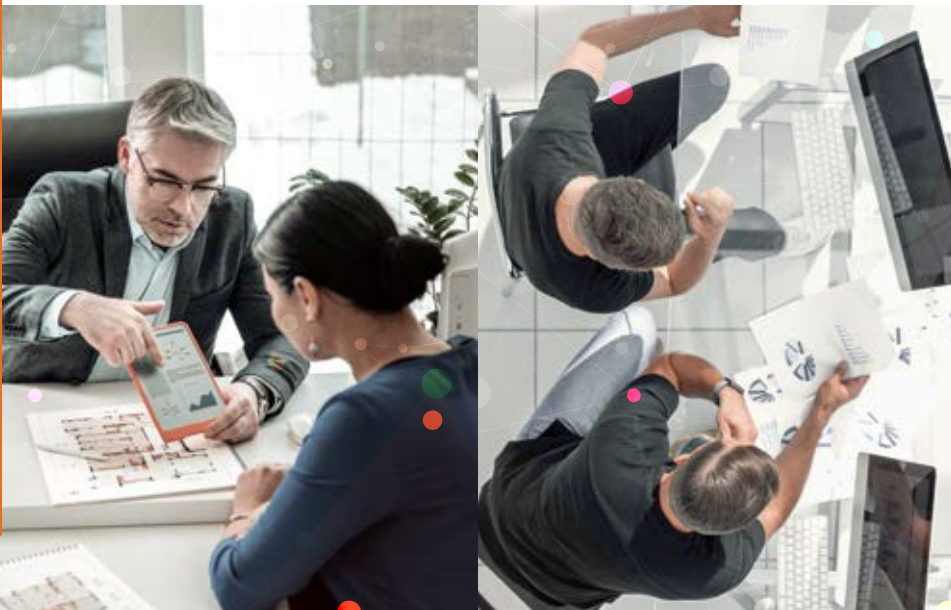


Long Distance and International Communications Business

In the Long Distance and International Communications Business Segment, in addition to enhancing its ability to provide ICT solutions, which combine network, security, and other services, NTT Group worked to enhance its service provision in growth areas such as cloud services and IT outsourcing.

Competitive Advantages

- ▶ Full-stack solutions from application to IT infrastructure
- ▶ Global coverage
- ▶ Strong customer engagement



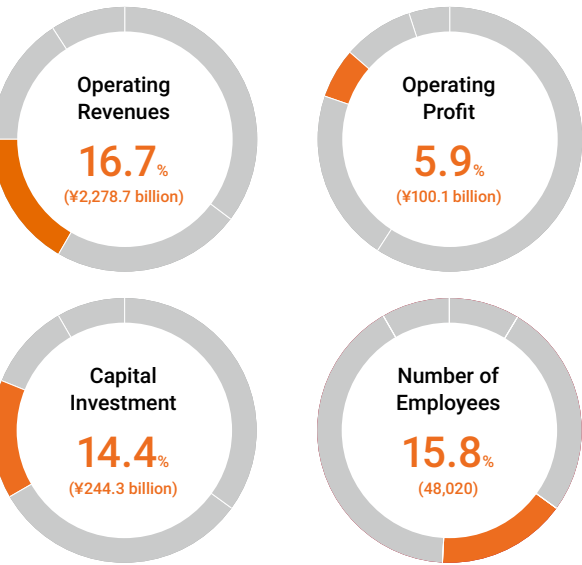
Data Communications Business

In the Data Communications Business Segment, NTT Group responded to the acceleration of its customers' digital transformations at a global level and to their increasingly diversified and sophisticated needs, by working to expand its business in the global market and to extend and consistently provide a range of IT services, such as digitalization and system integration, that are responsive to the changes in the market.

Competitive Advantages

- ▶ High-level technology development and project management capabilities
- ▶ Large market share and stable customer base in Japan
- ▶ Powerful service delivery capabilities using development bases in EMEA and in Central and South America

Composition by Segment
for the Fiscal Year Ended March 31, 2019



Topics

- ▶ By combining chat AI, including the COTOHA® Virtual Assistant chat-based natural language analysis AI engine, with RPA such as WinActor®, we provided a *Contact Center DX Solution*, which enables the automation of all processes from contact center responses to business processing, for significant increases in productivity. As a result, instead of the previous "person-centric" contact center response, we realized an environment in which "AI+RPA" provide the primary response and are able to complete all operations.
- ▶ In order to provide a comprehensive response to our customers' security needs, we signed an agreement to acquire U.S.-based WhiteHat Security, Inc., a leading application security operator, as our wholly owned subsidiary.
- ▶ To respond to demand for cloud services and data centers in various regions worldwide, we advanced the expansion of our service provision systems in various countries that have continuous market expansion. In addition, we established an investment subsidiary company, with the objective of centralizing the construction, ownership, and the provision of wholesale equipment for data centers of NTT Group.

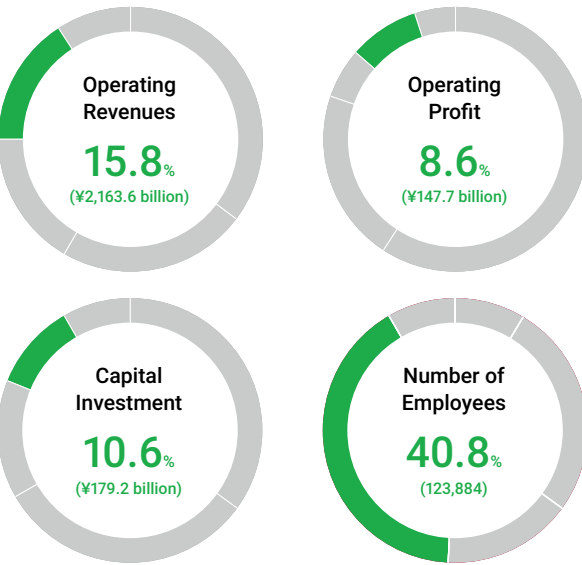
Business Environment

Market Trends and Risks

Market Trends	Business (Competition) Risks
<ul style="list-style-type: none">• Global growth in IT-related markets associated with advances in use of AI and IoT, etc.• Increasing sophistication of market needs globally (increase in demand for advanced IT services)	<ul style="list-style-type: none">• Economic impacts of U.S. trade policies and European political situation, etc.• Curb on IT investments by customers due to changes in the economy and business environment

Major Initiatives
<ul style="list-style-type: none">• Strengthening sales in managed IT services market• Reviewing service portfolio in line with the market environment

Composition by Segment
for the Fiscal Year Ended March 31, 2019



Topics

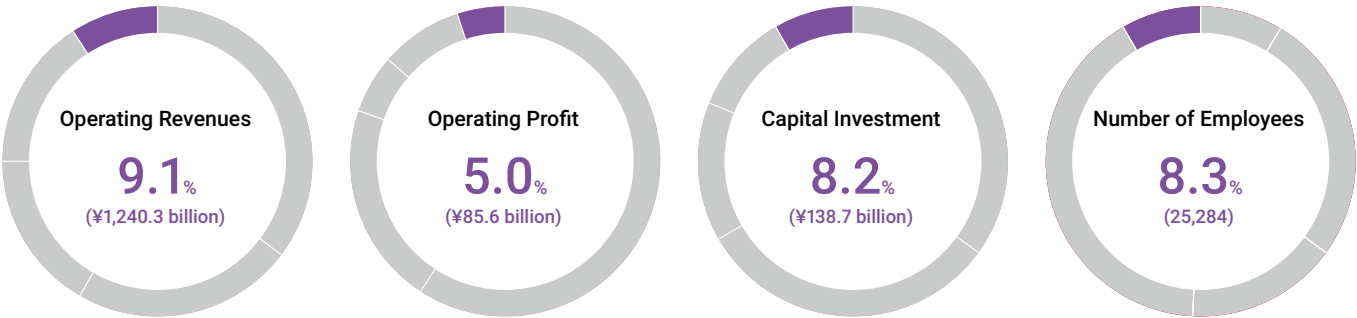
- ▶ In collaboration with local governments and local municipalities, we used WinActor® to research and verify improvements in process efficiencies and workstyle reforms. As a result, we confirmed efficiency improvements in routine work related to individual and corporate taxes as well as high accuracy for AI-OCR when reading a variety of forms, and announced the practicality of the solutions.
- ▶ We decided to begin offering a service whereby retail operators can handle various code payment methods, such as QR codes and one-dimensional bar codes, from both Japan and overseas, by using just one payment terminal or a single interface for CAFIS, the largest payment platform in Japan. Also, for local governments, we began offering the *Mobile Register Public Fund Credit Collection Service*, which enables credit payments via smartphone. Moreover, in preparation for expanding our electronic payments business in the APAC region, we took steps such as signing an agreement to acquire India-based Atom Technologies Limited as a subsidiary, thus promoting initiatives to provide highly convenient and sophisticated pay-related services both in Japan and overseas.
- ▶ In order to further strengthen our service provision capabilities, primarily in the digital area, we acquired U.K.-based MagenTys Holdings Limited, Germany-based Sybit GmbH, and Canada-based Sierra Systems Group, Inc., as subsidiaries.

Other Businesses

In the Other Businesses Segment, NTT Group mainly provided services related to the real estate business, finance business, construction and electric power business, and system development business.



Composition by Segment for the Fiscal Year Ended March 31, 2019



Details of Major Initiatives

Real Estate Business



In the Otemachi district of Chiyoda-ku, Tokyo, which is moving ahead to strengthen its functions to serve as an international business center, we opened Otemachi PLACE, whose facilities include the highest-level communications environment in Japan and a large hall that can deal with international conferences.

Construction and Electric Power Business



By combining and utilizing our technologies in ICT, energy, and construction to the fullest extent, we have implemented initiatives for the utilization of natural energy, such as by completing solar power plants, including the Minamisoma Kawabusa Power Generation Mega Solar Power Plant, as well as for the efficient, waste-free use of limited energy, working toward safe and secure urban development that is resilient against the risk of natural disasters.

Finance Business



We have developed financial services such as leasing and financing to facilitate the popularization of ICT devices and resolve social issues revolving around the environmental, educational, and medical fields. Furthermore, we provided billing and collection services for telecommunication service bills as well as credit card transaction settlement services.

System Development Business



We worked to develop network operation systems and application services to provide optimized, high-quality ICT services. Additionally, we worked to develop solutions utilizing cutting-edge technologies such as IoT, big data, and AI.

Focus

Converting a Historically Significant Elementary School into a Hotel

NTT Urban Development Corporation is engaged in the development of a hotel in Kiyomizu, Higashiyama-ku, Kyoto, and plans to start operations in March 2020 under the name "The Hotel Seiryu Kyoto Kiyomizu."

The hotel is being created by converting Kiyomizu Elementary School, which has been a treasured part of the community for many years, into a hotel with 48 guest rooms, restaurants, private baths, a fitness gym, and other facilities.

The name of the hotel combines two elements, "Kiyomizu," which is a world-class sightseeing areas steeped in history, and "Seiryu," which is the name of a mythical dragon said to have been the guardian of the Higashiyama area since ancient times. It conveys to the world the unique qualities of this hotel, which utilizes the character of a local elementary school house with historic value.

NTT Urban Development and the hotel operator, Prince Hotels, Inc., aim to respect the character and history of the building and create a one-of-a-kind hotel that offers a luxurious accommodation to guests from around the world.



NTT Group Topics

Fiscal year ended March 31, 2019

Fiscal year ending March 31, 2020

Holding Company (Groupwide Coordination)

May

Commenced sales of *InterSePT*®, a cybersecurity technology providing safe and secure operation of control systems

May

Announced launch of smart cities initiative with Dell Technologies (Las Vegas)

July

Yokohama City, Yokohama City University, and NTT signed the Agreement for Comprehensive Collaboration for Realizing a Super-Smart Society by Utilizing Public and Private Data

August

Announced foundation of global holding company

November

Announced “Your Value Partner 2025” NTT Group medium-term management strategy

November

Confirmed the basic operation of *transparent battery* that adapts to the surroundings

January

IndyCar named NTT as entitlement sponsor of IndyCar Series

July

NTT Ltd. started operations

July

NTT Urban Solutions started operations

July

Concluded a comprehensive collaboration agreement with Chiba City on smart and natural future urban development

July

Concluded an urban development partner agreement with municipalities of the Sapporo Metropolitan Area

July

Agreement on collaboration with Tokyo Metro on “Co-Creation of Tokyo’s Attractiveness and Vitality”

September

Concluded technology partnership agreement with Major League Baseball

September

NTT Anode Energy started operations

Mobile Communications Business

April

Achieved world’s first 5G wireless data transmission in ultra high-mobility environment exceeding 300 km/h

May

Started providing *Basic Share pack* and *Basic pack* for casual users

November

Conducted *Welcome Sumaho Wari* campaign for customers changing from feature phones to smart-phones for the first time, offering a discount of ¥1,500 per month for up to 13 months

November

Achieved world’s first 27Gbps throughput in 5G outdoor trials

February

Announced conversion of NTT Plala into a consolidated subsidiary in July 2019

March

Started providing *Mieru Denwa*, a service for customers with hearing impairments

June

Started providing new *Gigaho* and *Gigalite* rate plans

September

Started 5G pre-commercial services

Regional Communications Business

April

NTT West and Hitachi, Ltd., installed a system that uses ICT to counter bird and wildlife damage in Goto City, Nagasaki Prefecture

May

NTT East announced start of provision of *AI Guardman*, an AI service to prevent shoplifting

July

NTT West announced dramatic service reform through introduction of AI in contact centers

September

NTT East announced start of provision of “*Gyoda Cable Television & FLET’S Hikari*” through collaboration

November

NTT West announced start of collaboration with Microsoft regarding cloud business for local governments

November

NTT East started provision of IoT packages for plants, enabling visualization of production sites

January

Scheduled trials for using disaster safety confirmation services Disaster Emergency Message Dial 171 and Disaster Emergency Message Board (web 171) during Disaster Preparedness and Volunteer Week

February

TNCross, NTT, NTT East’s Chiba Business Division, and Chiba City concluded an agreement to conduct joint demonstration of new energy solutions

July

NTT East established NTT AgriTechnology as a new company in the agriculture field

August

NTT West established joint laboratory LINKSPARK to accelerate customers’ digital transformations

Long Distance and International Communications Business

April

NTT Communications and Dimension Data strengthened their hybrid IT solution globally

June

Announced the provision of VMware Cloud featuring VMware Cloud Foundation and Hybrid Cloud Extension

September

NTT Communications’ contact center reform awarded the “Best Technology Category Prize” at the Contact Center Awards 2018.

November

Announced establishment of NTT Global Data Centers Preparatory Corporation to strengthen data center business

December

Started provision of *Contact Center DX Solution* combining chat-type AI and RPA

January

Launched NTT Communications’ OPEN INNOVATION PROGRAM, to enable use of the company’s abundant resources

February

Received Excellence Award at the 19th Telework Promotion Award held by Japan Telework Association

June

Announced intention to expand data center provision capacity in Indonesia by 3.3 times

Data Communications Business

April

Started provision of public fee credit payment service via the *Mobile Register*® smartphone app

May

Announced results of joint research with local government using *WinActor*®

September

Conducted trial testing of on-demand transportation service using multiple self-driving vehicles on public roads in Toyosu, Tokyo

September

Assisted with Japan’s first money transfer using QR code via a financial institution app

November

Announced acquisition of a majority stake in Atom Technologies

December

Announced start of provision of solution enabling payments with various domestic and international codes on a single platform

February

Decided to start tender offer for shares of Netyear Group Corporation and to conclude capital and business alliance agreement therewith

March

Announced report on “Joint Trial of RPA” in Yokohama City

August

Started provision of support services for utilization of the *WinActor*® RPA tool for local governments

Financial Summary

Nippon Telegraph and Telephone Corporation and its subsidiaries
Fiscal years ended March 31

U.S. GAAP	Billions of yen								
	2010	2011	2012	2013	2014	2015	2016	2017	2018
Profit and loss (For the year)									
Operating revenues	¥10,181.4	¥10,305.0	¥10,507.4	¥10,700.7	¥10,925.2	¥11,095.3	¥11,541.0	¥11,391.0	¥11,799.6
Operating expenses	9,063.7	9,090.1	9,284.4	9,498.8	9,711.5	10,010.8	10,192.8	9,851.2	10,156.7
Operating income	1,117.7	1,214.9	1,223.0	1,202.0	1,213.7	1,084.6	1,348.1	1,539.8	1,642.8
Other income (expenses)	2.4	(39.1)	16.4	(4.3)	80.5	(17.9)	(18.9)	(12.0)	112.8
Income before income taxes and equity in earnings (losses) of affiliated companies	1,120.1	1,175.8	1,239.3	1,197.6	1,294.2	1,066.6	1,329.3	1,527.8	1,755.6
Income tax expense	452.9	474.6	583.2	474.0	486.5	397.3	354.8	468.4	541.9
Equity in earnings (losses) of affiliated companies	14.7	0.7	(7.6)	(16.1)	(50.8)	5.9	5.8	(0.0)	5.6
Net income	681.9	701.9	648.6	707.6	756.9	675.2	980.2	1,059.4	1,219.3
Less—Net income attributable to non-controlling interests	189.6	192.2	180.9	185.7	171.4	157.1	242.5	259.2	309.6
Net income attributable to NTT	¥ 492.3	¥ 509.6	¥ 467.7	¥ 521.9	¥ 585.5	¥ 518.1	¥ 737.7	¥ 800.1	¥ 909.7
Balance sheet (At year-end)									
Net property, plant and equipment	¥10,057.5	¥ 9,900.6	¥ 9,806.4	¥ 9,776.7	¥ 9,839.7	¥ 9,801.5	¥ 9,551.9	¥ 9,719.0	¥ 9,821.1
Total assets	18,939.1	19,665.6	19,389.7	19,549.1	20,284.9	20,702.4	21,035.9	21,250.3	21,675.8
Total current liabilities	3,588.3	3,689.1	3,494.3	3,499.4	3,676.8	3,721.7	3,741.1	4,131.4	4,239.0
Total long-term liabilities	5,579.9	5,895.6	5,847.7	5,527.7	5,657.4	5,902.7	6,009.6	5,560.4	5,354.3
Capital stock (common stock plus additional paid-in capital)	3,776.9	3,772.0	3,770.1	3,765.6	3,765.0	3,784.7	3,817.5	3,800.0	3,791.6
Total NTT shareholders' equity	7,788.2	8,020.7	7,882.6	8,231.4	8,511.4	8,681.9	8,833.8	9,052.5	9,486.0
Non-controlling interests	1,982.7	2,060.2	2,165.1	2,290.6	2,413.5	2,368.0	2,406.3	2,455.3	2,546.6
Total equity	¥ 9,770.9	¥10,080.9	¥10,047.7	¥10,522.0	¥10,924.8	¥11,049.8	¥11,240.1	¥11,507.8	¥12,032.6
Cash flows (For the year)									
Net cash provided by operating activities	¥ 2,817.8	¥ 2,830.9	¥ 2,508.3	¥ 2,453.7	¥ 2,727.9	¥ 2,391.8	¥ 2,711.8	¥ 2,917.4	¥ 2,637.5
Net cash used in investing activities	(2,308.9)	(2,052.2)	(1,971.2)	(1,776.3)	(2,106.8)	(1,868.6)	(1,759.8)	(2,089.3)	(1,841.8)
Net cash provided by (used in) financing activities	¥ (651.3)	¥ (249.6)	¥ (948.1)	¥ (745.2)	¥ (622.4)	¥ (678.0)	¥ (707.6)	¥ (981.5)	¥ (931.7)
Other financial data, performance indicators, etc.									
Interest-bearing liabilities	¥ 4,491.7	¥ 4,553.5	¥ 4,274.0	¥ 4,036.0	¥ 4,200.0	¥ 4,406.7	¥ 4,163.3	¥ 4,088.2	¥ 3,854.8
D/E ratio	57.7%	56.8%	54.2%	49.0%	49.3%	50.8%	47.1%	45.2%	40.6%
Capital investment (For the year) ⁽¹⁾	1,987.1	1,870.1	1,946.6	1,970.0	1,892.8	1,817.5	1,687.2	1,700.0	1,674.8
Depreciation and amortization (For the year)	2,012.1	1,962.5	1,910.7	1,899.2	1,880.3	1,828.0	1,766.3	1,462.2	1,339.4
Research and development expenses (For the year)	278.1	268.2	267.9	269.2	249.3	233.8	213.4	211.6	213.9
EBITDA	3,249.3	3,286.0	3,234.1	3,244.2	3,204.2	3,063.4	3,277.9	3,183.3	3,215.8
EBITDA margin ⁽¹⁾	31.9%	31.9%	30.8%	30.3%	29.3%	27.6%	28.4%	27.9%	27.3%
Free cash flows	508.9	778.7	537.1	677.4	621.1	523.2	952.1	828.0	795.8
Employees (Thousands) (At year-end)	195	219	224	227	240	242	241	275	283
Weighted average number of shares outstanding ⁽²⁾	2,646,524,966	2,646,346,778	2,551,038,800	2,423,761,538	2,299,516,428	2,187,360,018	2,105,782,828	2,046,678,144	1,995,912,757
Cash dividends, applicable to earnings for the year ⁽²⁾	60.00	60.00	70.00	80.00	85.00	90.00	110.00	120.00	150.00
Dividend payout ratio (%)	32.3%	31.2%	38.2%	37.2%	33.4%	38.0%	31.4%	30.7%	32.9%
ROE (%)	6.5%	6.4%	5.9%	6.5%	7.0%	6.0%	8.4%	8.9%	9.8%
Medium-term financial targets									
EPS (Yen) ⁽²⁾	186.00	192.58	183.34	215.34	254.61	236.85	350.34	390.94	455.78
Capex to sales (%)									
Capex to sales (%)	19.5%	18.1%	18.5%	18.4%	17.3%	16.4%	14.6%	14.9%	14.2%

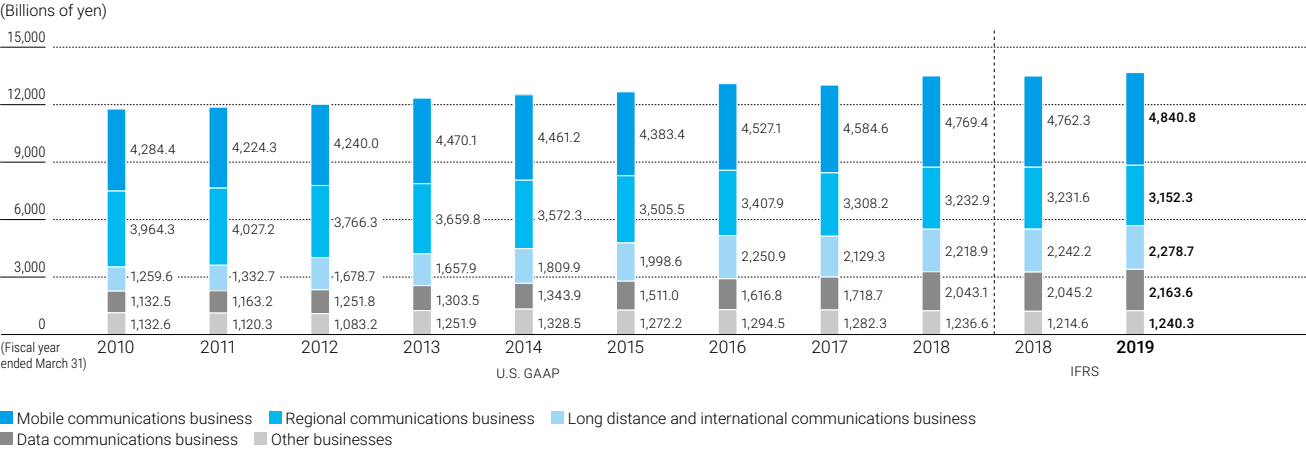
(1) Please refer to Reconciliation of Capital Investment and Reconciliation of EBITDA Margin on page 91.
• Capital investment is on an accrual basis for the acquisition of property, plant and equipment.
• From the fiscal year ended March 31, 2017, the method for calculating EBITDA has been revised.
EBITDA = Operating income + Depreciation and amortization + Loss on sales of property, plant and equipment + Impairment loss
EBITDA margin = (Operating income + Depreciation and amortization + Loss on sales and disposal of property, plant and equipment + Impairment loss) / Operating revenues × 100
(2) Adjusted for the 2-for-1 stock split with an effective date of July 1, 2015.

IFRS	Billions of yen	
	2018	2019
Profit and loss (For the year)		
Operating revenues	¥11,782.1	¥11,879.8
Operating expenses	10,141.1	10,186.0
Operating profit	1,641.1	1,693.8
Finance income and costs	(53.2)	(11.9)
Share of profit (loss) of entities accounted for using equity method	5.0	(10.1)
Profit (loss) before tax	1,740.5	1,671.9
Income taxes	533.8	533.2
Profit	1,206.7	1,138.7
Less—Profit attributable to non-controlling interests	308.8	284.1
Profit attributable to NTT	¥ 897.9	¥ 854.6
Balance sheet (At year-end)		
Property, plant and equipment	¥ 8,812.2	¥ 9,012.9
Total assets	21,541.4	22,295.1
Total current liabilities	4,622.4	5,228.1
Total non-current liabilities	5,353.4	5,262.3
Capital stock (common stock plus additional paid-in capital)	3,334.5	3,279.2
Total NTT shareholders' equity	9,050.4	9,264.9
Non-controlling interests	2,515.3	2,539.9
Total equity	¥11,565.7	¥11,804.8
Cash flows (For the year)		
Net cash provided by operating activities	¥ 2,541.3	¥ 2,406.2
Net cash used in investing activities	(1,746.2)	(1,774.1)
Net cash provided by (used in) financing activities	¥ (968.3)	¥ (584.3)
Other financial data, performance indicators, etc.		
Interest-bearing liabilities	¥ 3,971.6	¥ 4,262.7
D/E ratio	43.9%	46.0%
Capital investment (For the year)	1,697.9	1,697.0
Depreciation and amortization (For the year)	1,346.9	1,333.6
Research and development expenses (For the year)	208.6	211.3
EBITDA	3,237.1	3,241.4
EBITDA margin	27.5%	27.3%
Free cash flows	795.1	632.0
Employees (Thousands) (At year-end)	283	303
Weighted average number of shares outstanding	1,995,912,757	1,941,068,728
Cash dividends, applicable to earnings for the year	150	180
Dividend payout ratio (%)	33.3%	40.9%
ROE (%)	10.2%	9.3%
Medium-term financial targets		
EPS (Yen)	449.86	440.25
Overseas sales (Millions of dollars) ⁽³⁾	18,354	18,911
Overseas operating income margin (%) ⁽³⁾	3.1%	3.2%
Cost reductions (Billions of yen) ⁽⁴⁾	—	(220.0)
ROIC (%)	7.4%	7.4%
Capex to sales (%) (Domestic network business ⁽⁵⁾)	13.7%	13.9%

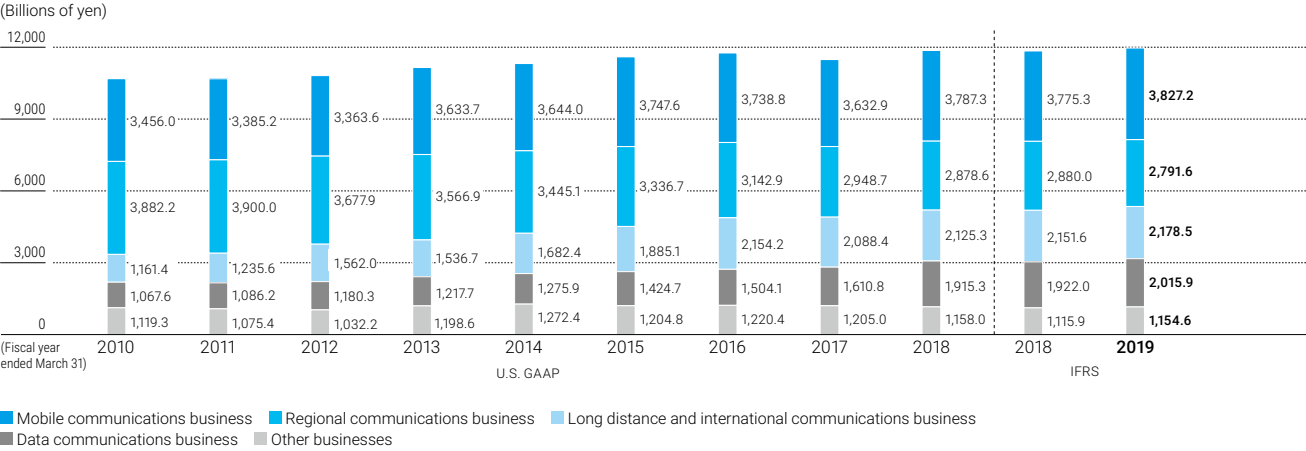
(3) Includes results from the global holding company (NTT, Inc.) and its subsidiaries and affiliates.
Operating Income excludes temporary expenses, such as M&A-related depreciation costs of intangible fixed assets.
(4) Cumulative reductions from FY2017.
(5) Excludes NTT Communications' data centers and certain other assets.

Business Segment Data

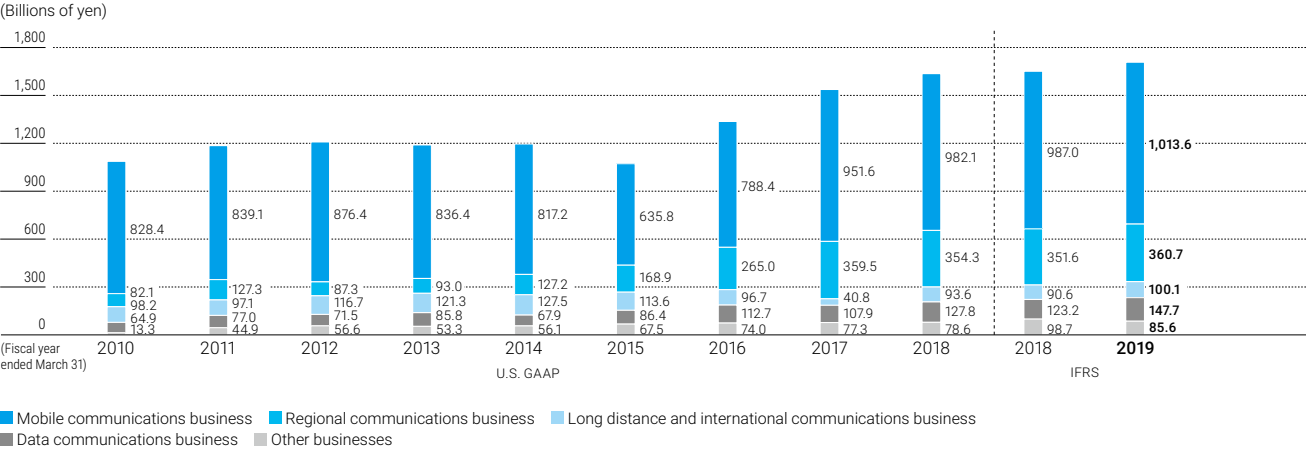
Total Operating Revenues



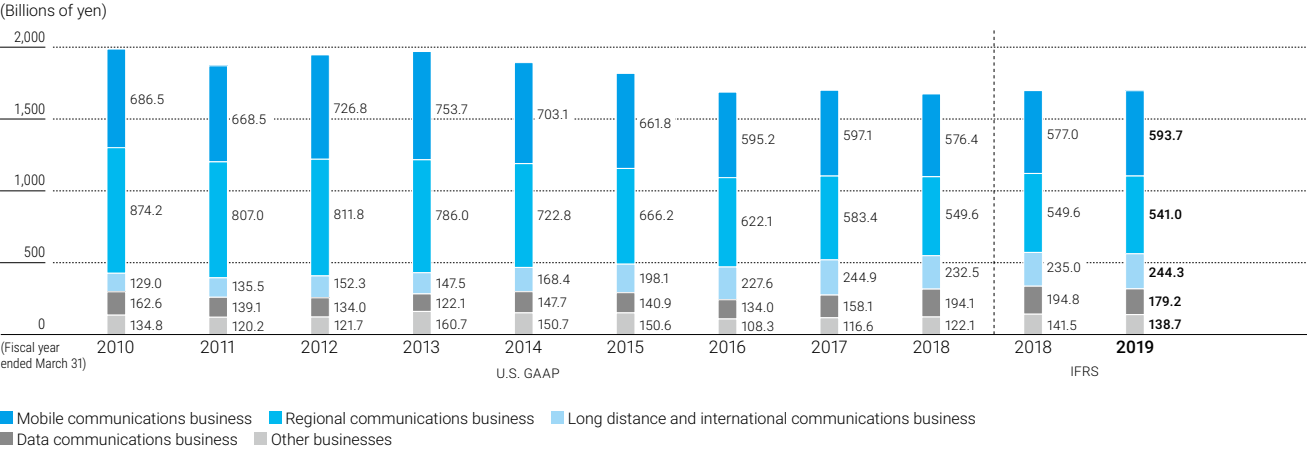
Operating Expenses



Total Operating Profit



Capital Investment



Group Data

Fiscal year ended March 31	NTT DOCOMO (Consolidated)		NTT East Group*1		NTT West Group*2	
	2018	2019	2018	2019	2018	2019
	Billions of yen					
Operating revenues	4,762.3	4,840.8	1,786.8	1,740.6	1,494.0	1,462.3
Operating expenses / Selling, general and administrative expenses	3,775.3	3,827.2	1,554.1	1,498.0	1,374.7	1,344.0
Operating profit	987.0	1,013.6	232.7	242.7	119.4	118.3
Profit before taxes	1,141.7	1,002.6	230.3	241.0	113.6	113.7
Profit attributable to NTT	790.8	663.6	162.4	166.0	80.0	80.7

Fiscal year ended March 31	NTT Communications Group*3		Dimension Data (Consolidated)*4		NTT DATA (Consolidated)		NTT Urban Development (Consolidated)	
	2018	2019	2018	2019	2018	2019	2018	2019
	Billions of yen							
Operating revenues	1,333.5	1,392.0	887.5	893.3	2,039.7	2,163.6	160.6	168.0
Operating expenses / Selling, general and administrative expenses	1,215.0	1,259.8	885.7	873.9	1,916.5	2,015.9	132.7	140.4
Operating profit	118.5	132.1	1.8	19.4	123.1	147.7	30.4	28.6
Profit before taxes	115.8	132.1	15.9	11.8	122.7	146.9	27.9	25.6
Profit attributable to NTT	78.8	98.5	9.7	5.2	82.4	93.6	18.1	16.1

*1 The scope of aggregation for each of the figures presented for NTT East Group is internal management figures after eliminating internal transactions between NTT East and its subsidiaries. Such figures are not audited and are provided for reference only.

*2 The scope of aggregation for each of the figures presented for NTT West Group is internal management figures after eliminating internal transactions between NTT West and its subsidiaries. Such figures are not audited and are provided for reference only.

*3 The scope of aggregation for each of the figures presented for NTT Communications Group is internal management figures after eliminating internal transactions between NTT Communications and its subsidiaries. Such figures are not audited and are provided for reference only.

*4 These are figures from the United Kingdom statutory financial reports of Dimension Data.

Quarterly Data (IFRS)										
	Billions of yen									
	1Q		2Q		3Q		4Q		Years Ended March 31	
	FY2017	FY2018	FY2017	FY2018	FY2017	FY2018	FY2017	FY2018	FY2017	FY2018
NTT Consolidated Financial Results										
Operating revenues	2,808.7	2,852.7	2,882.4	2,940.5	3,055.8	3,002.0	3,035.2	3,084.6	11,782.1	11,879.8
Fixed voice-related services	290.2	272.2	280.8	266.1	287.8	271.0	288.0	268.4	1,146.9	1,077.7
Mobile voice-related services	227.2	234.5	236.9	238.5	235.7	237.2	233.5	236.5	933.3	946.7
IP/packet communications services	939.5	938.0	949.6	930.5	939.1	934.1	929.3	918.7	3,757.4	3,721.2
Sales of telecommunications equipment	179.8	198.0	184.2	234.5	304.1	280.1	210.2	216.6	878.3	929.2
System integration services	792.2	837.7	855.2	877.2	884.0	884.9	925.9	994.3	3,457.4	3,594.1
Other	379.9	372.3	375.7	393.7	405.0	394.9	448.3	450.1	1,608.9	1,611.0
Operating expenses	2,284.1	2,315.5	2,368.7	2,406.9	2,684.5	2,545.6	2,803.8	2,917.9	10,141.1	10,186.0
Personnel expenses	591.6	592.1	594.9	590.7	614.2	603.0	592.6	605.8	2,393.4	2,391.6
Expenses for purchase of goods and services and other expenses	1,305.9	1,341.8	1,378.6	1,426.3	1,519.7	1,475.5	1,629.6	1,674.1	5,833.9	5,917.7
Depreciation and amortization	331.0	325.5	333.3	331.0	339.5	334.2	343.3	343.0	1,346.9	1,333.6
Impairment losses	—	—	0.7	0.0	150.1	67.3	27.0	59.0	177.9	126.4
Goodwill	—	—	—	—	25.3	—	8.8	39.4	34.1	39.4
Metal cable-related	—	—	—	—	124.8	66.0	—	—	124.8	66.0
Other	—	—	0.7	0.0	0.0	1.3	18.2	19.6	19.0	21.0
Expenses on disposal of fixed assets	27.3	26.8	35.5	32.4	34.7	34.1	56.7	78.9	154.2	172.2
Taxes and dues	28.3	29.3	25.7	26.6	26.3	31.5	154.5	157.1	234.9	244.5
Operating profit	524.7	537.2	513.7	533.5	371.3	456.4	231.5	166.7	1,641.1	1,693.8
Profit before taxes	527.8	542.7	514.1	535.7	486.8	452.1	211.7	141.4	1,740.5	1,671.9
Profit attributable to NTT	289.3	289.7	274.8	270.0	217.3	232.4	116.5	62.4	897.9	854.6
NTT Consolidated Financial Position										
Assets	21,233.6	21,467.0	21,454.9	21,719.8	21,443.6	21,899.8	21,541.4	22,295.1		
Current assets	5,574.8	5,702.3	5,733.2	6,082.5	5,849.5	6,385.2	5,869.2	6,580.0		
(incl.) Cash and cash equivalents	1,161.7	797.1	984.4	889.6	892.2	908.4	895.0	946.1		
(incl.) Trade and other receivables	3,361.0	3,823.7	3,693.8	3,965.9	3,900.4	4,149.0	4,022.2	4,391.4		
Non-current assets	15,658.8	15,764.6	15,721.7	15,637.3	15,594.1	15,514.7	15,672.3	15,715.2		
(incl.) Property, plant and equipment	8,724.6	8,820.7	8,786.9	8,941.8	8,699.1	8,858.6	8,812.2	9,012.9		
Liabilities and Equity	21,233.6	21,467.0	21,454.9	21,719.8	21,443.6	21,899.8	21,541.4	22,295.1		
Liabilities	10,033.3	9,802.9	9,874.1	9,655.7	9,852.6	10,169.4	9,975.8	10,490.4		
Current liabilities	4,406.5	4,618.2	4,221.1	4,329.1	4,231.8	4,843.8	4,622.4	5,228.1		
(incl.) Trade and other payables	1,469.2	1,510.6	1,425.8	1,484.8	1,570.5	1,615.5	1,811.7	2,092.5		
Non-current liabilities	5,626.8	5,184.7	5,653.0	5,326.6	5,620.8	5,325.6	5,353.4	5,262.3		
(incl.) Long-term debt	3,178.2	2,793.1	3,185.1	2,936.3	3,163.0	2,907.7	2,953.9	2,865.2		
(incl.) Defined benefit liabilities	1,880.9	1,864.4	1,894.2	1,879.1	1,911.9	1,891.9	1,860.5	1,878.0		
Equity	11,200.3	11,664.0	11,580.8	12,064.1	11,591.0	11,730.4	11,565.7	11,804.8		
Interest-Bearing Liabilities (Consolidated)										
Interest-bearing liabilities	4,636.9	4,359.5	4,315.6	4,064.1	4,276.5	4,560.1	3,971.6	4,262.7		
Capital Investment										
Capital investment	369.1	321.4	401.2	361.1	383.3	367.6	544.4	646.8	1,697.9	1,697.0
Mobile Communications Business	122.3	124.9	145.2	130.5	135.9	134.0	173.6	204.3	577.0	593.7
Regional Communications Business	106.4	102.1	126.2	108.0	123.6	114.0	193.4	217.0	549.6	541.0
Long Distance and International Communications Business	52.1	38.4	56.7	50.3	47.5	45.4	78.7	110.2	235.0	244.3
Data Communications Business	44.6	38.2	53.7	40.2	40.9	45.4	55.6	55.4	194.8	179.2
Other Businesses	43.7	17.8	19.3	32.1	35.3	28.8	43.2	60.0	141.5	138.7
(Ref.) Capital investment by group										
NTT East Group	60.9	60.6	60.1	57.7	59.0	54.6	88.6	101.2	268.6	274.1
NTT West Group	45.5	41.5	66.1	50.3	64.7	59.4	104.8	115.8	281.0	266.9
NTT Communications Group	46.3	32.3	51.7	44.6	42.5	39.7	68.6	102.6	209.1	219.3
Dimension Data (Consolidated)	5.3	5.5	4.1	5.1	3.8	4.7	7.8	5.7	21.1	20.9

Business Segments (IFRS)										
Billions of yen										
	1Q		2Q		3Q		4Q		Years Ended March 31	
	FY2017	FY2018	FY2017	FY2018	FY2017	FY2018	FY2017	FY2018	FY2017	FY2018
Mobile Communications Business										
Operating revenues	1,133.6	1,176.7	1,160.7	1,212.9	1,295.1	1,264.6	1,172.9	1,186.7	4,762.3	4,840.8
Mobile voice-related service	229.7	236.9	239.4	241.0	238.3	239.7	235.5	238.7	942.8	956.2
IP/packet communications service	533.5	544.6	540.8	541.7	539.1	542.5	523.8	530.4	2,137.2	2,159.3
Sales of telecommunications equipment	157.0	178.6	162.0	211.8	284.7	259.7	186.2	194.3	789.8	844.4
Other	213.5	216.5	218.4	218.4	233.1	222.7	227.4	223.4	892.4	880.9
Operating expenses	851.5	866.7	883.2	912.3	998.9	973.1	1,041.7	1,075.1	3,775.3	3,827.2
Personnel expenses	72.6	73.0	71.4	72.3	72.2	72.6	71.9	71.1	288.1	288.9
Expenses for purchase of goods and services and other expenses	644.8	666.6	671.7	706.1	786.2	766.1	779.1	785.1	2,881.8	2,923.8
Depreciation and amortization	119.1	113.8	121.3	117.7	122.0	117.1	124.2	122.3	486.6	470.9
Impairment losses	—	—	—	—	—	—	11.8	32.8	11.8	32.8
Expenses on disposal of fixed assets	12.5	10.4	16.1	13.3	15.5	14.3	23.0	30.8	67.2	68.8
Taxes and dues	2.5	3.0	2.7	3.0	2.9	3.1	31.7	33.0	39.8	42.0
Operating profit	282.1	309.9	277.5	300.6	296.3	291.5	131.1	111.6	987.0	1,013.6
Regional Communications Business										
Operating revenues	786.7	768.9	792.1	775.5	798.7	781.1	854.0	826.8	3,231.6	3,152.3
Fixed voice-related service	288.5	274.0	280.4	267.9	286.7	271.7	287.5	271.6	1,143.1	1,085.2
IP/packet communications service	379.5	374.4	381.4	374.1	380.0	377.3	382.7	374.9	1,523.7	1,500.7
Sales of telecommunications equipment	18.5	18.3	19.2	18.7	18.5	18.9	20.6	20.7	76.7	76.6
System integration services	28.4	27.6	38.0	41.1	37.2	37.7	63.1	62.5	166.6	168.9
Other	71.9	74.6	73.2	73.7	76.2	75.5	100.2	97.0	321.4	320.9
Operating expenses	635.4	626.9	655.1	641.2	779.4	706.0	810.1	817.5	2,880.0	2,791.6
Personnel expenses	190.6	178.4	184.7	178.4	182.8	177.9	178.7	172.9	736.8	707.6
Expenses for purchase of goods and services and other expenses	301.3	305.1	323.2	318.7	324.8	317.0	396.1	398.2	1,345.4	1,338.9
Depreciation and amortization	112.0	110.7	112.9	110.8	114.7	111.9	115.4	114.5	455.0	448.0
Impairment losses	—	—	0.6	—	124.8	66.0	2.2	3.7	127.6	69.7
Expenses on disposal of fixed assets	13.7	14.4	18.2	17.6	16.9	17.4	29.6	40.9	78.3	90.3
Taxes and dues	17.9	18.3	15.5	15.8	15.5	15.8	88.1	87.2	136.9	137.1
Operating profit	151.3	142.0	137.1	134.3	19.3	75.0	43.9	9.4	351.6	360.7
Long Distance and International Communications Business										
Operating revenues	533.4	541.2	562.7	572.0	570.0	571.3	576.1	594.3	2,242.2	2,278.7
Fixed voice-related service	60.4	55.7	59.1	56.8	60.8	56.0	59.5	51.8	239.9	220.3
IP/packet communications service	99.8	106.0	101.8	105.8	103.4	107.9	105.2	107.8	410.2	427.5
Sales of telecommunications equipment	4.7	1.6	3.9	4.4	1.6	1.9	4.5	3.6	14.7	11.5
System integration services	325.5	338.6	357.8	363.3	362.2	357.4	358.5	379.7	1,404.0	1,439.1
Other	43.0	39.3	40.1	41.6	42.0	48.1	48.3	51.4	173.4	180.3
Operating expenses	492.3	509.1	523.7	532.6	569.7	537.6	566.0	599.2	2,151.6	2,178.5
Personnel expenses	96.0	102.5	97.6	102.7	111.4	103.7	99.6	102.4	404.6	411.4
Expenses for purchase of goods and services and other expenses	353.3	361.3	382.2	384.2	387.5	381.8	398.8	414.2	1,521.8	1,541.6
Depreciation and amortization	40.5	42.8	41.2	43.3	42.5	43.8	43.6	48.6	167.8	178.4
Impairment losses	—	—	0.2	—	25.3	0.2	11.6	19.4	37.1	19.7
Expenses on disposal of fixed assets	0.9	0.7	0.9	0.7	1.4	2.4	2.2	4.1	5.4	7.9
Taxes and dues	1.6	1.8	1.6	1.6	1.6	5.7	10.1	10.5	15.0	19.6
Operating profit	41.1	32.0	39.1	39.4	0.3	33.6	10.1	(4.9)	90.6	100.1
Data Communications Business										
Operating revenues	472.1	505.2	491.9	517.5	521.4	528.0	559.9	612.9	2,045.2	2,163.6
System integration services	472.1	505.2	491.9	517.5	521.4	528.0	559.9	612.9	2,045.2	2,163.6
Operating expenses	445.7	476.0	461.9	486.4	490.4	493.5	524.0	560.0	1,922.0	2,015.9
Personnel expenses	182.8	193.3	193.1	193.5	202.2	202.5	198.5	214.9	776.6	804.2
Expenses for purchase of goods and services and other expenses	221.5	242.6	227.8	251.9	245.9	247.6	280.6	300.9	975.7	1,043.0
Depreciation and amortization	38.5	37.2	38.1	38.3	39.1	39.9	38.2	38.2	153.9	153.6
Impairment losses	—	—	—	—	—	—	1.7	0.7	1.7	0.7
Expenses on disposal of fixed assets	0.3	0.2	0.5	0.2	0.3	0.6	1.3	1.3	2.4	2.2
Taxes and dues	2.6	2.7	2.6	2.5	2.8	2.9	3.7	4.1	11.6	12.2
Operating profit	26.4	29.3	30.0	31.1	31.0	34.5	35.9	52.9	123.2	147.7
Other Businesses										
Operating revenues	274.8	267.2	281.3	297.8	293.0	290.3	365.6	385.0	1,214.6	1,240.3
IP/packet communications service	5.9	5.7	6.4	5.9	5.6	6.1	6.6	6.9	24.5	24.6
System integration services	32.4	35.5	34.7	37.1	39.7	34.7	40.9	44.8	147.7	152.1
Other	236.5	226.0	240.2	254.7	247.6	249.5	318.1	333.3	1,042.3	1,063.5
Operating expenses	246.3	241.2	251.0	266.4	265.8	264.5	352.8	382.5	1,115.9	1,154.6
Personnel expenses	63.2	61.6	62.6	61.3	62.1	61.4	65.5	69.6	253.5	253.9
Expenses for purchase of goods and services and other expenses	158.6	152.8	164.7	178.9	177.8	176.3	242.6	255.6	743.8	763.7
Depreciation and amortization	20.8	22.3	20.2	21.7	21.5	21.4	22.1	25.5	84.6	90.9
Impairment losses	—	—	—	0.0	—	1.1	0.0	2.4	0.0	3.6
Expenses on disposal of fixed assets	0.5	1.6	0.6	1.5	1.4	0.9	2.3	5.1	4.8	9.0
Taxes and dues	3.2	2.9	2.8	3.0	2.9	3.4	20.3	24.2	29.3	33.6
Operating profit	28.5	26.0	30.3	31.4	27.2	25.8	12.8	2.5	98.7	85.6

Group Summary (IFRS)										
Billions of yen										
	1Q		2Q		3Q		4Q		Years Ended March 31	
	FY2017	FY2018	FY2017	FY2018	FY2017	FY2018	FY2017	FY2018	FY2017	FY2018
NTT DOCOMO (Consolidated)										
Operating revenues	1,133.7	1,176.7	1,160.8	1,212.9	1,295.3	1,264.6	1,172.5	1,186.7	4,762.3	4,840.8
Telecommunications services	766.1	785.4	784.1	786.5	780.6	785.9	762.1	772.9	3,092.7	3,130.7
Mobile communications services	716.5	718.3	729.2	716.8	721.8	712.6	699.8	696.6	2,867.3	2,844.4
Voice	229.7	236.9	239.4	241.0	238.3	239.7	235.5	238.7	942.8	956.2
Packet communications	486.8	481.4	489.8	475.9	483.6	473.0	464.3	458.0	1,924.5	1,888.2
Optical fiber broadband service and other telecommunications services	49.6	67.1	54.9	69.7	58.7	73.2	62.2	76.3	225.4	286.3
Equipment sales	157.0	178.6	162.0	211.8	284.7	259.7	186.2	194.3	789.8	844.4
Other	210.7	212.6	214.7	214.6	230.0	219.0	224.3	219.5	879.7	865.8
Operating expenses	851.6	866.7	882.9	912.3	999.0	973.1	1,041.7	1,075.1	3,775.3	3,827.2
Personnel expenses	72.6	73.0	71.4	72.3	72.2	72.6	71.9	71.1	288.1	288.9
Expenses for purchase of goods and services and other expenses	556.3	566.4	577.3	602.1	688.3	658.2	709.3	707.0	2,531.3	2,533.7
Depreciation and amortization	119.1	113.8	121.3	117.7	122.0	117.1	124.2	122.3	486.6	470.9
Impairment losses	—	—	—	—	—	—	11.8	32.8	11.8	32.8
Communication network charges	91.0	103.2	96.9	106.9	101.0	110.9	101.5	111.0	390.4	432.0
Expenses on disposal of fixed assets	12.5	10.4	16.1	13.3	15.5	14.3	23.0	30.8	67.2	68.8
Operating profit	282.1	309.9	277.8	300.6	296.2	291.5	130.8	111.6	987.0	1,013.6
Profit before taxes	289.8	317.1	285.5	304.1	445.3	290.5	121.1	91.0	1,141.7	1,002.6
Profit attributable to NTT DOCOMO	199.9	218.3	192.2	188.7	305.6	200.5	93.2	56.1	790.8	663.6
NTT East Group*1										
Operating revenues	430.2	424.2	432.3	425.6	441.2	431.7	483.1	459.1	1,786.8	1,740.6
Fixed voice-related service	151.1	144.5	147.6	142.3	150.7	145.4	149.7	141.3	599.1	573.6
IP/packet communications service	210.8	209.7	212.9	210.6	212.8	211.5	215.1	210.7	851.6	842.5
Sales of telecommunications equipment	7.3	7.2	7.3	7.4	7.0	7.4	8.3	8.3	29.9	30.3
System integration services	14.0	13.0	16.8	18.5	17.9	17.7	31.3	26.2	80.0	75.4
Other	47.0	49.8	47.7	46.8	52.7	49.7	78.7	72.5	226.1	218.8
Operating expenses	341.3	336.6	352.9	340.4	413.3	378.2	446.6	442.7	1,554.1	1,498.0
Personnel expenses	99.8	93.6	96.8	93.4	95.6	92.7	93.9	92.8	386.1	372.6
Expenses for purchase of goods and services and other expenses	164.7	167.3	176.9	172.3	179.7	172.1	230.6	221.6	751.8	733.3
Depreciation and amortization	59.9	59.1	60.3	58.6	60.9	59.2	61.9	60.9	242.9	237.9
Impairment losses	—	—	0.6	—	60.9	36.1	1.5	2.5	63.0	38.7
Expenses on disposal of fixed assets	7.2	6.7	9.8	7.5	7.8	9.5	13.4	19.8	38.2	43.5
Taxes and dues	9.7	9.9	8.5	8.6	8.4	8.5	45.4	45.0	72.1	72.1
Operating profit	88.9	87.6	79.4	85.1	27.9	53.5	36.5	16.3	232.7	242.7
Profit before taxes	88.4	87.5	79.2	84.5	27.0	53.0	35.8	16.0	230.3	241.0
Profit attributable to NTT East	61.5	61.7	54.3	59.2	19.4	37.5	27.2	7.6	162.4	166.0
NTT West Group*2										
Operating revenues	366.6	354.1	370.7	359.9	368.1	361.7	388.6	386.6	1,494.0	1,462.3
Fixed voice-related service	139.5	131.2	135.6	127.9	137.9	130.2	140.7	132.7	553.7	522.0
IP/packet communications service	168.9	164.8	168.7	163.7	167.3	165.9	167.7	164.2	672.5	658.6
Sales of telecommunications equipment	11.3	11.1	12.0	11.4	11.5	11.5	12.5	12.6	47.2	46.7
System integration services	14.8	15.0	21.6	23.0	19.8	20.5	32.8	36.8	88.9	95.4
Other	32.2	31.9	32.9	34.0	31.7	33.5	34.9	40.2	131.6	139.6
Operating expenses	304.2	299.8	312.9	310.8	376.7	339.8	380.8	393.6	1,374.7	1,344.0
Personnel expenses	91.0	85.1	88.1	85.2	87.5	85.5	85.5	81.1	352.1	336.8
Expenses for purchase of goods and services and other expenses	146.4	146.8	156.7	156.1	155.3	156.4	181.7	193.8	640.2	653.1
Depreciation and amortization	52.1	51.6	52.6	52.1	53.8	52.7	53.5	53.8	212.0	210.3
Impairment losses	—	—	—	—	63.9	29.9	0.7	1.2	64.6	31.0
Expenses on disposal of fixed assets	6.5	7.9	8.5	10.2	9.2	8.0	16.7	21.5	40.9	47.7
Taxes and dues	8.2	8.3	7.0	7.2	7.0	7.2	42.7	42.2	64.9	65.0
Operating profit	62.4	54.3	57.8	49.1	(8.6)	21.9	7.8	(7.0)	119.4	118.3
Profit before taxes	61.1	53.3	56.2	47.9	(10.1)	20.7	6.4	(8.2)	113.6	113.7
Profit attributable to NTT West	42.5	37.7	39.1	33.9	(6.2)	15.5	4.7	(6.4)	80.0	80.7

Financial Summary

	Billions of yen									
	1Q		2Q		3Q		4Q		Years Ended March 31	
	FY2017	FY2018	FY2017	FY2018	FY2017	FY2018	FY2017	FY2018	FY2017	FY2018
NTT Communications Group*1										
Operating revenues*2	319.9	326.3	324.3	345.2	334.2	348.9	355.1	371.5	1,333.5	1,392.0
Cloud computing platforms	43.1	49.0	45.4	52.0	47.7	51.8	49.1	54.7	185.3	207.5
Data networks	118.7	122.4	120.0	121.2	122.0	122.2	120.2	122.0	480.8	487.9
Voice communications	68.7	66.8	69.1	66.8	71.1	69.1	67.4	63.9	276.3	266.6
Applications and content	29.8	30.6	30.6	31.5	31.2	33.9	34.3	38.5	125.8	134.5
Solution services	50.7	51.3	54.5	67.3	56.3	61.0	76.5	86.5	238.0	266.2
Other	9.0	6.1	4.9	6.4	5.8	10.8	7.7	5.9	27.3	29.2
Operating expenses	276.4	289.3	283.3	304.5	329.4	308.8	325.9	357.3	1,215.0	1,259.8
Personnel expenses	48.3	50.6	47.3	50.5	58.5	51.6	47.9	50.0	202.0	202.8
Expenses for purchase of goods and services and other expenses	193.2	200.6	200.2	215.2	208.4	215.9	231.0	247.9	832.7	879.6
Depreciation and amortization	32.5	35.7	33.5	36.5	34.4	37.2	34.8	42.1	135.2	151.5
Impairment losses	—	—	—	—	25.3	—	0.1	2.7	25.4	2.7
Expenses on disposal of fixed assets	0.9	0.6	0.8	0.7	1.4	2.4	2.2	4.1	5.3	7.9
Taxes and dues	1.5	1.8	1.5	1.6	1.5	1.7	9.9	10.3	14.4	15.4
Operating profit	43.5	37.1	41.0	40.7	4.8	40.1	29.2	14.3	118.5	132.1
Profit before taxes	44.6	37.9	43.3	41.1	4.4	39.4	23.5	13.6	115.8	132.1
Profit attributable to NTT Communications	31.6	27.1	31.4	28.2	(7.0)	28.2	22.9	15.0	78.8	98.5
Dimension Data (Consolidated)*3										
Operating revenues	208.4	215.2	232.8	228.6	231.6	224.5	214.5	225.0	887.5	893.3
System integration services	208.4	215.2	232.8	228.6	231.6	224.5	214.5	225.0	887.5	893.3
Cost of sales	168.3	172.4	188.2	184.0	188.1	182.2	180.2	180.1	724.8	718.7
Gross profit	40.2	42.8	44.6	44.6	43.5	42.3	34.4	44.9	162.7	174.6
Selling, general and administrative expenses	36.9	39.3	41.3	38.4	42.7	38.3	40.0	39.0	160.9	155.2
Operating profit	3.3	3.4	3.3	6.1	0.8	4.0	(5.6)	5.9	1.8	19.4
Profit before taxes	1.9	1.4	1.9	3.3	0.1	2.7	12.0	4.4	15.9	11.8
Profit attributable to Dimension Data	0.1	0.3	2.3	0.5	(0.8)	0.6	8.1	3.7	9.7	5.2
NTT DATA Consolidated										
Net sales	470.3	505.2	490.1	517.5	519.7	528.0	559.6	612.9	2,039.7	2,163.6
Public and social infrastructure	90.5	106.7	101.2	101.7	107.2	109.0	146.0	162.5	444.9	479.9
Financial	130.6	130.9	136.7	135.1	140.4	133.3	152.2	159.8	559.9	559.1
Enterprise and solutions	107.2	120.7	114.0	129.9	122.1	130.3	134.9	149.0	478.1	529.8
North America	110.9	101.5	108.3	107.4	107.2	105.0	101.5	108.0	427.9	421.9
EMEA and LATAM	86.5	103.7	90.6	102.9	104.5	115.9	105.9	117.7	387.5	440.1
Eliminations or corporate	(55.4)	(58.3)	(60.7)	(59.6)	(61.7)	(65.5)	(80.9)	(84.0)	(258.7)	(267.3)
Cost of sales	355.3	378.4	367.7	394.6	392.2	395.0	420.3	450.6	1,535.5	1,618.6
Gross profit	115.1	126.8	122.4	122.9	127.4	132.9	139.3	162.3	504.2	545.0
Selling, general and administrative expenses	88.8	97.7	92.4	92.0	96.6	98.7	103.3	108.9	381.0	397.3
Operating profit	26.3	29.1	30.0	30.9	30.8	34.2	35.9	53.4	123.1	147.7
Profit before taxes	26.9	30.2	28.2	30.8	30.7	33.6	36.9	52.3	122.7	146.9
Profit attributable to NTT DATA	16.9	20.8	18.4	17.9	20.9	20.9	26.2	34.1	82.4	93.6
NTT Urban Development (Consolidated)										
Operating revenues	40.1	29.9	31.1	42.0	39.4	37.5	49.9	58.6	160.6	168.0
Cost of sales	23.1	17.2	18.0	26.6	24.8	24.2	46.2	51.7	112.2	119.9
Gross profit	17.0	12.6	13.1	15.3	14.6	13.2	3.6	6.8	48.3	48.0
Selling, general and administrative expenses	4.7	4.2	4.1	4.3	4.9	4.8	6.6	6.9	20.5	20.4
Operating profit	12.4	9.9	9.0	9.9	9.7	8.0	(0.8)	0.7	30.4	28.6
Profit before taxes	11.7	9.3	8.2	9.0	9.8	7.2	(1.9)	(0.0)	27.9	25.6
Profit attributable to NTT Urban Development	7.7	6.0	5.3	5.7	6.5	4.5	(1.4)	(0.1)	18.1	16.1

*1 The scope of aggregation for each of the figures presented for NTT Communications Group is internal management figures after eliminating internal transactions between NTT Communications and its subsidiaries. Such figures are not audited and are provided for reference only.

*2 The following are the main services included in each line item:

- Cloud computing platforms: "Data center services" and "Private cloud (Enterprise cloud, etc.)"

- Data networks: "Closed network services (Arcstar Universal One, etc.)" and "Open network services (OCN, etc.)"

- Voice communications: "Telephone services" and "VoIP services (050 plus, etc.)."

- Applications and content: "Application services (Mail services, etc.)"

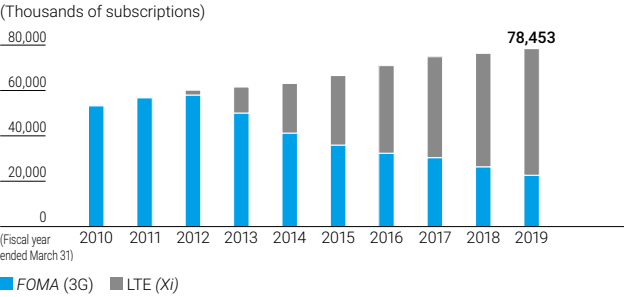
- Solution services: "System integration services"

*3 These are figures from the United Kingdom statutory financial reports of Dimension Data. The quarterly financial results above are not audited and are provided for reference only.

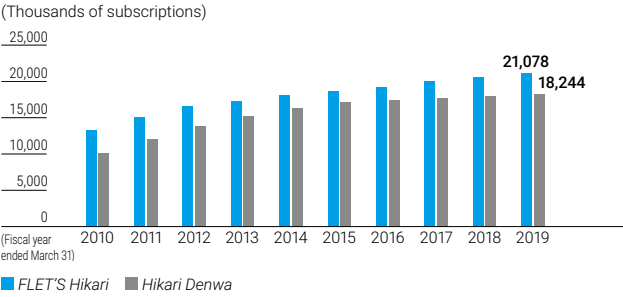
The full-year financial results above have not been audited, and are provided for reference only. These full-year financial results are subject to change, pending results of the independent financial audit.

Operational Data

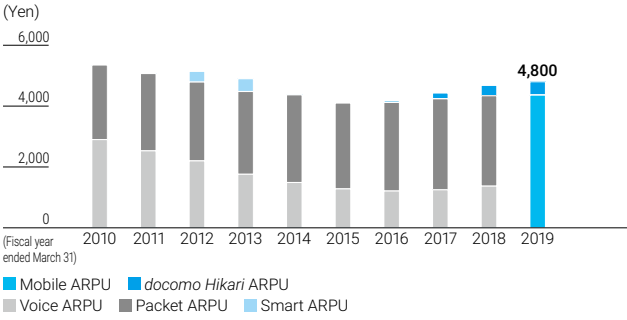
Mobile Communications Services Subscriptions



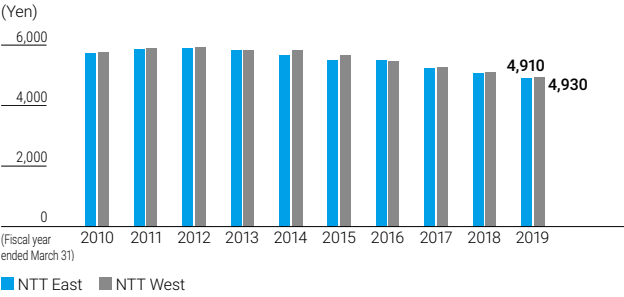
Fixed-Line Broadband Services Subscriptions



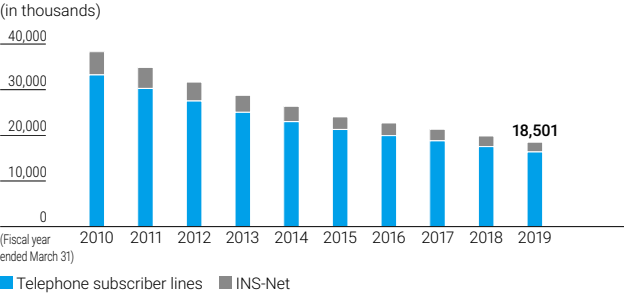
Mobile Aggregate ARPU



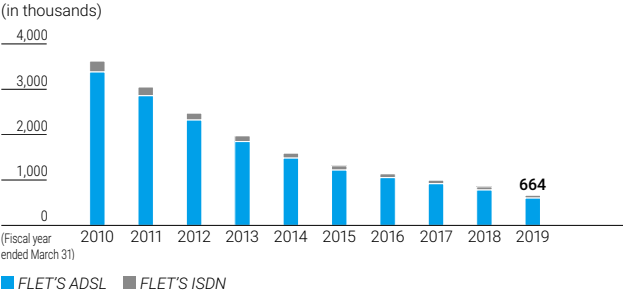
ARPU of FLET'S Hikari



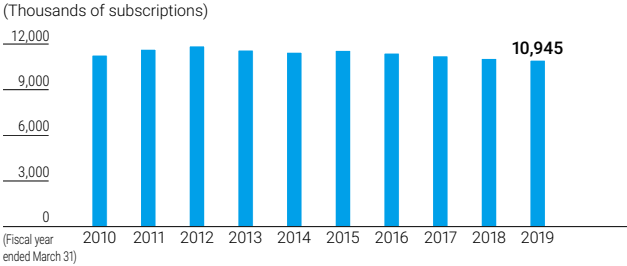
Telephone Subscriber Lines + INS-Net



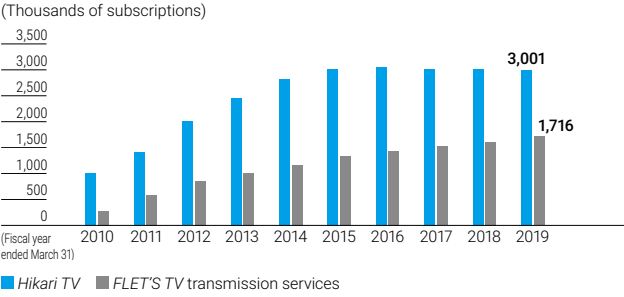
FLET'S ADSL / FLET'S ISDN



NTT Group Major ISPs



Hikari TV / FLET'S TV Transmission Services



Fiscal years ended March 31	2010	2011	2012	2013		2014	2015	2016	2017	2018	2019
Mobile Communications Services Subscriptions (Thousands of subscriptions)											
FOMA (3G)	53,203	56,746	57,905	49,970		41,140	35,851	32,285	30,336	26,273	22,581
LTE (Xi)	—	26	2,225	11,566		21,965	30,744	38,679	44,544	50,097	55,872
Fixed-Line Broadband Services Subscriptions (Thousands of subscriptions)*1											
FLET'S Hikari	13,251	15,059	16,564	17,300		18,050	18,716	19,259	20,053	20,533	21,078
Hikari Denwa	10,142	12,113	13,900	15,169		16,256	17,108	17,374	17,759	18,032	18,244
Telephone Subscriber Lines + INS-Net (in thousands)*2											
NTT East	33,238	30,271	27,521	25,042		23,000	21,286	19,943	18,797	17,538	16,363
NTT West	5,092	4,613	4,150	3,724		3,366	3,058	2,776	2,539	2,331	2,138
FLET'S ADSL / FLET'S ISDN (in thousands)											
FLET'S ADSL	3,381	2,858	2,322	1,848		1,483	1,219	1,053	919	780	602
FLET'S ISDN	241	193	152	127		109	95	85	77	70	62
NTT Group Major ISPs (Thousands of subscriptions)*3											
	11,280	11,662	11,882	11,611		11,466	11,586	11,411	11,231	11,057	10,945
Hikari TV / FLET'S TV Transmission Services (Thousands of subscriptions)											
Hikari TV	1,009	1,413	2,004	2,453		2,823	3,014	3,052	3,023	3,016	3,001
FLET'S TV Transmission Services*1	270	592	861	1,003		1,161	1,345	1,432	1,521	1,615	1,716

Fiscal years ended March 31	2010	2011	2012	2013		2014	2015	2016	2017	2018	2019
Mobile Aggregate ARPU (Yen)**4,5											
New	Mobile ARPU (LTE (Xi) + FOMA (3G))										
	—	—	—	—		—	—	—	—	—	4,360
Old	docomo Hikari ARPU										
	—	—	—	—		—	—	50	190	340	440
	Voice ARPU										
	2,900	2,530	2,200	1,760		1,490	1,280	1,210	1,250	1,370	—
	Packet ARPU										
	2,450	2,540	2,590	2,720		2,880	2,820	2,910	2,990	2,970	—
	Smart ARPU										
	—	—	350	420		—	—	—	—	—	—
ARPU of FLET'S Hikari (Yen)**4											
NTT East											
5,740											
NTT West											
5,780											

*1 The number of subscriptions for FLET'S Hikari, Hikari Denwa, and FLET'S TV transmission services includes wholesale services provided to service providers by NTT East and NTT West.

*2 The number of telephone subscriber lines is the total of individual lines and central station lines (including the Subscriber Telephone Lite Plan). "INS-Net" includes INS-Net 64 and INS-Net 1500. In terms of the number of channels, transmission rate, and line use rate (base rate), INS-Net 1500 is in all cases approximately 10 times greater than INS-Net 64. For this reason, one INS-Net 1500 subscription is calculated as 10 INS-Net 64 subscriptions (including subscriptions to the INS-Net 64 Lite Plan).

*3 "NTT Group Major ISPs" includes WAKWAK and InfoSphere, in addition to OCN and Plala.

*4 Please see page 90 for the ARPU calculation method and other details.

*5 The ARPU calculation method was changed from the fiscal year ended March 31, 2016. Accompanying this change, the new method has been applied retroactively to the ARPU figures for the fiscal year ended March 31, 2014, and the fiscal year ended March 31, 2015. Packet ARPU from the fiscal year ended March 31, 2009, to the fiscal year ended March 31, 2011, includes an amount corresponding to Smart ARPU.

Reference Information

Average Monthly Revenue per Unit (ARPU)

Average monthly revenue per unit, or ARPU, is used to measure average monthly operating revenues on a per subscriber (user) basis. In the case of the mobile communications business, ARPU is calculated by dividing communications services revenue items included in operating revenues from NTT Group's mobile communications business segment, such as revenues from LTE (Xi) mobile phone services, FOMA mobile phone services and docomo Hikari services (with certain exceptions), by the number of Active users of the relevant services. In the case of NTT Group's fixed-line business, ARPU is calculated by dividing revenue items included in the operating revenues of NTT Group's regional communications business segment (i.e., fixed-line (telephone subscriber lines plus INS-Net subscriber lines) and FLET'S Hikari) by the number of Active Subscribers to the relevant services. The calculation of these figures excludes revenues that are not representative of monthly average usage, such as telecommunications equipment sales, activation fees and universal service charges. The revenue items included in the numerators of NTT Group's ARPU figures are based on its financial results comprising its IFRS results of operations.

Method of Calculating ARPU

(a) NTT DOCOMO

- NTT computes ARPU for NTT DOCOMO as follows:
Aggregate ARPU = Mobile ARPU + docomo Hikari ARPU.
- (1) Mobile ARPU: Mobile ARPU related revenues {voice-related revenues (basic monthly charges, voice communication charges) + packet-related revenues (basic monthly charges, packet communication charges)} / Number of active users
docomo Hikari ARPU: docomo Hikari ARPU-related revenues (basic monthly charges and voice communication charges) / Number of Active Users
- (2) Number of Active Users used in the ARPU calculation of NTT DOCOMO is as below.
Sum of number of Active Users for each month during the applicable period
Active Users = (number of users at end of previous month + number of users at end of current month)/2.
- (3) The number of "users" used to calculate ARPU is basically the total number of subscriptions, excluding the subscriptions listed below:
Number of active users = subscriptions
Subscriptions of communication module services, "Phone Number Storage," "Mail Address Storage," "docomo Business Transceiver" and wholesale telecommunications services and interconnecting telecommunications facilities that are provided to MVNOs; and Data Plan subscriptions in the case where the customer contracting for such subscription in his/her name also has a subscription for Xi or FOMA services in his/her name.

Revenues from communication module services, "Phone Number Storage," "Mail Address Storage," "docomo Business Transceiver" and wholesale telecommunications services and interconnecting telecommunications facilities that are provided to MVNOs are not included in NTT DOCOMO's ARPU calculation.

(b) NTT East and NTT West

- NTT separately computes the following two categories of ARPU for the fixed-line business conducted by each of NTT East and NTT West, using the following measures:
- Aggregate Fixed-line ARPU (Telephone Subscriber Lines + INS-Net Subscriber Lines): Calculated based on revenues from monthly charges and call charges for Telephone Subscriber Lines and INS-Net Subscriber Lines, which are included in operating revenues from Voice Transmission Services (excluding IP Services), and revenues from FLET'S ADSL and FLET'S ISDN, which are included in operating revenues from IP Services.
 - FLET'S Hikari ARPU: Calculated based on revenues from FLET'S Hikari (including FLET'S Hikari optional services), which are included in operating revenues from IP Services and Supplementary Business, revenues from monthly charges, call charges and device connection charges for Hikari Denwa, which are included in operating revenues from IP Services, and revenues from FLET'S Hikari optional services, which are included in Supplementary Business revenues.

- (1) FLET'S Hikari includes B FLET'S, FLET'S Hikari Next, FLET'S Hikari Light, FLET'S Hikari Lightplus and FLET'S Hikari WiFi Access provided by NTT East, B FLET'S, FLET'S Hikari Premium, FLET'S Hikari Mytown, FLET'S Hikari Next, FLET'S Hikari Mytown Next, FLET'S Hikari Light and FLET'S Hikari WiFi Access provided by NTT West, and the Hikari Collaboration Model wholesale provision of services provided by NTT East and NTT West to service providers. FLET'S Hikari optional services include wholesale services provided to service providers by NTT East and NTT West.
- (2) Revenues from interconnection charges are excluded from the calculation of Aggregate Fixed-line ARPU (Telephone Subscriber Lines + INS-Net Subscriber Lines) and FLET'S Hikari ARPU.
- (3) For purposes of calculating Aggregate Fixed-line ARPU (Telephone Subscriber Lines + INS-Net Subscriber Lines), the number of subscribers is that for fixed-line services (telephone subscriber lines or INS Net subscriber lines).
- (4) In terms of number of channels, transmission rate, and line use rate (base rate), INS-Net 1500 is in all cases roughly ten times greater than INS-Net 64. For this reason, one INS-Net 1500 subscription is calculated as ten INS-Net 64 subscriptions.
- (5) For purposes of calculating FLET'S Hikari ARPU, the number of subscribers is determined based on the number of FLET'S Hikari subscribers (including B FLET'S, FLET'S Hikari Next, FLET'S Hikari Light, FLET'S Hikari Lightplus and FLET'S Hikari WiFi Access provided by NTT East, B FLET'S, FLET'S Hikari Premium, FLET'S Hikari Mytown, FLET'S Hikari Next, FLET'S Hikari Mytown Next, FLET'S Hikari Light and FLET'S Hikari WiFi Access provided by NTT West), and Hikari Collaboration Model wholesale services provided by NTT East and NTT West to service providers.
- (6) Number of Active Subscribers used in the ARPU calculation of NTT East and NTT West is as below:
Fiscal Year Results: Sum of number of Active Subscribers for each month from April to March
Active Subscribers = (number of subscribers at end of previous month + number of subscribers at end of current month) / 2

Reconciliation of Capital Investment

	Billions of yen				
Fiscal years ended March 31	2015 (U.S. GAAP)	2016 (U.S. GAAP)	2017 (U.S. GAAP)	2018 (U.S. GAAP)	2019 (IFRS)
Payments for property, plant and equipment	¥1,444.9	¥1,265.6	¥1,301.7	¥1,308.7	—
Payments for acquisition of intangible fixed assets	358.2	371.9	400.1	402.0	—
Purchase of property, plant and equipment, intangible assets, and investment property	—	—	—	—	¥1,672.4
Total	¥1,803.1	¥1,637.5	¥1,701.8	¥1,710.7	¥1,672.4
Differences between capital investment	(14.4)	(49.7)	1.8	36.0	(24.6)

Reconciliation of EBITDA Margin

	Billions of yen					
Fiscal years ended March 31	2015 (U.S. GAAP)	2016 (U.S. GAAP)	2017 (U.S. GAAP)	2018 (U.S. GAAP)	2018 (IFRS)	2019 (IFRS)
Operating income / Operating profit	¥ 1,084.6	¥ 1,348.1	¥ 1,539.8	¥ 1,642.8	¥ 1,641.1	¥ 1,693.8
Depreciation and amortization	1,828.0	1,766.3	1,462.2	1,339.4	1,346.9	1,333.6
Loss on sales and disposal of property, plant and equipment	108.6	130.7	107.4	71.4	71.2	87.5
Impairment losses	42.2	32.7	73.9	162.2	177.9	126.4
EBITDA	3,063.4	3,277.9	3,183.3	3,215.8	3,237.1	3,241.4
Operating revenues	¥11,095.3	¥11,541.0	¥11,391.0	¥11,799.6	¥11,782.1	¥11,879.8
EBITDA margin	27.6%	28.4%	27.9%	27.3%	27.5%	27.3%

Consolidated Statements of Financial Position

Nippon Telegraph and Telephone Corporation and its subsidiaries
March 31

	Millions of yen	
	2018	2019
ASSETS		
Current assets		
Cash and cash equivalents	¥ 895,003	¥ 946,134
Trade and other receivables	4,022,227	4,391,434
Other financial assets	123,344	117,753
Inventories	354,181	331,634
Other current assets	474,405	550,487
Subtotal	5,869,160	6,337,442
Assets held for sale	—	242,524
Total current assets	5,869,160	6,579,966
Non-current assets		
Property, plant and equipment	8,812,174	9,012,947
Goodwill	841,283	886,531
Intangible assets	1,589,448	1,627,762
Investment property	1,002,301	967,006
Investments accounted for using the equity method	539,342	298,261
Other financial assets	1,068,799	1,138,502
Deferred tax assets	1,173,946	1,124,467
Other non-current assets	644,991	659,704
Total non-current assets	15,672,284	15,715,180
Total assets	¥21,541,444	¥22,295,146
LIABILITIES AND EQUITY		
Current liabilities		
Short-term borrowings	¥ 1,017,744	¥ 1,397,545
Trade and other payables	1,811,723	2,092,479
Other financial liabilities	50,711	44,305
Accrued payroll	455,007	468,216
Income taxes payable	240,670	237,282
Other current liabilities	1,046,582	988,244
Total current liabilities	4,622,437	5,228,071
Non-current liabilities		
Long-term borrowings	2,953,855	2,865,181
Other financial liabilities	190,356	175,087
Defined benefit liabilities	1,860,524	1,878,013
Deferred tax liabilities	74,095	61,189
Other non-current liabilities	274,523	282,815
Total non-current liabilities	5,353,353	5,262,285
Total liabilities	9,975,790	10,490,356
Equity		
Nippon Telegraph and Telephone Corporation ("NTT") shareholders' equity		
Common stock	937,950	937,950
Additional paid-in capital	2,396,555	2,341,206
Retained earnings	6,125,957	5,954,305
Treasury stock	(610,742)	(150,635)
Other components of equity	200,638	182,087
Total NTT shareholders' equity	9,050,358	9,264,913
Non-controlling interests	2,515,296	2,539,877
Total equity	11,565,654	11,804,790
Total liabilities and equity	¥21,541,444	¥22,295,146

Consolidated Statements of Profit or Loss and Consolidated Statements of Comprehensive Income

Nippon Telegraph and Telephone Corporation and its subsidiaries
Year ended March 31

Consolidated Statements of Profit or Loss

	Millions of yen	
	2018	2019
Operating revenues	¥11,782,148	¥11,879,842
Operating expenses		
Personnel expenses	2,393,358	2,391,617
Expenses for purchase of goods and services and other expenses	5,833,866	5,917,693
Depreciation and amortization	1,346,931	1,333,647
Loss on disposal of property, plant and equipment and intangible assets	154,161	172,167
Impairment losses	177,869	126,398
Goodwill	34,119	39,443
Metal cables	124,800	66,003
Other	18,950	20,952
Taxes and dues	234,877	244,487
Total operating expenses	10,141,062	10,186,009
Operating profit	1,641,086	1,693,833
Finance income	43,964	24,465
Finance costs	97,183	36,362
Income from arbitration award	147,646	—
Share of profit (loss) of entities accounted for using the equity method	4,966	(10,075)
Profit before taxes	1,740,479	1,671,861
Income taxes	533,780	533,174
Profit	1,206,699	1,138,687
Profit attributable to NTT	897,887	854,561
Profit attributable to Non-controlling interests	308,812	284,126
Earnings per share attributable to NTT		
Basic earnings per share (yen)	¥ 449.86	¥ 440.25

Consolidated Statements of Comprehensive Income

	Millions of yen	
	2018	2019
Profit	¥1,206,699	¥1,138,687
Other comprehensive income (net of taxes)		
Items that will not be reclassified to profit or loss		
Change in the fair value of financial assets measured at fair value through other comprehensive income	—	5,967
Share of other comprehensive income of entities accounted for using the equity method	(432)	(4,637)
Remeasurements of the defined benefit plans	32,710	(13,250)
Total of items that will not be reclassified to profit or loss	32,278	(11,920)
Items that may be reclassified subsequently to profit or loss		
Unrealized gains (losses) on securities	15,602	—
Cash flow hedges	2,257	(2,784)
Foreign currency translation adjustments	(23,098)	2,791
Share of other comprehensive income of entities accounted for using the equity method	41,258	(12,025)
Total of items that may be reclassified to profit or loss	36,019	(12,018)
Total other comprehensive income (net of taxes)	68,297	(23,938)
Total comprehensive income	1,274,996	1,114,749
Comprehensive income attributable to NTT	950,302	826,154
Comprehensive income attributable to Non-controlling interests	¥ 324,694	¥ 288,595

Consolidated Statements of Changes in Equity

Nippon Telegraph and Telephone Corporation and its subsidiaries
Year ended March 31

Fiscal year ended March 31, 2018

	Millions of yen							
	NTT shareholders' equity						Non-controlling interests	Total equity
	Common stock	Additional paid-in capital	Retained earnings	Treasury stock	Other components of equity	Total		
As of April 1, 2017	¥937,950	¥2,410,572	¥5,468,245	¥(375,223)	¥179,453	¥8,620,997	¥2,421,432	¥11,042,429
Comprehensive income								
Profit	—	—	897,887	—	—	897,887	308,812	1,206,699
Other comprehensive income	—	—	—	—	52,415	52,415	15,882	68,297
Total comprehensive income	—	—	897,887	—	52,415	950,302	324,694	1,274,996
Transactions with owners and other transactions								
Dividends of surplus	—	—	(271,405)	—	—	(271,405)	(126,494)	(397,899)
Transfer to retained earnings	—	—	31,230	—	(31,230)	—	—	—
Purchase and disposal of treasury stock	—	1	—	(235,519)	—	(235,518)	—	(235,518)
Changes in ownership interest in subsidiaries without loss of control	—	(22,467)	—	—	—	(22,467)	(104,336)	(126,803)
Share-based compensation transactions	—	(7,315)	—	—	—	(7,315)	—	(7,315)
Put options granted to non-controlling interests	—	15,764	—	—	—	15,764	—	15,764
Total Transactions with owners and other transactions	—	(14,017)	(240,175)	(235,519)	(31,230)	(520,941)	(230,830)	(751,771)
As of March 31, 2018	¥937,950	¥2,396,555	¥6,125,957	¥(610,742)	¥200,638	¥9,050,358	¥2,515,296	¥11,565,654

Fiscal year ended March 31, 2019

	Millions of yen							
	NTT shareholders' equity						Non-controlling interests	Total equity
	Common stock	Additional paid-in capital	Retained earnings	Treasury stock	Other components of equity	Total		
As of March 31, 2018	¥937,950	¥2,396,555	¥ 6,125,957	¥(610,742)	¥200,638	¥9,050,358	¥2,515,296	¥11,565,654
Cumulative effect of adoption of IFRS 9 "Financial Instruments"	—	—	14,033	—	(2,432)	11,601	7,565	19,166
As of April 1, 2018	¥937,950	¥2,396,555	¥ 6,139,990	¥(610,742)	¥198,206	¥9,061,959	¥2,522,861	¥11,584,820
Comprehensive income								
Profit	—	—	854,561	—	—	854,561	284,126	1,138,687
Other comprehensive income	—	—	—	—	(28,407)	(28,407)	4,469	(23,938)
Total comprehensive income	—	—	854,561	—	(28,407)	826,154	288,595	1,114,749
Transactions with owners and other transactions								
Dividends of surplus	—	—	(313,605)	—	—	(313,605)	(142,171)	(455,776)
Transfer to retained earnings	—	—	(8,383)	—	8,383	—	—	—
Transfer to non-financial assets	—	—	—	—	3,905	3,905	—	3,905
Purchase and disposal of treasury stock	—	0	—	(258,153)	—	(258,153)	—	(258,153)
Cancellation of treasury stock	—	(2)	(718,258)	718,260	—	—	—	—
Changes in ownership interest in subsidiaries without loss of control	—	(61,233)	—	—	—	(61,233)	(135,038)	(196,271)
Share-based compensation transactions	—	(6,589)	—	—	—	(6,589)	—	(6,589)
Put options granted to non-controlling interests	—	12,475	—	—	—	12,475	5,630	18,105
Total Transactions with owners and other transactions	—	(55,349)	(1,040,246)	460,107	12,288	(623,200)	(271,579)	(894,779)
As of March 31, 2019	¥937,950	¥2,341,206	¥ 5,954,305	¥(150,635)	¥182,087	¥9,264,913	¥2,539,877	¥11,804,790

Consolidated Statements of Cash Flows

Nippon Telegraph and Telephone Corporation and its subsidiaries
Year ended March 31

	Millions of yen	
	2018	2019
Cash flows from operating activities		
Profit	¥ 1,206,699	¥ 1,138,687
Depreciation and amortization	1,346,931	1,333,647
Impairment losses	177,869	126,398
Share of loss (profit) of entities accounted for using the equity method	(4,966)	10,075
Losses on retirement of property, plant and equipment and intangible assets	69,591	85,703
Gain on sales of property, plant and equipment and intangible assets	(12,556)	(10,142)
Income taxes	533,780	533,174
Decrease (increase) in trade and other receivables	(395,972)	(338,018)
Decrease (increase) in inventories	(44,770)	1,572
Decrease (increase) in other current assets	(36,754)	(11,538)
Increase (decrease) in trade and other payables / accrued payroll	70,900	99,452
Increase (decrease) in other current liabilities	111,414	12,511
Increase (decrease) in defined benefit liabilities	18,596	834
Increase (decrease) in other non-current liabilities	12,371	4,359
Other	49,599	15,359
Subtotal	3,102,732	3,002,073
Interest and dividends received	58,634	56,889
Interest paid	(45,461)	(39,416)
Income taxes paid	(574,635)	(613,389)
Net cash provided by (used in) operating activities	2,541,270	2,406,157
Cash flows from investing activities		
Purchase of property, plant and equipment, intangible assets, and investment property	(1,748,113)	(1,672,350)
Purchase of investments	(251,295)	(65,623)
Proceeds from sale or redemption of investments	268,370	55,178
Expenses due to acquisition of control of subsidiaries	(9,057)	(107,264)
Other	(6,090)	15,923
Net cash provided by (used in) investing activities	(1,746,185)	(1,774,136)
Cash flows from financing activities		
Net increase (decrease) in short-term borrowings	(2,370)	486,124
Proceeds from increases in long-term borrowings	449,857	434,922
Repayments of long-term borrowings	(636,853)	(627,680)
Payments for acquisition of interests in subsidiaries from non-controlling interests	(132,431)	(164,415)
Dividends paid	(271,405)	(313,605)
Dividends paid to non-controlling interests	(126,366)	(142,020)
Payments for purchase of treasury stock	(235,570)	(258,215)
Other	(13,141)	623
Net cash provided by (used in) financing activities	(968,279)	(584,266)
Effect of exchange rate changes on cash and cash equivalents	(7,576)	3,376
Net increase (decrease) in cash and cash equivalents	(180,770)	51,131
Cash and cash equivalents as of April 1	1,075,773	895,003
Cash and cash equivalents as of March 31	¥ 895,003	¥ 946,134

Operating Revenues and Expenses

Operating Revenues

NTT Group's operating revenues are divided into six service categories, comprising fixed voice related services, mobile voice related services, IP/packet communications services, sales of telecommunications equipment, system integration and other.

Operating revenues in the fiscal year ended March 31, 2019 increased 0.8% from the previous fiscal year to ¥11,879.8 billion. This increase was due to such factors as an increase in revenues in the data communications business segment, both domestically and overseas, and an increase in revenues from sales of telecommunications equipment and the expansion of *docomo Hikari* in the mobile communications business segment.

Operating revenues for each service category for the fiscal year ended March 31, 2019 are summarized as follows:

■ **Fixed Voice Related Services**

NTT Group's fixed voice related services include a portion of the services it provides in the regional communications business segment and long distance and international communications business segment, such as telephone subscriber lines, INS-Net, conventional leased circuits and high speed digital.

Fixed voice related revenues for the fiscal year ended March 31, 2019 decreased 6.0% from the previous fiscal year to ¥1,077.7 billion, accounting for 9.1% of total operating revenues. This decrease was due to a continued decline in the number of subscriptions for telephone subscriber lines and INS-Net caused by the increased popularization of mobile phones and optical IP telephones, and an increase in free or low-priced communications services offered by OTT operators (content distribution services utilizing other companies' communications infrastructure, allowing a service provider to distribute services without owning its own communications infrastructure).

■ **Mobile Voice Related Services**

Mobile voice related services include a portion of the services NTT Group provides in the mobile communications business segment, such as LTE (Xi).

Mobile voice related revenues for the fiscal year ended March 31, 2019 increased 1.4% from the previous fiscal year to ¥946.7 billion, accounting for 8.0% of total operating revenues. This increase was due to, mainly to the revenue boosting effect associated with the reduction of *Monthly Support* discounts.

■ **IP/Package Communications Services**

NTT Group's IP/packet communications services include a portion of the services it provides in the regional communications business segment, such as *FLET'S Hikari*, a portion of the services it provides in the long distance and international communications business segment, such as Arc star Universal One, IP-VPN, and OCN, as well as a portion of the services it provides in the mobile communications business segment, such as LTE (Xi) packet communications services.

In the fiscal year ended March 31, 2019, revenues from IP/packet communications services decreased 1.0% from the

previous fiscal year to ¥3,721.2 billion, accounting for 31.3% of total operating revenues. This decrease was due to, among other things, the increased number of transfers to the *Hikari Collaboration Model* in the regional communications business segment and a decrease in revenues in the mobile communications business segment due to strengthened efforts to enhance returns to customers, despite the continued increase in the number of *docomo Hikari* subscriptions in the mobile communications business segment.

■ **Sales of Telecommunications Equipment**

This category includes a portion of the services NTT Group provides in the mobile communications business segment and the regional communications business segment.

In the fiscal year ended March 31, 2019, revenues from telecommunications equipment sales increased 5.8% from the previous fiscal year to ¥929.2 billion, accounting for 7.8% of total operating revenues. This increase was mainly due to an increase in equipment sales revenues as a result of higher smartphone prices in the mobile communications business segment.

■ **System Integration**

NTT Group's system integration services include its data communications business segment and a portion of the services it provides in the long distance and international communications business segment and the regional communications business segment.

In the fiscal year ended March 31, 2019, revenues from system integration increased 4.0% from the previous fiscal year to ¥3,594.1 billion, accounting for 30.3% of total operating revenues. This increase was mainly due to factors such as the impact of the expansion of consolidated subsidiaries and the expanded scope of business in the data communications business segment.

■ **Other**

Other services principally comprise building maintenance, real estate rentals, systems development, leasing activities and the Smart Life area in the mobile communications business segment.

In the fiscal year ended March 31, 2019, revenues from other services increased 0.1% from the previous fiscal year to ¥1,611.0 billion, accounting for 13.6% of total operating revenues.

Operating Expenses

Operating expenses in the fiscal year ended March 31, 2019 increased 0.4% from the previous fiscal year to ¥10,186.0 billion. The reasons for the increase are discussed below.

■ **Personnel Expenses**

Personnel expenses in the fiscal year ended March 31, 2019 decreased 0.1% from the previous fiscal year to ¥2,391.6 billion. This decrease was mainly due to the increase in personnel expenses as a result of the effect of the expansion of consolidated subsidiaries in the data communications business segment, despite a decrease in personnel expenses due to employee retirements in the regional communications business segment.

The Fiscal Year Ended March 31, 2019, Compared with the Fiscal Year Ended March 31, 2018

Billions of yen				
Fiscal years ended March 31	2018	2019	Change	Percent Change
Operating revenues	¥11,782.1	¥11,879.8	97.7	0.8%
Fixed voice related services	1,146.9	1,077.7	(69.2)	(6.0)%
Mobile voice related services	933.3	946.7	13.5	1.4%
IP/Package communications services	3,757.4	3,721.2	(36.2)	(1.0)%
Sales of telecommunications equipment	878.3	929.2	50.9	5.8%
System integration	3,457.4	3,594.1	136.7	4.0%
Other	1,608.9	1,611.0	2.1	0.1%
Operating expenses	10,141.1	10,186.0	44.9	0.4%
Operating profit	1,641.1	1,693.8	52.7	3.2%
Finance income and costs	(53.2)	(11.9)	41.3	77.6%
Income from arbitration award	147.6	—	(147.6)	—
Share of profit (loss) of entities accounted for using equity method	5.0	(10.1)	(15.0)	—
Profit before taxes	1,740.5	1,671.9	(68.6)	(3.9)%
Income taxes	533.8	533.2	(0.6)	(0.1)%
Profit	1,206.7	1,138.7	(68.0)	(5.6)%
Less—profit attributable to non-controlling interests	308.8	284.1	(24.7)	(8.0)%
Profit attributable to NTT	897.9	854.6	(43.3)	(4.8)%

■ **Expenses for Purchase of Goods and Services and Other Expenses**

In the fiscal year ended March 31, 2019, expenses for purchase of goods and services and other expenses increased 1.4% from the previous fiscal year to ¥5,917.7 billion. This increase was mainly due to the expanded scope of business in the data communications business segment and an increase in revenue-linked headset costs resulting from an increase in equipment sales in the mobile communications business segment.

■ **Depreciation and Amortization Expenses**

Depreciation and amortization expenses in the fiscal year ended March 31, 2019 decreased 1.0% from the previous fiscal year to ¥1,333.6 billion. This decrease was mainly due to the fact that the accelerated depreciation of prior-generation equipment that was recorded for the mobile communications business segment in the fiscal year ended March 31, 2018 was not recorded in the fiscal year ended March 31, 2019.

Operating Profit

As a result of the foregoing, operating profit for the fiscal year ended March 31, 2019 increased 3.2% from the previous fiscal year to ¥1,693.8 billion.

Finance Income and Costs

Finance income and costs for the fiscal year ended March 31, 2019 was ¥(11.9) billion compared to ¥(53.2) billion for the previous fiscal year.

Income from Arbitration Award

The arbitration awards received from Tata Sons Limited in the fiscal year ended March 31, 2018 did not occur in the fiscal year ended March 31, 2019.

Share of Profit (Loss) of Entities Accounted for Using Equity Method

Share of profit (loss) of entities accounted for using equity method for the fiscal year ended March 31, 2019 was ¥(10.1) billion compared to ¥5.0 billion for the previous fiscal year.

Profit before Taxes

As a result of the foregoing, profit before taxes for the fiscal year ended March 31, 2019 decreased 3.9% from the previous fiscal year to ¥1,671.9 billion.

Income Taxes

In the fiscal year ended March 31, 2019, income taxes decreased 0.1% from the previous fiscal year to ¥533.2 billion. Effective tax rates for the fiscal year ended March 31, 2018 and for the fiscal year ended March 31, 2019 were 30.67% and 31.89%.

Profit Attributable to NTT

As a result, profit for the fiscal year ended March 31, 2019 decreased 5.6% from the previous fiscal year to ¥1,138.7 billion. Profit attributable to NTT (excluding the profit attributable to non-controlling interests) for the fiscal year ended March 31, 2019 decreased 4.8% from the previous fiscal year to ¥854.6 billion.

Liquidity and Capital Resources

Financing, Capital Resources and Use of Funds

Cash flows provided by operating activities during the fiscal year ended March 31, 2019, excluding the impact of non-business days, amounted to ¥2,397.9 billion, a decrease of ¥375.3 billion from ¥2,773.2 billion in the fiscal year ended March 31, 2018. This decrease was due to, among other factors, income from an arbitration award for the fiscal year ended March 31, 2018 and a decrease in collections of trade receivables for the fiscal year ended March 31, 2019. Cash flows provided by operating activities for the fiscal year ended March 31, 2019 was ¥2,406.2 billion.

NTT Group used the cash flows provided by operating activities mainly to acquire property, plant and equipment, pay dividends and complete stock repurchases.

Cash flows used in investing activities during the fiscal year ended March 31, 2019 amounted to ¥1,774.1 billion, an increase in payments of ¥28.0 billion from ¥1,746.2 billion in the fiscal year ended March 31, 2018. This increase was due to, among other factors, an increase of ¥98.2 billion in expenditures on acquisitions of control over subsidiaries, despite a decrease of ¥75.8 billion in investments for property, plant and equipment and intangibles on a cash basis.

The decrease in payments for investments in property, plant and equipment and intangibles for the fiscal year ended March 31, 2019 resulted from, among other factors, a decrease in capital expenditures due to improved efficiency in access equipment maintenance in the regional communications business. For the fiscal year ended March 31, 2019, capital investments amounted to ¥1,697.0 billion on an accrual basis, of which ¥593.7 billion was invested in the mobile communications business and ¥541.0 billion was invested in the regional communications business.

Cash flows used in financing activities during the fiscal year ended March 31, 2019 amounted to ¥584.3 billion, a decrease in payments of ¥384.0 billion from ¥968.3 billion in the fiscal year ended March 31, 2018. This decrease in payments was due to, among other factors, a net increase of ¥482.7 billion in proceeds as a result of increases in short-term and long-term debt. The capital raised from the issuance of long-term debt in the fiscal year ended March 31, 2019 includes ¥15.6 billion in net proceeds from corporate bond offerings and an aggregate of ¥419.3 billion in loans from financial institutions.

As of March 31, 2019, the total balance of the interest-bearing debt of NTT Group was ¥4,262.7 billion, an increase of ¥291.1 billion from the balance of ¥3,971.6 billion as of March 31, 2018. The ratio of interest-bearing debt to shareholders' equity stood at 46.0% as of March 31, 2019 (from 43.9% as of March 31, 2018).

NTT Group believes that the net cash it expects to generate from operating activities, financing from banks and other financial institutions and/or offerings of equity or debt securities in the capital markets will provide the requisite financial resources to meet NTT Group's currently anticipated capital investment and other expenditure needs and payment of debt.

For the fiscal year ending March 31, 2020, NTT Group expects to make capital investments totaling ¥1,750.0 billion on an accrual basis, due to, among other factors, an increase in capital investments due to data center-related work in the long distance and international communications business, despite a decrease in capital investments related to improved efficiency in existing network investments in the mobile communications business and a decrease in capital investments related to improved efficiency in the maintenance of access equipment and in the work related to opening new lines in the regional communications business. The total amount of expected capital investments includes ¥570.0 billion in the mobile communications business and ¥520.0 billion in the regional communications business. The actual amount of capital investments may be different from expected one, since capital investments may be influenced by trends in demand, the competitive environment and other factors. In addition, the actual amount of NTT Group's financing will depend on its future performance, market conditions and other factors, and is therefore difficult to predict.

Liquidity

As of March 31, 2019, NTT Group had cash and cash equivalents balance, excluding the impact of non-business days, at the end of the fiscal year of ¥1,169.8 billion, an increase of ¥42.9 billion compared to the balance of ¥1,126.9 billion as of March 31, 2018. Cash equivalents represent a temporary cash surplus used to repay debts and make capital investments, among other factors, and are used as working capital. Accordingly, the balance of cash equivalents fluctuates each fiscal year depending on particular financing and working capital requirements. Cash and cash equivalents at the end of the fiscal year ended March 31, 2019, were ¥946.1 billion.

Risk Factors

For more information on risk factors, please refer to NTT's corporate website.
https://www.ntt.co.jp/ir/mgt_e/risks_factors.html



Consolidated Subsidiaries (As of March 31, 2019)

Company	Capital	Voting rights ratio	Main line(s) of business
Consolidated subsidiaries	Millions of yen	%	
MOBILE COMMUNICATIONS BUSINESS SEGMENT			
NTT DOCOMO, INC.	949,680	64.11	Provision of mobile communications services and smart life area services

REGIONAL COMMUNICATIONS BUSINESS SEGMENT			
NIPPON TELEGRAPH AND TELEPHONE EAST CORPORATION	335,000	100.00	Provision of intra-prefectural communications services in the eastern part of Japan
NIPPON TELEGRAPH AND TELEPHONE WEST CORPORATION	312,000	100.00	Provision of intra-prefectural communications services in the western part of Japan

LONG DISTANCE AND INTERNATIONAL COMMUNICATIONS BUSINESS/DATA COMMUNICATIONS BUSINESS SEGMENT			
NTT, Inc.	574,730	100.00	Governance, strategy planning, and policy promotion for the global business of NTT Group

LONG DISTANCE AND INTERNATIONAL COMMUNICATIONS BUSINESS SEGMENT			
NTT Communications Corporation	230,979	100.00	Provision of inter-prefectural communications services, international communications services, and Internet-related services.
Dimension Data Holdings plc	USD888.52 million	100.00	Provision of IT system building and maintenance support for corporations
NTT Security Corporation	25,250	100.00	Provision of professional security services
NTT America	USD2,695.38 million	100.00	Provision of ICT services in North America
NTT EUROPE	GBP153.83 million	100.00	Provision of ICT services in Europe
Lux e-shelter 1	EUR403.21 million	86.70	Provision of data center-related services in Europe
Arkadin International	EUR223.05 million	100.00	Provision of teleconference, web conference, and video conference services
RagingWire Data Centers	USD420.42 million	100.00	Provision of data center-related services in North America
NTT Global Networks	USD513.53 million	100.00	Provision of network services
NETMAGIC SOLUTIONS	INR16,611.93 million	100.00	Provision of data center-related services in India
GYRON INTERNET	GBP93.00 million	100.00	Provision of data center-related services in the U.K.
NTT Plala Inc.	12,321	95.39	Provision of Internet connection and video distribution services
Secure-24 Intermediate Holdings	USD0 million	100.00	Provision of IT-managed services in North America
Transatel	EUR5.86 million	80.70	Provision of mobile connectivity services for IoT
Spectrum Holdings	USD4,101.93 million	100.00	Management of subsidiaries of Dimension Data Holdings plc in Europe and North America

DATA COMMUNICATIONS BUSINESS SEGMENT			
NTT DATA CORPORATION	142,520	54.21	Provision of data communications system services and network system services
NTT DATA	USD4,826.13 million	100.00	Consulting, system design, and development in North America
NTT DATA Services	USD2,114.29 million	100.00	Consulting, system design, and development in North America
EVERIS PARTICIPACIONES	EUR120.31 million	100.00	Consulting, system design, and development
NTT Data International	USD4,848.07 million	100.00	Management of subsidiaries of NTT DATA CORPORATION in North America

OTHER BUSINESSES			
NTT-SH Corporation	108,372	100.00	Holding company of NTT Urban Development Corporation and NTT FACILITIES, INC.
NTT Urban Development Corporation	48,760	100.00	Real estate acquisition, development, construction, leasing, and management
NTT FACILITIES, INC.	12,400	100.00	Design, management, and maintenance of buildings, equipment, and electric power facilities
NTT FINANCE CORPORATION	16,771	100.00	Lease and installment sales of telecommunications-related devices, and billing and collection of charges for communications and other services
NTT COMWARE CORPORATION	20,000	100.00	Development, production, operation, and maintenance of information communications systems and software
NTT ADVANCED TECHNOLOGY CORPORATION	5,000	100.00	Technology transfer, technical consulting, and design and development of systems

Note: NTT-SH Corporation was reorganized into NTT Urban Solutions, Inc., which began operations in July 2019 as the point of contact for services offered by NTT Group in relation to urban solutions.

Other 889 companies

Career Summaries of Members of the Board and Audit & Supervisory Board Members

Hiromichi Shinohara

Chairman of the Board

Years Served as Member of the Board: 10
Shares Owned: 19,600

Background and Experience

Apr. 1978: Joined Nippon Telegraph and Telephone Public Corporation
Jun. 2009: Senior Vice President
Head of Research and Development Planning
Member of the Board of the Company
Jun. 2011: Senior Vice President
Head of Research and Development Planning
Head of the Information Sharing Laboratory Group
Member of the Board of the Company
Oct. 2011: Senior Vice President
Head of Research and Development Planning
Member of the Board of the Company
Jun. 2012: Executive Vice President
Head of Research and Development Planning
Member of the Board of the Company
Jun. 2014: Senior Executive Vice President
Head of Research and Development Planning
Member of the Board of the Company
Jun. 2018: Chairman of the Board of the Company (present post)

Motoyuki Ii

Senior Executive Vice President

Chief Technology Officer

Chief Information Officer

Chief Digital Officer

In charge of technical strategy and international standardization

Member of the Board

Years Served as Member of the Board: 1
Shares Owned: 6,900

Background and Experience

Apr. 1983: Joined Nippon Telegraph and Telephone Public Corporation
Jun. 2011: Senior Vice President
Executive Manager of the Plant Department of the Network Business Headquarters
Executive Manager of the Planning Department of the Network Business Headquarters
Jun. 2013: Senior Vice President
Executive Manager of the Plant Planning Department of the Network Business Headquarters
Jun. 2014: Senior Vice President
Senior Executive Manager of the Corporate Sales Promotion Headquarters
Member of the Board of Nippon Telegraph and Telephone East Corporation
Jun. 2015: Executive Vice President
Senior Executive Manager of the Corporate Sales Promotion Headquarters
Member of the Board of Nippon Telegraph and Telephone East Corporation
Jun. 2016: Senior Executive Vice President
Senior Executive Manager of the Corporate Sales Promotion Headquarters
Member of the Board of Nippon Telegraph and Telephone East Corporation
Jun. 2017: Senior Executive Vice President
Senior Executive Manager of the Business Innovation Headquarters
Member of the Board of Nippon Telegraph and Telephone East Corporation
Jun. 2018: Senior Executive Vice President
Head of Technology Planning
Member of the Board of the Company
Jun. 2019: President and Chief Executive Officer
Member of the Board of NTT Anode Energy Corporation (present post)
Jun. 2019: Senior Executive Vice President
Member of the Board of the Company (present post)

Takashi Hiroi

Senior Vice President

Head of Finance and Accounting

Member of the Board

Years Served as Member of the Board: 4
Shares Owned: 4,500

Background and Experience

Apr. 1986: Joined the Company
May 2005: Vice President of Corporate Business Strategy of the Company
Jun. 2008: Vice President of Strategic Business Development of the Company
Jul. 2009: Vice President of Corporate Strategy Planning of the Company
Jun. 2014: Head of Finance and Accounting of the Company
Jun. 2015: Senior Vice President
Head of Finance and Accounting
Member of the Board of the Company (present post)

Ryota Kitamura

Senior Vice President

Head of Corporate Strategy Planning

Member of the Board

Years Served as Member of the Board: 1
Shares Owned: 1,800

Background and Experience

Apr. 1988: Joined the Company
Oct. 2003: Senior Manager of the Corporate Strategy Planning Department of Nippon Telegraph and Telephone East Corporation
Jun. 2011: Head of the Marketing Strategy Group of the Corporate Strategy Planning Department of Nippon Telegraph and Telephone East Corporation
Jul. 2015: Vice President of Corporate Strategy Planning of the Company
Jun. 2018: Member of the Board of Nippon Telegraph and Telephone West Corporation (present post)
Senior Vice President
Head of the Corporate Strategy Planning Department
Member of the Board of the Company (present post)

Jun Sawada

President and Chief Executive Officer

Member of the Board

Years Served as Member of the Board: 5
Shares Owned: 15,400

Background and Experience

Apr. 1978: Joined Nippon Telegraph and Telephone Public Corporation
Jun. 2008: Senior Vice President
Executive Manager of the Corporate Strategy Planning Department
Member of the Board of NTT Communications Corporation
Jun. 2011: Executive Vice President
Executive Manager of the Corporate Strategy Planning Department
Member of the Board of NTT Communications Corporation
Jun. 2012: Senior Executive Vice President
Executive Manager of the Corporate Strategy Planning Department
Member of the Board of NTT Communications Corporation
Jun. 2013: Senior Executive Vice President
Member of the Board of NTT Communications Corporation
Jun. 2014: Senior Executive Vice President
Member of the Board of the Company
Jun. 2018: President and Chief Executive Officer
Member of the Board of the Company (present post)
Aug. 2018: President and Chief Executive Officer
Member of the Board of NTT, Inc. (present post)

Tsunehisa Okuno

Executive Vice President

Head of Global Business

Member of the Board

Years Served as Member of the Board: 7
Shares Owned: 6,300

Background and Experience

Apr. 1983: Joined Nippon Telegraph and Telephone Public Corporation
Jul. 2007: Vice President of Corporate Business Strategy of the Company
Jun. 2008: Head of the Global Business Strategy Office of Strategic Business Development of the Company
Jan. 2011: Senior Vice President of Dimension Data Holdings plc
Jun. 2011: Head of Global Business of the Company
Jun. 2012: Senior Vice President
Head of Global Business
Member of the Board of the Company
Jun. 2016: Director of NTT Security Corporation (present post)
Jun. 2018: Executive Vice President
Head of Global Business
Member of the Board of the Company (present post)
Aug. 2018: Member of the Board of NTT, Inc. (present post)
Jul. 2019: Chairman of the Board of NTT Ltd. (present post)

Eiichi Sakamoto

Senior Vice President

Head of General Affairs

Member of the Board

Years Served as Member of the Board: 3
Shares Owned: 4,000

Background and Experience

Oct. 2006: Joined the Company
Head of the Business Management Group of the Corporate Strategy Planning Department of Nippon Telegraph and Telephone East Corporation
Jul. 2009: Head of the Planning Group of the Corporate Strategy Planning Department of Nippon Telegraph and Telephone East Corporation
Jul. 2011: Head of Public Relations of Corporate Strategy Planning of the Company
Jun. 2015: Senior Vice President
Managing Director of the Corporate Marketing Strategy Department of NTT DOCOMO, INC.
Jun. 2016: Senior Vice President
Head of the Corporate Strategy Planning Department
Member of the Board of the Company
Member of the Board of Nippon Telegraph and Telephone East Corporation (present post)
Jun. 2018: Senior Vice President
Head of General Affairs
Member of the Board of the Company (present post)

Atsuko Oka

Senior Vice President

Head of Technology Planning

Member of the Board

Years Served as Member of the Board: –
Shares Owned: 0

Background and Experience

Apr. 1988: Joined the Company
Aug. 2006: Director of the IP Service Department of the Net Business Division of NTT Communications Corporation
Jul. 2010: Director and President of NTT NavSpace Corporation
Jul. 2012: Director of Integrated Customer Portal Taskforce of the Corporate Strategy Planning Department of NTT Communications Corporation
Aug. 2015: Vice President of the IoT Office of the Corporate Strategy Planning Department of NTT Communications Corporation
Jul. 2017: General Manager of the Business Platform Division
Member of the Board of NTT Resonant Incorporated
Oct. 2017: General Manager of the Solutions Business Division
Member of the Board of NTT Resonant Incorporated
Jun. 2019: Senior Vice President
Head of Technology Planning
Member of the Board of the Company (present post)

Akira Shimada

Senior Executive Vice President

Chief Financial Officer

Chief Compliance Officer

In charge of business strategy and risk management

Member of the Board

Years Served as Member of the Board: 7
Shares Owned: 9,804

Background and Experience

Apr. 1981: Joined Nippon Telegraph and Telephone Public Corporation
Jun. 2007: Vice President of Corporate Strategy Planning of the Company
Jul. 2007: General Manager of the Accounts and Finance Department of Nippon Telegraph and Telephone West Corporation
Jul. 2009: General Manager of the General Affairs and Personnel Department of Nippon Telegraph and Telephone East Corporation
Jun. 2011: Senior Vice President
General Manager of the General Affairs and Personnel Department
Member of the Board of Nippon Telegraph and Telephone East Corporation
Jun. 2012: Senior Vice President
Head of General Affairs
Member of the Board of the Company
Jun. 2015: Executive Vice President
Head of General Affairs
Member of the Board of the Company
Jun. 2018: Senior Executive Vice President
Member of the Board of the Company (present post)
Aug. 2018: Senior Executive Vice President of NTT, Inc. (present post)

Hiroki Kuriyama

Executive Vice President

Head of Strategic Business Development

In charge of 2020 Project

Member of the Board

Years Served as Member of the Board: 5
Shares Owned: 5,170

Background and Experience

Apr. 1985: Joined the Company
Feb. 2003: Vice President of Department I of the Company
May 2005: Vice President of Corporate Business Strategy of the Company
Jun. 2008: Vice President of Corporate Strategy Planning of the Company
Jun. 2012: Vice President of President's Office of General Affairs of the Company
Jun. 2014: Senior Vice President
Head of Strategic Business Development
Member of the Board of the Company
Jun. 2019: Executive Vice President
Head of Strategic Business Development
Member of the Board of the Company (present post)

Katsuhiko Kawazoe

Senior Vice President

Head of Research and Development Planning

Member of the Board

Years Served as Member of the Board: 1
Shares Owned: 2,200

Background and Experience

Apr. 1987: Joined the Company
Aug. 2003: Senior Research Engineer of the Cyberspace Laboratories of the Cyber Communications Laboratory Group of the Company
Oct. 2007: Senior Research Engineer of the Cyber Solutions Laboratories of the Cyber Communications Laboratory Group of the Company
Jul. 2008: Vice President of Research and Development Planning of the Company
Jul. 2014: Head of the Service Evolution Laboratories of the Service Innovation Laboratory Group of the Company
Jul. 2016: Head of the Service Innovation Laboratory Group of the Company
Jul. 2018: Senior Vice President
Head of Research and Development Planning
Member of the Board of the Company (present post)

Katsuhiko Shirai

Outside Independent Member of the Board

Years Served as Member of the Board: 7

Shares Owned: 4,300

Background and Experience

Apr. 1965: Assistant of the First Faculty of Science and Engineering of Waseda University
Apr. 1968: Full-Time Lecturer of the Faculty of Science and Engineering of Waseda University
Apr. 1970: Assistant Professor of the Faculty of Science and Engineering of Waseda University
Apr. 1975: Professor of the Faculty of Science and Engineering of Waseda University
Nov. 1994: Director of Academic Affairs and Director of the International Exchange Center of Waseda University
Nov. 1998: Executive Director of Waseda University
Nov. 2002: President of Waseda University
Nov. 2010: Educational Advisor of Waseda University
Apr. 2011: Chairperson of the Foundation for the Open University of Japan
Jun. 2012: Member of the Board of the Company (present post)
Jun. 2012: Director of Japan Display, Inc.
Nov. 2016: Honorary Advisor of Waseda University (present post)

Sadayuki Sakakibara

Outside Independent Member of the Board

Years Served as Member of the Board: 7
Shares Owned: 9,500

Background and Experience

Apr. 1967: Joined Toyo Rayon Co., Ltd. (currently registered as Toray Industries, Inc.)
Jun. 1994: Director of the Corporate Planning Department of Toray Industries, Inc.
Jun. 1996: Director of the Board of Toray Industries, Inc.
Jun. 1998: Managing Director of Toray Industries, Inc.
Jun. 1999: Senior Managing Director of Toray Industries, Inc.
Jun. 2001: Executive Vice President of Toray Industries, Inc.
Jun. 2002: President of Toray Industries, Inc.
Jun. 2010: Chairman and Representative Member of the Board of Toray Industries, Inc.
Jun. 2010: Director of the Board of Mitsui O.S.K. Lines, Ltd.
Jun. 2012: Member of the Board of the Company (present post)
Jun. 2013: Director of Hitachi, Ltd.
Jun. 2014: Chairman of the Japan Business Federation (Kaidanren)
Jun. 2014: Chairman of the Board of Directors, Toray Industries, Inc.
Jun. 2015: Chief Senior Adviser and Chief Senior Counselor of Toray Industries, Inc.
Jun. 2017: Senior Adviser of Toray Industries, Inc.
Aug. 2018: Special Adviser of Toray Industries, Inc.
Mar. 2019: Outside Director of SHIMANO INC. (present post)
May 2019: Outside Director of Nitori Holdings Co., Ltd. (present post)

Akiko Ide

Audit & Supervisory Board Member

Years Served as Audit & Supervisory Board Member: 5
Shares Owned: 10,200

Background and Experience

Apr. 1977: Joined Nippon Telegraph and Telephone Public Corporation
Jun. 2003: General Manager of Customer Services of NTT DOCOMO, INC.
Sep. 2004: Concurrently General Manager of Customer Services and General Manager of Information Security of NTT DOCOMO, INC.
Jun. 2005: General Manager of Customer Services of NTT DOCOMO, INC.
Apr. 2006: General Manager of the Corporate Citizenship Department of NTT DOCOMO, INC.
Jun. 2006: Executive Director and General Manager of the Corporate Citizenship Department of NTT DOCOMO, INC.
Jul. 2008: Executive Director and General Manager of the Chugoku Regional Office of NTT DOCOMO, INC.
Jun. 2012: Executive Director and Director of Information Security of NTT DOCOMO, INC.
May 2013: President and Chief Executive Officer of Radishbo-ya Co., Ltd.
Jun. 2013: Executive Director and Senior Manager in Charge of Commerce Business Promotion of NTT DOCOMO, INC.
Jun. 2014: Full-Time Audit & Supervisory Board Member of the Company (present post)
Aug. 2018: Audit & Supervisory Board Member of NTT, Inc. (present post)

Hideki Kanda

Outside Independent Audit & Supervisory Board Member

Years Served as Audit & Supervisory Board Member: –
Shares Owned: 0

Background and Experience

Apr. 1977: Research Assistant of the Faculty of Law of the University of Tokyo
Apr. 1980: Lecturer of the Faculty of Law of Gakushuin University
Apr. 1982: Associate Professor of the Faculty of Law of Gakushuin University
Apr. 1988: Associate Professor of the Faculty of Law of the University of Tokyo
Apr. 1991: Associate Professor of the Graduate Schools for Law and Politics of the University of Tokyo
May 1993: Professor of the Graduate Schools for Law and Politics of the University of Tokyo
Apr. 2016: Professor of the Professional School of Law (Law School) of Gakushuin University (present post)
Jun. 2016: Emeritus Professor of the University of Tokyo (present post)
Jun. 2017: Director of Sumitomo Mitsui Trust Bank, Limited (present post)
Jun. 2019: Outside Audit & Supervisory Board Member of the Company (present post)

Ken Sakamura

Outside Independent Member of the Board

Years Served as Member of the Board: –
Shares Owned: 300

Background and Experience

Apr. 2000: Professor of the Interfaculty Initiative in Information Studies and the Graduate School of Interdisciplinary Information Studies of the University of Tokyo
Jan. 2002: Director of YRP Ubiquitous Networking Laboratory (present post)
Apr. 2009: Director of the Institute of Infrastructure Application of Ubiquitous Computing of the Interfaculty Initiative in Information Studies of the University of Tokyo
Oct. 2014: President of Wabrad Local Economy Organization by Open Data & Big Data (present post)
Apr. 2017: Professor and Dean of Faculty of Information Networking for Innovation and Design of Toyo University (present post)
Head of Collaboration Hub for University and Business of Toyo University
Jun. 2017: Emeritus Professor of the University of Tokyo (present post)
Jun. 2019: Member of the Board of the Company (present post)

Takao Maezawa

Audit & Supervisory Board Member

Years Served as Audit & Supervisory Board Member: 3
Shares Owned: 9,704

Background and Experience

Apr. 1978: Joined Nippon Telegraph and Telephone Public Corporation
Jun. 2006: Executive Manager of the Human Resources Management Department
General Manager of the Training Institute
Executive Manager of General Affairs of NTT Communications Corporation
Jun. 2008: Senior Vice President
Deputy General Manager of the Enterprise Business Division
Member of the Board of NTT Communications Corporation
Jun. 2011: Executive Vice President
Deputy General Manager of the Enterprise Business Division
Member of the Board of NTT Communications Corporation
Executive Vice President
Head of the Second Sales Division
Member of the Board of NTT Communications Corporation
Jun. 2012: President and CEO of NTT-PC Communications Incorporated
Jun. 2016: Full-Time Audit & Supervisory Board Member of the Company (present post)
Aug. 2018: Audit & Supervisory Board Member of NTT, Inc. (present post)

Kaoru Kashima

Outside Independent Audit & Supervisory Board Member

Years Served as Audit & Supervisory Board Member: –
Shares Owned: 0

Background and Experience

Nov. 1981: Joined Showa Audit Corporation
(currently Ernst & Young ShinNihon LLC)
Apr. 1985: Registered as a certified public accountant
(registration up-to-date)
Jun. 1996: Partner of Showa Ota & Co.
(currently Ernst & Young ShinNihon LLC)
Jun. 2002: Senior Partner of ShinNihon & Co.
(currently Ernst & Young ShinNihon LLC)
Jul. 2006: In charge of personnel of HR Development Headquarters of ShinNihon & Co.
Sep. 2010: Managing Director of Ernst & Young ShinNihon LLC
In charge of the Corporate Culture Promotion Office
In charge of the Public Relations Office
Jul. 2012: General Manager of Knowledge Headquarters
Managing Director of Ernst & Young ShinNihon LLC
Jul. 2013: Representative Director of Ernst & Young Institute Co., Ltd.
Jun. 2019: Outside Audit & Supervisory Board Member of the Company (present post)
Jun. 2019: Director of Sumitomo Mitsui Trust Bank, Limited (present post)

Keiko Takegawa

Outside Independent Member of the Board

Years Served as Member of the Board: –
Shares Owned: 0

Background and Experience

Jul. 2008: Director-General for Policies on Cohesive Society and Minister's Secretariat of the Cabinet Office
Jul. 2009: Director-General for the Gender Equality Bureau of the Cabinet Office
Dec. 2012: Director-General of the Public Relations Office of the Cabinet Office
Jul. 2014: Director of the Gender Equality Bureau of the Cabinet Office
Apr. 2019: Professor of Showa Women's University (present post)
Jun. 2019: Member of the Board of the Company (present post)
Jun. 2019: Audit & Supervisory Board Member of MITSUI MINING & SMELTING CO., LTD. (present post)

Takashi Iida

Outside Independent Audit & Supervisory Board Member

Years Served as Audit & Supervisory Board Member: 5
Shares Owned: 3,200

Background and Experience

Apr. 1974: Registered as Attorney-at-Law (Daini Tokyo Bar Association) (registration up-to-date)
Joined Mori Sogo Law Offices (currently Mori Hamada & Matsumoto)
Apr. 1991: Deputy Chairman of the Daini Tokyo Bar Association
Apr. 1997: Executive Governor of the Japan Federation of Bar Associations
Apr. 2006: Chairman of the Daini Tokyo Bar Association
Apr. 2006: Vice President of the Japan Federation of Bar Associations
Jan. 2012: Established Kowa Law Office (present post)
Jun. 2012: Corporate Auditor (Part-Time) for Shimadzu Corporation (present post)
Jun. 2013: Corporate Auditor of JAFCO Co., Ltd.
Jun. 2013: Outside Director of Alps Electric Co., Ltd.
(currently registered as Alps Alpine Co., Ltd.) (present post)
Jun. 2014: Outside Audit & Supervisory Board Member of the Company (present post)

Notes: 1. Number of shares owned is as of June 2019.
2. Other items are as of July 2019.

Corporate Information

Company name	NIPPON TELEGRAPH AND TELEPHONE CORPORATION		
Date of establishment	April 1, 1985		
Head office	Otemachi First Square, East Tower, 5-1, Otemachi 1-Chome, Chiyoda-ku, Tokyo 100-8116, Japan		
Telephone	+81 (3) 6838-5111		
Common stock	¥937,950,000,000		
Total number of shares authorized to be issued by NTT	6,192,920,900 shares		
Total number of shares issued	1,950,394,470 shares		
Aggregate voting rights	19,148,459		
Number of shareholders (including holders of fractional shares)	821,175		

Stock Exchange on Which the Company Is Listed

Tokyo (Stock Code: 9432)

Investor Relations

https://www.ntt.co.jp/ir/contact_e/

Telephone: +81 (3) 6838-5481

Depository for NTT American Depositary Receipts (ADRs)

JPMorgan Chase Bank, N.A.

383 Madison Avenue, Floor 11

New York, NY 10179, U.S.A.

Inquiries

JPMorgan Service Center

P.O. Box 64504

St. Paul, MN 55164-0504, U.S.A.

Telephone: 1-800-990-1135 (General)

1-651-453-2128 (From outside the U.S.A.)

Principal Shareholders

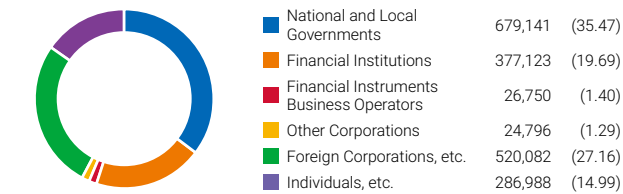
Name	Number of shares held (Thousands)	Ratio of the number of shares held to the total number of shares issued (%)
The Minister of Finance	679,121	35.42
The Master Trust Bank of Japan, Ltd. (Trust Account)	85,651	4.47
Japan Trustee Services Bank, Ltd. (Trust Account)	79,101	4.13
Japan Trustee Services Bank, Ltd. (Trust Account 9)	29,504	1.54
Japan Trustee Services Bank, Ltd. (Trust Account 5)	26,339	1.37
Japan Trustee Services Bank, Ltd. (Trust Account 1)	17,537	0.91
JPMorgan Chase Bank 385632	17,442	0.91
Moxley & Co. LLC	16,345	0.85
Japan Trustee Services Bank, Ltd. (Trust Account 2)	16,301	0.85
Japan Trustee Services Bank, Ltd. (Trust Account 7)	16,012	0.84

Notes: 1. Number of shares held is rounded down to the nearest thousand.
2. NTT's holdings of treasury stock (32,998,346 shares) are not included in the above table.
3. Equity ownership percentages do not include treasury stock.

Breakdown of Shares by Shareholder

The number of shares is rounded down to the nearest thousand.

The figures in parentheses represent the percentage of total shares owned for each category of shareholder.



Notes: 1. NTT's holdings of treasury stock (32,998,346 shares) are not included in the above table.
2. The percentages above represent the ratio of shareholders' shares to the total number of issued shares excluding treasury stock.
3. "Other Corporations" above includes 28 thousand shares in the name of Japan Securities Depository Center.
4. Shares representing less than one unit are not included in the above table.

Restrictions under the NTT Act

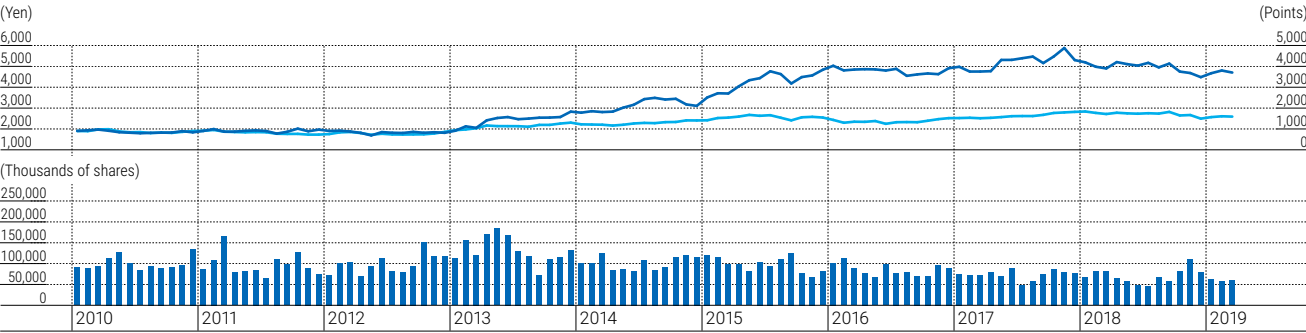
The NTT Act requires the government to own at least one-third of the total number of issued shares.* Pursuant to the NTT Act, the proportion of voting rights of foreign nationals and foreign corporations is limited to less than one-third of the total voting rights.

If the proportion of voting rights of foreign nationals and foreign corporations should exceed one-third, pursuant to the NTT Act, NTT is prohibited from registering ownership of shareholders in excess of such limit.

As of the end of March 2019, 5,200,824 of the voting rights were owned by foreign nationals and foreign corporations.

* For the time being, pursuant to Article 13 of the NTT Act, any increase in the number of shares attributable to the issuance of new shares is not included in calculating the total number of issued shares for the purposes of the NTT Act.

NTT's Share Price on the Tokyo Stock Exchange



NTT's share price (upper left scale)
 TOPIX index (right scale)
 NTT's trading volume (lower left scale)

Notes: 1. NTT's share price and TOPIX index are the simple average closing prices on the last trading day every month.
2. NTT's trading volume refers to the number of NTT shares traded every month.
3. NTT conducted a 100-for-1 stock split of its common stock, with an effective date of January 4, 2009, and a 2-for-1 stock split of its common stock, with an effective date of July 1, 2015. NTT share prices have been adjusted to reflect the impact of these stock splits.