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## Initiatives Aimed at Promoting ESG Management

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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 or referred to in this report are based on a series of assumptions, projections, estimates, judgments, and beliefs of the management of NTT in the 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, and other factors, which could cause actual results to differ materially from the forecasts contained or referred to in this report.

**Editorial Policy**

This report provides information that is important to shareholders and investors, including not only financial and growth strategy information 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/library_e/presentation/
- Shareholders’ Meeting Materials: https://www.ntt.co.jp/shareholder/boards/meetings.html
- Sustainability Report: https://www.ntt.co.jp csr/report.html
NTT Group's Journey of Transformation

NTT Group's Business Structure Transformation

Development of Telephony Services

Expansion of global business

Transition to mobile and broadband services

More than twice as high as time of establishment of Nippon Telegraph and Telephone Corporation

Operating revenues / operating profit

¥11.9 trillion

¥1.69 trillion

Change in Earnings Structure Focus to System Integration and IP

Operating revenues breakdown / Operating profit

¥11.9 trillion

Operating revenues ¥5.1 trillion

Operating profit ¥0.76 trillion

Voice 83% ¥4.2 trillion

IP, Packet 31% ¥3.7 trillion

SI 30% ¥3.6 trillion

Operating revenues breakdown (Overseas / Domestic)

¥11.9 trillion

Overseas sales

Domestic sales

EPS Growth

EPS (earnings per share)

¥440

¥36

¥2012 2013 2014 2015 2016 2017 2018

¥100


Operating revenues

¥0.76 trillion

¥5.1 trillion


¥186

¥440


Group Formation

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: Network system services, system integration, etc., in Japan and overseas

Competitive Advantages:
- Secure, highly reliable, stable communication network
- Provision of and support for ICT solutions with strong total 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)

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: EIP 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 Aisule Energy Corporation

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

Operating Revenues ¥11,879.8 billion
Operating Profit ¥1,693.8 billion
Capital Investment ¥593.7 billion
Number of Employees 303,351

Composition by Segment (As of March 2019)
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.

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..."
Message from the CEO

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.

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 108 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 the J.League. J.League concurred with NTT Group’s idea that data should belong to the customer, the center 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 Itami 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 JIS 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.

We consider the 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 2021, we will roll out 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 KOUSSU,” 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 ¥2 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 thriving 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.
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 specifications will be announced going forward.

Cognitive Foundation

space. These are managed by the service

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In April 2019, we succeeded in developing the world’s first specifi
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.

EPS Growth
+50% (Approximately ¥640 per share)

Overseas Sales / Overseas Operating Profit Margin
$25 billion / 7%

Cost Reductions (in fixed-line / mobile access networks) at least ¥800 billion

ROIC
Return on invested capital
8%

Capex to Sales (Domestic Network Business)*2
Capital expenditure to sales ratio
13.5% or less

*1 Including results from the global holding company, its subsidiaries and its affiliates. Operating profit excludes temporary expenses, such as M&A-related depreciation costs of intangible fixed assets.

*2 Excludes NTT Communications’ data centers and certain other assets.

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

● The target year for EPS growth, overseas sales/overseas operating profit margin, cost reductions, and ROIC is the fiscal year ending March 31, 2024 (regarding EPS growth*3 and cost reductions, the targets are compared with the fiscal year ended March 31, 2018).

● The target year for capex to sales is the fiscal year ending March 31, 2022.

Contribute to Realization of Smart World / Society 5.0
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

1. Support our customers’ digital transformations
2. Accelerate our own digital transformation
3. Leverage talent, technologies, and assets
4. Promote ESG management, and enhance the returns of shareholders to improve corporate value

Support Our Customers’ Digital Transformations

NTT Group: Contributing to the Realization of a Smart World

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.

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)
  - Begun 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

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

- 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)
- 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)

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

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

Cumulative investment in 5G infrastructure build-out, etc.

- $1 trillion

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.

<table>
<thead>
<tr>
<th>Personal Solutions</th>
<th>Target</th>
<th>FY2019 Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great value and simple rate plans</td>
<td>Approx. 20~40% rate reduction (FY2019-Q1)</td>
<td>Began offering Gigahiro™ and Gigalight™ (from June 2019)</td>
</tr>
<tr>
<td>Expand collaborative partners</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promote electronic payment, use of points</td>
<td>Locations where payment / point service can be used</td>
<td>Locations where payment / point service can be used (As of the end of June 2019)</td>
</tr>
<tr>
<td>Upgrading of personal contents</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Optimum proposals suiting individual customers by leveraging AI, big data
Simple procedures, smooth resolution of business

Medium-Term Management Strategy

Four to 11 bases (September 2019)
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—
Number of bases with permanently installed DOCOMO Open Lab® environments for the verification of 5G technologies (September 2019)

For details on 5G, please see NTT DOCOMO’s website.

https://www.nttdocomo.co.jp/corporate/ir/library/presentation/index.html#190918 (Japanese Only)

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

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™ 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® smart agriculture.

*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 of IOWN, ID, and above, are usable.

For details on IOWN, please see page 30.

Overview and Summary 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

For details on 5G, please see NTT DOCOMO’s website.

https://www.nttdocomo.co.jp/corporate/ir/library/presentation/index.html#190918 (Japanese Only)
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, NTT Global Sourcing, Inc., and established a global procurement company, NTT Global Sourcing, Inc., with a view to reducing NTT Group’s overall procurement costs.

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.

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 overseas 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.

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.

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.

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-savings, 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® (WinActor®)
- Further expand scope of work
- Optimize-enterprise service processes from service order / delivery with IT
- Optimize-construction / maintenance-related processes with IT (in collaboration with partner companies)*3

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

- Reduce wait / attendance time at docomo Shops
- Cut by half

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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

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 solution 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.

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.

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 ¥300 billion by the fiscal year ending March 31, 2026.
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%.

Minimize business risks
Capture business opportunities
Ongoing improvements of corporate value
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)

Researchers: Approx. 2,500
(For details about Kirari®, please refer to page 28.)
Research and Development Aimed at Achieving Immersive and Natural Worlds

Further Evolving of Ultrahigh-Immersive Telespresence 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 sense of “being there” as the match progresses.

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.

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

As Moore’s law approaches its limit in electronic circuits, there are expectations 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 (a-OEO converter) and a nano photodetector (a-OEO converter) with extremely small capacitance and low energy consumption. Moreover, through their integration, we also realized an O-O conv. version optical transistor. These nano-optical technologies have opened the way to realizing high-speed, low-energy integrated opto-electronic information processing.

For details about OAM multiplex transmission technology, please refer to the following website: https://www.youtube.com/watch?v=Jr9ZmrmYcVY

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

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 ultra-wide 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 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.

For details about OAM multiplex transmission technology, please refer to the following website: https://www.ntt.co.jp/activity/en/innovation/kirari/

Optical transistor capable of high-speed operation with ultralow power consumption

As Moore’s law approaches its limit in electronic circuits, there are expectations 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 (a-OEO converter) and a nano photodetector (a-OEO converter) with extremely small capacitance and low energy consumption. Moreover, through their integration, we also realized an O-O conversion optical transistor. These nano-optical technologies have opened the way to realizing high-speed, low-energy integrated opto-electronic information processing.

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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 safe 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.

Digital twin computing is a significant advance in existing digital twin technology. By performing calculations such as conversions, combinations, and applications 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.

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.
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.

### Initiatives Aimed at Promoting ESG Management

<table>
<thead>
<tr>
<th>Material Issues</th>
<th>Status of Initiatives for the Medium-Term Management Strategy</th>
<th>Major Initiatives</th>
<th>Targets</th>
<th>Relevant Sustainable Development Goals</th>
<th>Relevant Management Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
| Reduction of Environmental Impact | • Reduce environmental impact | • Contribution to reducing society’s CO2 emissions  \*10 times the Company’s own CO2 emissions or more (by FY2030)  
• Electricity efficiency of telecommunications \*10 times or more (by FY2030)*  
• Conversion rate of general Company-use vehicles in Japan to EVs  \*100% (by 2025)  
• Final disposal ratio of waste  \*Under 1% (by FY2030)  | | | |
| **Social** |                                                                 |                   |         |                                        |                             |
| Strengthening of Security | • Protect personal information  
• Support customers in reinforcing information security | • Maintenance of security promotion systems  \*P35  
• Promotion of security business  \*P35 | | | |
| Utilization of Diverse Human Resources | • Promote diversity | • Empowerment of women in the workforce  \*P45  
• Revision of compensation system for research personnel  \*P45 | | | |
| Strengthening of Disaster Countermeasures | • Strengthen disaster countermeasures | • Securing of stability and reliability of communication services  \*P45 | | | |
| **Governance** |                                                                 |                   |         |                                        |                             |
| Reinforcement of Governance for Sustainable Growth | • Enhance structure on the basis of the intent of Japan’s Corporate Governance Code  
• Strengthen global corporate governance | • Composition of the Board of Directors  \*P55  
• Evaluation of Board of Directors’ effectiveness  \*P55 | | | |

* *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).

**Reduction of downside risks**  
**Expansion of upside potential**  
**Ongoing improvements of corporate value**
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.

Social Demand
- Climate change caused by global warming, resource depletion associated with global production 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 to make use of smart energy solutions.

Relevant Laws, Regulations, and Global Trends
- Transition to a carbon-free society with the establishment of plastic resource-recycling strategies, 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

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>Set up the Environmental Response Office</td>
</tr>
<tr>
<td>1996</td>
<td>Formulated the Basic Program of Environmental Protection</td>
</tr>
<tr>
<td>2006</td>
<td>Set up the Global Environmental Protection Promotion Committee as a decision-making organ</td>
</tr>
<tr>
<td>2007</td>
<td>Formulated a detailed program compiling the action plans of each business unit</td>
</tr>
<tr>
<td>2009</td>
<td>Changed the name of the organization to the Environmental Protection Promotion Office</td>
</tr>
<tr>
<td>2010</td>
<td>Established the new NTT Group Global Environmental Charter to clearly express our principles and positions</td>
</tr>
<tr>
<td>2011</td>
<td>Formulated the NTT Group Ecology Program 21 as our basic concept for promoting environmental protection</td>
</tr>
</tbody>
</table>

The NTT Group Environmental Statement

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

The Eco Strategy 2030

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.

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

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

Goals for the Reduction of Environmental Burden

- Use ICT to contribute to the environment
- Reduce environmental impact of business operations
- Effectively use resources

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
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.

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, 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.

<table>
<thead>
<tr>
<th>Components of the Business</th>
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<tbody>
<tr>
<td><strong>Power Generation</strong></td>
<td></td>
</tr>
<tr>
<td>1. Green power generation business: Power supply solutions using renewable energy</td>
<td></td>
</tr>
<tr>
<td>2. VPP (virtual power plant) business: Supply and demand coordination solutions through control of dispersed power sources*</td>
<td></td>
</tr>
<tr>
<td>3. Advanced EV station business: Advanced EV charging infrastructure solutions using storage batteries and chargers*</td>
<td></td>
</tr>
<tr>
<td>4. Backup power source business: Optimal emergency power supply solutions according to the type of disaster</td>
<td></td>
</tr>
<tr>
<td>5. Electric power retail and wholesale business: Electric power supply with low environmental impact</td>
<td></td>
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</tbody>
</table>

Overview of the Business

<table>
<thead>
<tr>
<th>Overview of the Business</th>
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<tbody>
<tr>
<td><strong>During Ordinary Times</strong></td>
<td></td>
</tr>
<tr>
<td>VPP</td>
<td></td>
</tr>
<tr>
<td>Backup power source</td>
<td></td>
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<tr>
<td>Electric power retail</td>
<td></td>
</tr>
<tr>
<td><strong>During Disasters</strong></td>
<td></td>
</tr>
<tr>
<td>Evacuation center</td>
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</tr>
</tbody>
</table>

For details on the smart energy business, please see page 37.

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–¥42.2 billion per year)
* In the fiscal year ended March 31, 2019, invested approximately ¥1 billion in measures for reducing power use, including those related to air-conditioning equipment and facilities (service life of measures: 15 years)
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 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 cybersecurity 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
- 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

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
- Early Detection of and Rapid Responses to Security Threats
- Unique position that allows the provision of a wide range of ICT-related services on a global scale
- Development of “verified by NTT” solutions that take advantage of the Company’s global operating environment, value chain, and digital transformation

Cooperation with Stakeholders Aimed at Leading the Ossipation of Knowledge and at Developing a Digital Society
- Advanced analysis capabilities, such as SEM engine, and personnel with a high level of integrity
- Advanced analysis systems and professional support provided by analysts
- The only Japanese company with a dedicated cyber-advocacy team (a team that makes policy recommendations and society-related recommendations)
- Forming 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.

Shinichi Yokohama
Chief Information Security Officer (CISO)
NTT
Initiatives Aimed at Promoting ESG Management

Initiatives Aimed at Strengthening Security

Strengthening 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,*6 an organization that facilitates information sharing, collaboration, and coordination in Japan’s ICT industry
  - The global CSIRT community FIRST,*7 an association for the sharing of information on global cyber-threats
  - Establishment of ICT companies worldwide of CSDE,*5 an international council for the realization of a secure digital economy
  - Issuance of the IAB*D
  - In three countries and regions worldwide, coordination with communities that conduct collaborative efforts aimed at sharing information on and neutralizing cyber-crime
    - Europe: EC2,*4 the United States: NCFTA,*6 Japan: JC3*8

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

Security management consulting / Security operation / Security development

Level

Title

Job classification

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 CSISO 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 CSISO 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.

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.

NIPPON TELEGRAPH AND TELEPHONE CORPORATION ANNUAL REPORT 2019
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.

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

<table>
<thead>
<tr>
<th>Security Measures that NTT Ltd. is Taking</th>
<th>R&amp;D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network (Border) Security</td>
<td></td>
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<tr>
<td>- Advanced detection of threats</td>
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<tr>
<td>Cloud-Native Security</td>
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<tr>
<td>- Microsegmentation</td>
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<tr>
<td>- Lateral movement detection</td>
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<tr>
<td>Application Security</td>
<td></td>
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<tr>
<td>- Utilization of WhiteHat Security, Inc.</td>
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</tr>
<tr>
<td>- Elimination of continuous vulnerabilities by providing clients with DevSecOps environments</td>
<td></td>
</tr>
<tr>
<td>Next-Generation End-Point Security</td>
<td></td>
</tr>
<tr>
<td>- Immediate countermeasures for detection incidents (proliferation prevention, isolation)</td>
<td></td>
</tr>
<tr>
<td>IoT Security</td>
<td></td>
</tr>
<tr>
<td>- Product SOC (connected cars, etc.) Assessment of the vulnerabilities of IoT devices</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Security Management program</th>
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<tbody>
<tr>
<td>Use of risk assessment to identify issues and establish countermeasure policies</td>
</tr>
</tbody>
</table>

Application of Leading Edge Technologies

<table>
<thead>
<tr>
<th>Asset visualization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network analysis and segmentation</td>
</tr>
<tr>
<td>Host reinforcement</td>
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</table>

Real-Time Monitoring and Operation

<table>
<thead>
<tr>
<th>Continuous monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threat detection</td>
</tr>
<tr>
<td>Incident response</td>
</tr>
</tbody>
</table>

Use of dedicated box to detect and block unauthorized communication

Monitoring of communications status, reporting on status through distribution of reports, support for client issues, response to faults

Eradication of virus infections and restoration
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 Female Employees**

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. In the fiscal year ended March 31, 2023, the percentage rose to 33.2%, marking the seventh consecutive fiscal year since the fiscal year ended March 31, 2017, that the Group has reached the target.

**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. In the fiscal year ended March 31, 2023, the percentage rose to 33.2%, marking the seventh consecutive fiscal year since the fiscal year ended March 31, 2017, 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.
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.

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 talent

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.

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.

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work</td>
<td>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</td>
</tr>
<tr>
<td>Welfare</td>
<td>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</td>
</tr>
</tbody>
</table>

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 to spouses of same-gender partners who have the equivalent of spousal relationships with employees.

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary</td>
<td>Allowance for dependent</td>
</tr>
<tr>
<td>Work</td>
<td>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 spouses’s job</td>
</tr>
<tr>
<td>Welfare</td>
<td>Congratulatory/condolence payments (special payments for marriage, condolences payments), company housing, company housing subsidy, child-rearing leave, child-rearing leave (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 spouses’s job</td>
</tr>
</tbody>
</table>

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.

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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.

<table>
<thead>
<tr>
<th>System supporting flexible workstyles</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systems supporting flexible workstyles</td>
<td>Flextime systems, discretionary work systems for specialists, working from home systems, etc.</td>
</tr>
</tbody>
</table>

Use of Working-from-Home System, Number and Percentage of Paid Leave Days Taken

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of employees using the working-from-home system</th>
<th>Number of paid leave days taken (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>3,955</td>
<td>96.4</td>
</tr>
<tr>
<td>2017</td>
<td>15,046</td>
<td>98.4</td>
</tr>
<tr>
<td>2018</td>
<td>26,719</td>
<td>96.4</td>
</tr>
</tbody>
</table>

Agegroups of NTT Group companies

* Excluding the NTT DATA Group only in 2016
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, the 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 communications buildings and base stations, and 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, 2020, no serious telecommunications disruptions occurred at four telecommunications business companies (NTT DOCOMO, NTT East, NTT West, and NTT Communications), while service stability was maintained at 100.00% under normal circumstances.

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.
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**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>Establishment of NTT Group, Inc. (strengthening of governance system)</td>
</tr>
<tr>
<td>1998</td>
<td>Establishment of the Audit &amp; Supervisory Board, consisting 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.</td>
</tr>
<tr>
<td>2002</td>
<td>Establishment of the Audit &amp; Supervisory Board Members (outside independent members)</td>
</tr>
<tr>
<td>2005</td>
<td>Establishment of the Audit &amp; Supervisory Board Members (outside independent members)</td>
</tr>
<tr>
<td>2006</td>
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<td>2019</td>
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</table>

**Business Execution / Supervisory Systems**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>2002</td>
<td>Establishment of the Audit &amp; Supervisory Board Members (outside independent members)</td>
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<td>2003</td>
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**Internal Control / Risk Management**

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**Information Disclosure**

<table>
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<tr>
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<tbody>
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<tr>
<td>2019</td>
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</tr>
</tbody>
</table>

**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.

**Initiatives Aimed at Promoting ESG Management**

**Qualitative enhancement by improving the execution of duties and expanding disclosure**

**Composition of the Board of Directors**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>Establishment of the Audit &amp; Supervisory Board Members (outside independent members)</td>
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<tr>
<td>2016</td>
<td>Establishment of the Audit &amp; Supervisory Board Members (outside independent members)</td>
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<td>2017</td>
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<td>2019</td>
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</tr>
</tbody>
</table>

**Material ESG Issue 5**

**Reinforcement of Governance for Sustained Growth**

Enhancements to the recruitment and selection process, including the establishment of a committee for the selection of new directors and Audit & Supervisory Board Members, and the appointment of full-time employees for internal control and risk management, further enhance NTT’s efforts to improve corporate governance.

NTT’s Governance Code, which has been revised six times, most recently in April 2015, sets out the guiding principles for the governance of the Group. The Code is also designed to ensure the transparency of corporate governance, as reflected in the Audit & Supervisory Board’s supervision of the Board of Directors and its committees.

**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.
## Initiatives Aimed at Promoting ESG Management

### Board of Directors

#### Members of the Board

<table>
<thead>
<tr>
<th>Name</th>
<th>Position and Responsibilities</th>
<th>Years Served as Member of the Board</th>
<th>Shares Owned</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hiromichi Shinohara</td>
<td>Chairman of the Board</td>
<td>10</td>
<td>19,600</td>
<td></td>
</tr>
<tr>
<td>Katsuhiko Shirai</td>
<td>Outside Independent Member of the Board</td>
<td>—</td>
<td>—</td>
<td>For career summaries, please see page 120.</td>
</tr>
<tr>
<td>Jun Sawada</td>
<td>President and Chief Executive Officer, Head of Strategic Business Development</td>
<td>7</td>
<td>12,700</td>
<td></td>
</tr>
<tr>
<td>Hiroshi Kuriyama</td>
<td>Executive Vice-President, Head of Research and Development Planning</td>
<td>1</td>
<td>3,000</td>
<td></td>
</tr>
<tr>
<td>Hiroki Kawasoe</td>
<td>Senior Vice-President, Head of Research and Development Planning</td>
<td>2</td>
<td>2,200</td>
<td></td>
</tr>
<tr>
<td>Takashi Hiroi</td>
<td>Senior Vice-President, Head of Finance and Accounting</td>
<td>4</td>
<td>4,000</td>
<td></td>
</tr>
<tr>
<td>Eiichi Sakamoto</td>
<td>Senior Vice-President</td>
<td>3</td>
<td>4,000</td>
<td></td>
</tr>
<tr>
<td>Ryota Kitamura</td>
<td>Senior Vice-President, Head of Corporate Strategy Planning</td>
<td>1</td>
<td>1,800</td>
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<tr>
<td>Akira Shimada</td>
<td>Senior Executive Vice-President, Chief Commercial Officer, Head of Business Strategy Planning</td>
<td>7</td>
<td>9,804</td>
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<tr>
<td>Motoyuki II</td>
<td>Senior Executive Vice-President, Chief Technology Officer</td>
<td>1</td>
<td>6,900</td>
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<tr>
<td>Tsunehis Okuno</td>
<td>Executive Vice-President, Head of Global Business</td>
<td>7</td>
<td>6,300</td>
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<tr>
<td>Eiich Sakamato</td>
<td>Senior Vice-President</td>
<td>3</td>
<td>4,000</td>
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<tr>
<td>Sadaayuki Sakakibara</td>
<td>Senior Independent Member of the Board</td>
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<td>5,170</td>
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<tr>
<td>Ken Sakamura</td>
<td>Senior Independent Member of the Board</td>
<td>5</td>
<td>15,400</td>
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<tr>
<td>Katsuhiko Shirai</td>
<td>Outside Independent Member of the Board</td>
<td>7</td>
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<tr>
<td>Atsuko Oka</td>
<td>Senior Vice-President, Head of Technology Planning</td>
<td>2</td>
<td>3,000</td>
<td></td>
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<tr>
<td>Keiko Takegawa</td>
<td>External Independent Member of the Board</td>
<td>7</td>
<td>1,800</td>
<td></td>
</tr>
</tbody>
</table>

*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.

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

  Composition of the Board of Directors
  Responses: Appointed first two female directors (June 2019)

  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
Messages from Outside Independent Members of the Board

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.

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 improving 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.

As a public servant, I have built my career around public relations and diversity promotion. Heading up the Cabinet Officer’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 peoples lives more fulfilling and better society as “Your Value Partner.” I thereby aim to further the sustainable growth of the Company by ensuring the effective functioning of corporate governance.

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.
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.

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 the members. 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.
Initiatives Aimed at Promoting ESG Management

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 sense 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 capability 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/en/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 considering factors including the degree of achievement of performance indicators, such as operating profit for the fiscal year ended March 31, 2019.

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.

A proposal to expand the ratio of performance-based compensation to total compensation from the fiscal year ending March 31, 2020, is under consideration.

Base salary
Based on the size and scope of responsibility for each role

Fixed compensation: approximately 70%

Bonus
Based on factors that include operating profit for the respective fiscal year

Treasury stock
Amounts above certain amounts of base salary and bonuses are used for purchase through the Board Members Shareholding Association.

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

<table>
<thead>
<tr>
<th>Position</th>
<th>Number of persons</th>
<th>Total compensation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Members of the Board</td>
<td>20</td>
<td>¥ 557 million</td>
</tr>
<tr>
<td>Audit &amp; Supervisory Board Members</td>
<td>5</td>
<td>¥ 119 million</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>¥ 696 million</td>
</tr>
</tbody>
</table>

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 ¥ 530 million for Members of the Board and ¥ 290 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 ¥ 13.2 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.

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.

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.

Promotion of Risk Management

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

For more information on the Basic Policies Concerning the Maintenance of Internal Control Systems for NTT Group, which can be found on NTT’s corporate website. https://www.ntt.co.jp/rmg_e/governance/66.html

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

Image

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

<table>
<thead>
<tr>
<th>Risk</th>
<th>Material risks, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Information security risks</td>
<td></td>
</tr>
<tr>
<td>• Disaster risks</td>
<td></td>
</tr>
<tr>
<td>• Investment risks</td>
<td></td>
</tr>
<tr>
<td>• Compliance risks</td>
<td></td>
</tr>
<tr>
<td>Other risks that need to be considered</td>
<td></td>
</tr>
<tr>
<td>• Financial risks</td>
<td></td>
</tr>
<tr>
<td>• Human resource and labor risks</td>
<td></td>
</tr>
</tbody>
</table>

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

For more details, please refer to NTT’s corporate website. https://www.ntt.co.jp/rmg_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.

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.)

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- Publication of yearly reports (annual reports, etc.)

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

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

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

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

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

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

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.
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 cancellations) of “Gigaho,” “Gigalight,” “Ketai Plan,” “Kids Ketai Plan,” and “Data Plus.”

Operating in Review

Mobile Communications Business

In the Mobile Communications Business Segment, NTT Group worked to promote sales of mobile phone services and “docomo Nankan” 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

- Operating Revenues: 35.4% (¥4,840.8 billion)
- Operating Profit: 59.4% (¥1,013.6 billion)
- Capital Investment: 35.0% (¥593.7 billion)
- Number of Employees: 8.8% (26,629)

Market Trends and Risks

Market Trends

- Appearance of new services using advanced technologies such as 5G, virtualization, and AI
- Growth in markets for point services and the finance and payments business
- Growth in non-telecommunications businesses such as the finance and payments business through strengthening of payment platform
- Strengthening initiatives to commercialize 5G

Business (Competition) Risks

- Intensifying competition from new entrants
- Tightening of regulations on business operations by the government
- Contraction in demand due to population decline

Major Initiatives

- Further strengthening customer base through new rate plans
- Growth in non-telecommunications businesses such as the finance and payments business through strengthening of payment platform
- Strengthening initiatives to commercialize 5G

Business Environment

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.

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### 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 network share and stable customer base

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

<table>
<thead>
<tr>
<th>Operating Revenues</th>
<th>Operating Profit</th>
<th>Capital Investment</th>
<th>Number of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>¥23.1 trillion (¥1,152.8 billion)</td>
<td>¥21.1 trillion (¥1,960.7 billion)</td>
<td>¥31.9 trillion (¥354.9 billion)</td>
<td>¥26.2 trillion (¥79,534 trillion)</td>
</tr>
</tbody>
</table>

#### Fixed-Line Broadband Services Subscriptions

- Total for NTT East: 12.14 million subscriptions
- Total for NTT West: 9.54 million subscriptions

#### 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

#### 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.**

#### 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-ripening 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.
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

### Business Environment

#### Market Trends and Risks

- **Market Trends**
  - Global growth in ICT-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)

- **Business (Competition) Risks**
  - 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

- Strengthening sales in managed IT services market
- Reviewing service portfolio in line with the market environment

### Topics

- By combining chat AI including the COTCHA® 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, 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.

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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

### Business Environment

#### Market Trends and Risks

- **Market Trends**
  - Global growth in ICT-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)

- **Business (Competition) Risks**
  - 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

- Accelerating customers’ digital transformations through marketing and investments in key areas
- Strengthening engagement with customers through regional strategies

### 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 practicability 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 all terminal types, 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.

Operating Revenues
9.1%
(¥1,240.3 billion)

Capital Investment
8.2%
(¥138.7 billion)

Operating Profit
5.0%
(¥85.6 billion)

Number of Employees
8.3%
(25,284)

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.

Details of Major Initiatives

Real Estate Business

NTT UD

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NTT FINANCE

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NTT COMWARE

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

Operating Revenues
9.1%
(¥1,240.3 billion)

Operating Profit
5.0%
(¥85.6 billion)

Capital Investment
8.2%
(¥138.7 billion)

Number of Employees
8.3%
(25,284)

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 area 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.

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## NTT Group Topics

### Fiscal year ended March 31, 2019

#### Holding Company (Groupwide Coordination)

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

- **June**
  - Announced AI Guardman, an AI service to prevent shoplifting

#### Mobile Communications Business

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

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

#### Regional Communications Business

- **April**
  - NTT East announced start of provision of "QoFe Cable Televison & FLET'S Rikai" through collaboration

- **May**
  - NTT East announced dramatic service reform through introduction of AI to contact centers

- **June**
  - NTT West announced establishment of NTT Global Data Centers Preparatory Corporation to strengthen data center business

- **July**
  - NTT East started provision of IoT packages for plants, local governments

#### Long Distance and International Communications Business

- **April**
  - Announced the provision of VMware Cloud featuring VMware Cloud Foundation and Hybrid Cloud Extension

- **June**
  - Announced results of joint research with local government using WinActor® smartphone app

#### Data Communications Business

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

- **May**
  - Announced acquisition of a majority stake in Atom Technologies

### Fiscal year ending March 31, 2020

#### Operations in Review

- **January**
  - IndyCar named NTT as entitlement sponsor of IndyCar Series

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

- **March**
  - Started providing Meru Denwa, a service for customers with hearing impairments

- **September**
  - Concluded technology partnership agreement with Major League Baseball

#### Mobile Communications Business

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

#### Regional Communications Business

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

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

- **November**
  - Concluded a comprehensive collaboration agreement with Tokyo Metro on “Co-Creation of Tokyo’s Attractiveness and Vitality”

#### Long Distance and International Communications Business

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

- **June**
  - Announced report on “Joint Trial of RPA” for customers with hearing impairments

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

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

- **November**
  - Awarded the “Best Technology Category Prize” through collaboration with Toshiba Electronics Co., Ltd.

#### Data Communications Business

- **December**
  - Started providing new Gigah and Gigalite rate plans

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

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

- **March**
  - Started providing Hybrid Cloud Extension featuring VMware Cloud Foundation and InteRSePT

- **April**
  - Announced the provision of VMware Cloud Centers Preparatory Corporation to strengthen data center business

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

- **June**
  - Announced acquisition of a majority stake in Atom Technologies

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

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

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- **December**
  - Started provision of support services for utilization of the WinActor® RPA tool for local governments
### U.S. GAAP

**Profit and loss (For the year)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Operating revenues</th>
<th>Operating expenses</th>
<th>Operating income</th>
<th>Other income (expenses)</th>
<th>Income before income losses and gains on sales of property, plant, and equipment</th>
<th>Impairment losses</th>
<th>EBITDA</th>
<th>Depreciation and amortization</th>
<th>Income tax expense</th>
<th>Operating income before tax</th>
<th>Net income attributable to NTT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$10,181.4</td>
<td>$10,305.0</td>
<td>$10,507.4</td>
<td>$10,700.7</td>
<td>$10,025.2</td>
<td>$11,065.3</td>
<td>$11,541.0</td>
<td>$11,391.0</td>
<td>$11,799.6</td>
<td>$10,192.8</td>
<td>$9,851.2</td>
</tr>
<tr>
<td>2011</td>
<td>$9,863.7</td>
<td>$9,966.1</td>
<td>$9,884.4</td>
<td>$9,498.8</td>
<td>$9,711.5</td>
<td>$10,101.0</td>
<td>$10,192.8</td>
<td>$9,851.2</td>
<td>$10,156.7</td>
<td>$10,192.8</td>
<td>$9,851.2</td>
</tr>
<tr>
<td>2012</td>
<td>$1,117.7</td>
<td>$1,214.9</td>
<td>$1,220.0</td>
<td>$1,220.0</td>
<td>$1,213.7</td>
<td>$1,084.6</td>
<td>$1,348.1</td>
<td>$1,139.6</td>
<td>$1,642.8</td>
<td>$1,348.1</td>
<td>$1,139.6</td>
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<tr>
<td>2013</td>
<td>$2.4</td>
<td>$39.1</td>
<td>$16.4</td>
<td>$43.8</td>
<td>$80.5</td>
<td>$17.9</td>
<td>$18.0</td>
<td>$12.0</td>
<td>$112.8</td>
<td>$18.0</td>
<td>$12.0</td>
</tr>
</tbody>
</table>

**Income costs**

<table>
<thead>
<tr>
<th>Year</th>
<th>Income before income losses and gains on sales of property, plant, and equipment</th>
<th>Income tax expense</th>
<th>Income before income taxes</th>
<th>Net income attributable to non-controlling interests</th>
<th>Net income attributable to NTT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$1,137.7</td>
<td>$9,851.2</td>
<td>$10,192.8</td>
<td>$1,641.1</td>
<td>$7,551.1</td>
</tr>
<tr>
<td>2011</td>
<td>$1,348.1</td>
<td>$1,139.6</td>
<td>$1,348.1</td>
<td>$1,139.6</td>
<td>$1,139.6</td>
</tr>
<tr>
<td>2012</td>
<td>$1,139.6</td>
<td>$1,139.6</td>
<td>$1,139.6</td>
<td>$1,139.6</td>
<td>$1,139.6</td>
</tr>
<tr>
<td>2013</td>
<td>$1,139.6</td>
<td>$1,139.6</td>
<td>$1,139.6</td>
<td>$1,139.6</td>
<td>$1,139.6</td>
</tr>
</tbody>
</table>

**Financial Summary**

- **EBITDA** = Operating income + Depreciation and amortization + Loss on sales of property, plant, and equipment + Impairment loss
- From the fiscal year ended March 31, 2017, the method for calculating EBITDA has been revised.
- Capital investment is on an accrual basis for the acquisition of property, plant, and equipment.
- Share of profit (loss) of entities accounted for using equity method:
  - Profit (loss) before tax: $1,740.5
  - Profit: $1,679.1
  - Income taxes: $533.8
  - Total: $533.2
- **EPS (Yen)**
  - Year: 449.86
  - 2018: 440.25
  - Overseas sales (Billions of dollars): 18,911
  - Overseas operating income margin (%) (3): 40.9%
  - Cost reductions (Billions of yen): 201.5
  - Dividend payout ratio (%) (3): 33.3%
  - ROE (%) (3): 9.3%

**Balance sheet (At year-end)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total assets</th>
<th>Total equity</th>
<th>Total capital</th>
<th>Total non-current liabilities</th>
<th>Total long-term liabilities</th>
<th>Capital stock</th>
<th>Other financial data, performance indicators, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$18,939.1</td>
<td>$9,012.9</td>
<td>$9,926.2</td>
<td>$5,353.4</td>
<td>$5,759.9</td>
<td>$3,779.0</td>
<td>Large non-current asset investment of property, plant and equipment: $1,697.0</td>
</tr>
<tr>
<td>2011</td>
<td>$19,665.6</td>
<td>$10,086.4</td>
<td>$9,579.2</td>
<td>$5,753.4</td>
<td>$6,090.0</td>
<td>$3,779.0</td>
<td>Large non-current asset investment of property, plant and equipment: $1,697.0</td>
</tr>
<tr>
<td>2012</td>
<td>$19,389.7</td>
<td>$10,450.5</td>
<td>$8,939.2</td>
<td>$6,090.0</td>
<td>$6,090.0</td>
<td>$3,779.0</td>
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</tr>
<tr>
<td>2013</td>
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<td>$10,990.0</td>
<td>$8,559.1</td>
<td>$6,090.0</td>
<td>$6,090.0</td>
<td>$3,779.0</td>
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</tr>
<tr>
<td>2014</td>
<td>$20,284.9</td>
<td>$11,557.7</td>
<td>$8,725.1</td>
<td>$6,090.0</td>
<td>$6,090.0</td>
<td>$3,779.0</td>
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</tr>
<tr>
<td>2015</td>
<td>$20,702.4</td>
<td>$11,567.7</td>
<td>$9,135.0</td>
<td>$6,090.0</td>
<td>$6,090.0</td>
<td>$3,779.0</td>
<td>Large non-current asset investment of property, plant and equipment: $1,697.0</td>
</tr>
<tr>
<td>2016</td>
<td>$21,035.9</td>
<td>$11,567.7</td>
<td>$9,470.0</td>
<td>$6,090.0</td>
<td>$6,090.0</td>
<td>$3,779.0</td>
<td>Large non-current asset investment of property, plant and equipment: $1,697.0</td>
</tr>
<tr>
<td>2017</td>
<td>$21,250.3</td>
<td>$11,567.7</td>
<td>$9,695.0</td>
<td>$6,090.0</td>
<td>$6,090.0</td>
<td>$3,779.0</td>
<td>Large non-current asset investment of property, plant and equipment: $1,697.0</td>
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<tr>
<td>2018</td>
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<td>$6,090.0</td>
<td>$3,779.0</td>
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</tr>
</tbody>
</table>

**Ratio Analysis**

- EPS (Yen): 449.86
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- Dividend payout ratio (%) (3): 33.3%
- ROE (%) (3): 9.3%

**Medium-term financial targets**

- EPS (Yen): 449.86
- EPS: 440.25
- Overseas sales (Billions of dollars): 18,911
- Overseas operating income margin (%) (3): 40.9%
- Cost reductions (Billions of yen): 201.5
- Dividend payout ratio (%) (3): 33.3%
- ROE (%) (3): 9.3%

(1) Excludes NTT Communications’ data centers and certain other assets.
(2) Excludes NTT Communications’ data centers and certain other assets.
(3) Includes results from the global holding company (NTT, Inc.) and its subsidiaries and affiliates.
(4) Excludes NTT Communications’ data centers and certain other assets.
(5) Excludes NTT Communications’ data centers and certain other assets.
(6) Excludes NTT Communications’ data centers and certain other assets.
## Business Summary

### Total Operating Segment Data

<table>
<thead>
<tr>
<th>Fiscal year ended (Mar 31)</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total revenues (Billions of yen)</td>
<td>3,659.8</td>
<td>3,827.2</td>
<td>4,027.2</td>
</tr>
<tr>
<td>Operating expenses (Billions of yen)</td>
<td>3,308.2</td>
<td>3,232.9</td>
<td>3,231.6</td>
</tr>
<tr>
<td>Profit attributable to NTT (Billions of yen)</td>
<td>300.3</td>
<td>328.4</td>
<td>395.6</td>
</tr>
</tbody>
</table>

### Capital Investment

<table>
<thead>
<tr>
<th>Fiscal year ended (Mar 31)</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Investment (Billions of yen)</td>
<td>2,015.9</td>
<td>2,163.6</td>
<td>2,045.2</td>
</tr>
</tbody>
</table>

### Group Data

<table>
<thead>
<tr>
<th>Fiscal year ended (Mar 31)</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
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## Quarterly Data (IFRS)

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## NTT Consolidated Financial Position

### Assets
- **Current assets**
  - **Cash and cash equivalents**
  - **Trade and other receivables**
- **Non-current assets**
  - **Property, plant and equipment**

### Liabilities and Equity
- **Liabilities**
- **Equity**

### Capital Investment
- **Capital investment by group**
  - **NTT East Group**
  - **NTT West Group**
  - **NTT Communications Group**
  - **Dimension Data (Consolidated)**

### Interest-Bearing Liabilities (Consolidated)
- **Interest-bearing liabilities**

### Financial Summary

**Billions of yen**
Financial Summary

Business Segments (IFRS)

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Note: Figures for each segment include intersegment transactions.
## Group Summary (IFRS)

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<td>566.4</td>
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<tr>
<td><strong>Operating expenses</strong></td>
<td>304.2</td>
<td>309.9</td>
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<tr>
<td><strong>Profit before taxes</strong></td>
<td>125.5</td>
<td>103.2</td>
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<tr>
<td><strong>Expenses on disposal of fixed assets</strong></td>
<td>12.5</td>
<td>10.4</td>
</tr>
<tr>
<td><strong>Depreciation and amortization</strong></td>
<td>47.0</td>
<td>49.8</td>
</tr>
<tr>
<td><strong>Expenses for purchase of goods and services and other expenses</strong></td>
<td>90.8</td>
<td>93.6</td>
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<tr>
<td><strong>Personnel expenses</strong></td>
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<td><strong>Operating expenses</strong></td>
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<td><strong>Impairment losses</strong></td>
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<tr>
<td><strong>Taxes and duties</strong></td>
<td>9.7</td>
<td>9.9</td>
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<tr>
<td><strong>Operating profit</strong></td>
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<tr>
<td><strong>Profit attributable to NTT East</strong></td>
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<tr>
<td><strong>Profit attributable to NTT East Group</strong></td>
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<td>61.7</td>
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### NTT West Group

<table>
<thead>
<tr>
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<th>FY2017</th>
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<tr>
<td><strong>Operating revenues</strong></td>
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<td><strong>IP communications service</strong></td>
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<td><strong>Sales of telecommunications equipment</strong></td>
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<tr>
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<tr>
<td><strong>Other</strong></td>
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<tr>
<td><strong>Operating expenses</strong></td>
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<tr>
<td><strong>Personal expenses</strong></td>
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<td><strong>Expenses for purchase of goods and services and other expenses</strong></td>
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<tr>
<td><strong>Depreciation and amortization</strong></td>
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<td>51.6</td>
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<tr>
<td><strong>Expenses on disposal of fixed assets</strong></td>
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<td>7.9</td>
</tr>
<tr>
<td><strong>Taxes and duties</strong></td>
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<td>8.3</td>
</tr>
<tr>
<td><strong>Operating profit</strong></td>
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<td>54.3</td>
</tr>
<tr>
<td><strong>Profit before taxes</strong></td>
<td>61.1</td>
<td>53.3</td>
</tr>
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</table>

### Notes

- FY stands for fiscal year, ending March 31.
- **NTT East Group** includes NTT East and its subsidiaries. Such figures are not audited and are provided for reference only.
- **NTT West Group** includes NTT West and its subsidiaries. Such figures are not audited and are provided for reference only.
Financial Summary

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<th>NTT Communications Group**</th>
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<tbody>
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<td>Cloud computing platforms</td>
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<td>Voice communications</td>
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<td>Applications and content</td>
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<td>Solution services</td>
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<td>Personnel expenses</td>
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<td>Expenses for purchase of goods and services and other expenses</td>
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<td>Depreciation and amortization</td>
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<td>Impairment losses</td>
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<td>Expenses on disposal of fixed assets</td>
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<tr>
<td>Profit before taxes</td>
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<tr>
<td>Profit attributable to NTT Communications</td>
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<table>
<thead>
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<th>Dimension Data (Consolidated)**</th>
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<td>Operating revenues</td>
<td>208.4</td>
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<tr>
<td>System integration services</td>
<td>208.4</td>
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<tr>
<td>Cost of sales</td>
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<td>Gross profit</td>
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<td>Selling, general and administrative expenses</td>
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</tr>
<tr>
<td>Profit before taxes</td>
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<tr>
<td>Profit attributable to Dimension Data</td>
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<tr>
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<td>Public and social infrastructure</td>
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<td>Financial</td>
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<td>Enterprise and solutions</td>
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<td>North America</td>
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<td>EMEA and LATAM</td>
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<td>Eliminations or corporate</td>
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<td>Cost of sales</td>
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<td>Gross profit</td>
<td>115.1</td>
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<tr>
<td>Selling, general and administrative expenses</td>
<td>88.8</td>
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<tr>
<td>Operating profit</td>
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<td>Profit before taxes</td>
<td>26.9</td>
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<tr>
<td>Profit attributable to NTT DATA</td>
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</table>

<table>
<thead>
<tr>
<th>NTT Urban Development (Consolidated)</th>
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<td>Operating revenues</td>
<td>40.1</td>
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<tr>
<td>Costs of sales</td>
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<tr>
<td>Gross profit</td>
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<tr>
<td>Selling, general and administrative expenses</td>
<td>4.7</td>
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<tr>
<td>Operating profit</td>
<td>12.4</td>
</tr>
<tr>
<td>Profit before taxes</td>
<td>11.7</td>
</tr>
<tr>
<td>Profit attributable to NTT Urban Development</td>
<td>7.7</td>
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</table>

** 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.

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

- **System integration services**
- **Application services (Mail services, etc.)**
- **Telephone services** and **VoIP services (050 plus, etc.)**
- **Closed network services (Arcstar Universal One, etc.)** and **Open network services (OCN, etc.)**
- **Data center services** and **Private cloud (Enterprise cloud, etc.)**

*1 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.

*2 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.

*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.
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
(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 / 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.
### Consolidated Statements of Financial Position

#### Nippon Telegraph and Telephone Corporation and its subsidiaries
#### March 31

<table>
<thead>
<tr>
<th>Non-current assets</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property, plant and equipment</td>
<td>¥8,812,174</td>
<td>¥9,012,847</td>
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<tr>
<td>Goodwill</td>
<td>¥841,283</td>
<td>¥886,531</td>
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<tr>
<td>Intangible assets</td>
<td>¥1,589,448</td>
<td>¥1,627,762</td>
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<tr>
<td>Investment property</td>
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<td>Investments accounted for using the equity method</td>
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<td>¥598,278</td>
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<td>Other financial assets</td>
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<td>¥1,138,502</td>
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<tr>
<td>Deferred tax assets</td>
<td>¥1,179,046</td>
<td>¥1,124,467</td>
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<tr>
<td>Other non-current assets</td>
<td>¥644,991</td>
<td>¥659,704</td>
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<tr>
<td>Total non-current assets</td>
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<td>¥15,715,180</td>
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<table>
<thead>
<tr>
<th>Total assets</th>
<th>2019</th>
<th>2018</th>
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</thead>
<tbody>
<tr>
<td>Cash and cash equivalents</td>
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<td>¥946,134</td>
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<td>Short-term investments</td>
<td>¥1,017,744</td>
<td>¥1,017,744</td>
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<td>Other current assets</td>
<td>¥242,524</td>
<td>¥242,524</td>
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<tr>
<td>Other non-current assets</td>
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<td>¥182,087</td>
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<td>Treasury stock (610,742)</td>
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<td>Total current assets</td>
<td>¥5,869,160</td>
<td>¥6,373,966</td>
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</table>

### Consolidated Statements of Comprehensive Income

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

<table>
<thead>
<tr>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>¥1,138,687</td>
<td>¥854,561</td>
</tr>
<tr>
<td>328,126</td>
<td>324,257</td>
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<table>
<thead>
<tr>
<th>Current liabilities</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term borrowings</td>
<td>¥1,017,744</td>
<td>¥1,397,545</td>
</tr>
<tr>
<td>Trade and other payables</td>
<td>¥841,283</td>
<td>¥886,531</td>
</tr>
<tr>
<td>Other current liabilities</td>
<td>¥50,711</td>
<td>¥44,305</td>
</tr>
<tr>
<td>Accrued payroll</td>
<td>¥240,670</td>
<td>¥237,282</td>
</tr>
<tr>
<td>Income taxes payable</td>
<td>¥1,046,582</td>
<td>¥1,124,467</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>¥644,991</td>
<td>¥659,704</td>
</tr>
<tr>
<td>Total current liabilities</td>
<td>¥5,869,160</td>
<td>¥6,373,966</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Other non-current assets</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other comprehensive income (net of taxes)</td>
<td>¥36,019</td>
<td>¥12,018</td>
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<tr>
<td>Unrealized gains (losses) on securities</td>
<td>¥449,860</td>
<td>¥440,250</td>
</tr>
<tr>
<td>Earnings per share attributable to NTT</td>
<td>¥1,138,687</td>
<td>¥854,561</td>
</tr>
<tr>
<td>Basic earnings per share (yen)</td>
<td>¥440,250</td>
<td>¥449,860</td>
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<table>
<thead>
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<th>2018</th>
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<tr>
<td>¥1,114,749</td>
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### Consolidated Statements of Comprehensive Income

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

<table>
<thead>
<tr>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
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<tr>
<td>¥1,206,699</td>
<td>¥1,138,687</td>
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<table>
<thead>
<tr>
<th>Current liabilities</th>
<th>2019</th>
<th>2018</th>
</tr>
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<tbody>
<tr>
<td>Short-term borrowings</td>
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<thead>
<tr>
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</tr>
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<tbody>
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<th>2018</th>
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<table>
<thead>
<tr>
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<th>2019</th>
<th>2018</th>
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<table>
<thead>
<tr>
<th>2019</th>
<th>2018</th>
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<tbody>
<tr>
<td>¥1,206,699</td>
<td>¥1,138,687</td>
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### Fiscal year ended March 31, 2018

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</thead>
<tbody>
<tr>
<td></td>
<td>Common stock</td>
<td>Additional paid-in capital</td>
<td>Retained earnings</td>
<td>Treasury stock</td>
<td>Non-controlling interests</td>
<td>Total equity</td>
<td>Harvesting stock</td>
<td>NTT shareholders’ equity</td>
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<tr>
<td>As of April 1</td>
<td>¥937,950</td>
<td>¥2,539,555</td>
<td>¥2,039,555</td>
<td>¥1,139,990</td>
<td>¥1,101,742</td>
<td>¥2,060,838</td>
<td>¥9,050,358</td>
<td>¥2,515,296</td>
<td>¥11,565,654</td>
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</tbody>
</table>

### Consolidated Statements of Changes in Equity

#### Nippon Telegraph and Telephone Corporation and its subsidiaries

#### Year ended March 31

#### Fiscal year ended March 31, 2018

|                        | As of March 31, 2018 | As of March 31, 2019 |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |
|------------------------|----------------------|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                        | ¥937,950             | ¥2,539,555           | ¥2,039,555     | ¥1,139,990     | ¥1,101,742     | ¥2,060,838     | ¥9,050,358     | ¥2,515,296     | ¥11,565,654    |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |
|                        |                      |                      |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |
|                        |                      |                      |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |

### Fiscal year ended March 31, 2019

|                        | As of March 31, 2018 | As of March 31, 2019 |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |
|------------------------|----------------------|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                        | ¥937,950             | ¥2,539,555           | ¥2,039,555     | ¥1,139,990     | ¥1,101,742     | ¥2,060,838     | ¥9,050,358     | ¥2,515,296     | ¥11,565,654    |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |
|                        |                      |                      |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |
|                        |                      |                      |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |

### Cash Flows from operating activities

|                        | 2018                | 2019                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |
|------------------------|---------------------|---------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                        | ¥1,138,687          | ¥1,206,699          |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |
|                        |                      |                     |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |
| Cash flows from investing activities | 2018                | 2019                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |

#### Consolidated Statements of Cash Flows

#### Nippon Telegraph and Telephone Corporation and its subsidiaries

#### Year ended March 31
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 fixed line, ISDN, leased lines, conventional leased circuits and high-speed digital.

- Mobile Voice Related Services
  Mobile voice related services include a portion of the services NTT Group provides in the mobile communications business segment.

- IP/Packet 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 Arcstar 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.

- 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.

- 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.

- 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.

- Sales of telecommunications equipment and the expansion of docomo Hikari in the mobile communications business segment.

- Fixed voice related services
  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.

- 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.

- Sales of telecommunications equipment and the expansion of docomo Hikari in the mobile communications business segment.

- 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 ¥9,917.7 billion. This increase was mainly due to the expanded scope of business in the data communications business segment and an increase in revenue-linked overhead 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 ¥3,733.6 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
  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 were ¥1(1.9) billion compared to ¥0(0.2) 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 ¥6.0 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 5.9% 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 4.8% from the previous fiscal year to ¥854.6 billion.

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

<table>
<thead>
<tr>
<th>Fiscal Year Ended March 31</th>
<th>Billions of yen</th>
<th>Change</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>¥11,782.1</td>
<td>¥11,879.8</td>
<td>¥97.7</td>
</tr>
<tr>
<td>Fixed voice related services</td>
<td>1,146.9</td>
<td>1,077.7</td>
<td>(69.2)</td>
</tr>
<tr>
<td>Mobile voice related services</td>
<td>933.3</td>
<td>946.7</td>
<td>13.5</td>
</tr>
<tr>
<td>IP/Packet communications services</td>
<td>3,757.4</td>
<td>3,721.2</td>
<td>36.2</td>
</tr>
<tr>
<td>Sales of telecommunications equipment</td>
<td>878.3</td>
<td>929.2</td>
<td>50.9</td>
</tr>
<tr>
<td>System integration</td>
<td>3,457.4</td>
<td>3,594.1</td>
<td>136.7</td>
</tr>
<tr>
<td>Other</td>
<td>1,608.9</td>
<td>1,611.0</td>
<td>2.1</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>10,141.1</td>
<td>10,186.0</td>
<td>44.9</td>
</tr>
<tr>
<td>Operating profit</td>
<td>1,641.1</td>
<td>1,693.8</td>
<td>52.7</td>
</tr>
<tr>
<td>Finance income and costs</td>
<td>(53.2)</td>
<td>(11.9)</td>
<td>41.3</td>
</tr>
<tr>
<td>Income from arbitration award</td>
<td>147.6</td>
<td>—</td>
<td>(147.6)</td>
</tr>
<tr>
<td>Share of profit (loss) of entities accounted for using equity method</td>
<td>5.0</td>
<td>(10.1)</td>
<td>(15.0)</td>
</tr>
<tr>
<td>Profit before taxes</td>
<td>1,740.5</td>
<td>1,671.9</td>
<td>(68.6)</td>
</tr>
<tr>
<td>Income taxes</td>
<td>533.8</td>
<td>533.2</td>
<td>(0.6)</td>
</tr>
<tr>
<td>Profit</td>
<td>1,206.7</td>
<td>1,138.7</td>
<td>(68.0)</td>
</tr>
<tr>
<td>Less—profit attributable to non-controlling interests</td>
<td>308.8</td>
<td>284.1</td>
<td>(24.7)</td>
</tr>
<tr>
<td>Profit attributable to NTT</td>
<td>897.9</td>
<td>854.6</td>
<td>(43.3)</td>
</tr>
</tbody>
</table>
For the fiscal year ending March 31, 2020, NTT Group expects to make capital investments totaling ¥1,790.0 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 ¥750.0 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.

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 ¥2,456.2 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 ¥77.8 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 ¥903.7 billion was invested in the mobile communications business and ¥450.1 billion was invested in the regional communications business. Cash flows used in financing activities during the fiscal year ended March 31, 2019 amounted to ¥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 decrease in payments of interest of ¥192.2 billion, an increase of ¥98.2 billion in share repurchases, and an increase of ¥14.9 billion in dividends.

For more information on risk factors, please refer to NTT’s corporate website: https://www.ntt.co.jp/en/global/stock_factors.html

Consolidated Subsidiaries

Consolidated subsidiaries

<table>
<thead>
<tr>
<th>Company</th>
<th>Capital</th>
<th>Voting rights %</th>
<th>Main line(s) of business</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTT DOCOMO, INC.</td>
<td>¥946,893 million</td>
<td>54.17</td>
<td>Provision of mobile communications services and smart life services</td>
</tr>
<tr>
<td>NTT EASTERN COMMUNICATIONS</td>
<td>¥5,900 billion</td>
<td>100.00</td>
<td>Provision of infrastructural communications services in the eastern part of Japan</td>
</tr>
<tr>
<td>NTT WESTERN COMMUNICATIONS</td>
<td>¥5,900 billion</td>
<td>100.00</td>
<td>Provision of infrastructural communications services in the western part of Japan</td>
</tr>
<tr>
<td>NTT COMMUNICATIONS SOLUTIONS</td>
<td>¥5,900 billion</td>
<td>100.00</td>
<td>Provision of NTT Group’s data, cloud and Internet services in Japan</td>
</tr>
<tr>
<td>NTT Security Corporation</td>
<td>¥5,900 billion</td>
<td>100.00</td>
<td>Provision of professional security services</td>
</tr>
<tr>
<td>NTT America</td>
<td>¥4,101.93 million</td>
<td>100.00</td>
<td>Provision of ICT services in North America</td>
</tr>
<tr>
<td>NTT EUROPE</td>
<td>¥1,757.85 million</td>
<td>100.00</td>
<td>Provision of ICT services in Europe</td>
</tr>
<tr>
<td>NTT Innovation Network 1</td>
<td>¥180,255 million</td>
<td>84.70</td>
<td>Provision of data center-related services in Europe</td>
</tr>
<tr>
<td>Arkadin International</td>
<td>¥180,255 million</td>
<td>60.00</td>
<td>Provision of communications services, video, media, and content services</td>
</tr>
<tr>
<td>NTT Data</td>
<td>¥180,255 million</td>
<td>100.00</td>
<td>Provision of ICT services in North America</td>
</tr>
<tr>
<td>NTT Security Systems Europe NV</td>
<td>¥180,255 million</td>
<td>100.00</td>
<td>Provision of network services</td>
</tr>
<tr>
<td>NTT DATA CORPORATION</td>
<td>¥180,255 million</td>
<td>100.00</td>
<td>Provision of data center-related services in India</td>
</tr>
<tr>
<td>NTT DATA Services</td>
<td>¥180,255 million</td>
<td>100.00</td>
<td>Provision of data center-related services in the U.K.</td>
</tr>
<tr>
<td>NTT Security Corporation Europe</td>
<td>¥180,255 million</td>
<td>100.00</td>
<td>Provision of data center-related services in the U.S. and Asia</td>
</tr>
<tr>
<td>Secure 24 Intermediate Holdings</td>
<td>¥180,255 million</td>
<td>100.00</td>
<td>Provision of IT managed services in North America</td>
</tr>
<tr>
<td>Transmet</td>
<td>¥180,255 million</td>
<td>100.00</td>
<td>Provision of mobility connectivity services for NTT</td>
</tr>
<tr>
<td>Spectrum Holdings</td>
<td>¥180,255 million</td>
<td>100.00</td>
<td>Management of subsidiaries of NTT Group, etc. in Europe and North America</td>
</tr>
<tr>
<td>Arkadin</td>
<td>¥180,255 million</td>
<td>100.00</td>
<td>Provision of teleconference, web conference, and video conference services</td>
</tr>
<tr>
<td>NTT DATA Corporation</td>
<td>¥180,255 million</td>
<td>100.00</td>
<td>Technology transfer, technical consulting, and design and development of systems and software</td>
</tr>
<tr>
<td>NTT DATA Corporation North America</td>
<td>¥180,255 million</td>
<td>100.00</td>
<td>Technology transfer, technical consulting, and design and development of systems and software</td>
</tr>
<tr>
<td>NTT DATA Corporation Western Europe</td>
<td>¥180,255 million</td>
<td>100.00</td>
<td>Technology transfer, technical consulting, and design and development of systems and software</td>
</tr>
<tr>
<td>NTT ADVANCED TECHNOLOGY CORPORATION</td>
<td>¥180,255 million</td>
<td>100.00</td>
<td>Technology transfer, technical consulting, and design and development of systems and software</td>
</tr>
</tbody>
</table>

Note: NTT Communications 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: 809 companies
Career Summaries of Members of the Board and Audit & Supervisory Board Members

Hiromichi Shinohara
President
Member of the Board
Years Served as Member of the Board: 11

Takashi Hiroi
Senior Executive Vice President, General Manager of the Service Innovation Laboratory Group
Member of the Board
Years Served as Member of the Board: 6

Jun Sawada
Senior Executive Vice President, General Manager of the Corporate Strategy Planning Department
Member of the Board
Years Served as Member of the Board: 5

Eiichi Sakamoto
Senior Executive Vice President, General Manager of the Planning Department
Member of the Board
Years Served as Member of the Board: 4

Hiromichi Shinohara
Senior Executive Vice President
Member of the Board
Years Served as Member of the Board: 5

Tsunehisa Okuno
Executive Vice President, Member of the Board
Years Served as Member of the Board: 7

Takashi Hiroi
Senior Executive Vice President
Member of the Board
Years Served as Member of the Board: 5

Motokiyo Lii
Senior Executive Vice President, Chief Technology Officer
Member of the Board
Years Served as Member of the Board: 5

Akira Shimada
Executive Vice President
Member of the Board
Years Served as Member of the Board: 5

Hiroki Kuriyama
Executive Vice President, Member of the Board
Years Served as Member of the Board: 4

Takashi Hiroi
Senior Executive Vice President
Member of the Board
Years Served as Member of the Board: 5

Katsuhiko Kawazoe
Executive Vice President
Member of the Board
Years Served as Member of the Board: 5

Motokiyo Lii
Senior Executive Vice President, Chief Technology Officer
Member of the Board
Years Served as Member of the Board: 5

Ryota Kitamura
Senior Executive Vice President
Member of the Board
Years Served as Member of the Board: 5

Atsuko Oka
Senior Executive Vice President
Member of the Board
Years Served as Member of the Board: 4

Katsuhiko Shirai
Senior Executive Vice President, Member of the Board
Years Served as Member of the Board: 4

Sadayuki Sakakibara
Chairman
Member of the Board
Years Served as Member of the Board: 7

Ken Sakamura
President
Member of the Board
Years Served as Member of the Board: 5

Keiko Takegawa
Senior Executive Vice President
Member of the Board
Years Served as Member of the Board: 4

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Hideki Kanda
President
Member of the Board
Years Served as Member of the Board: 5

Koaru Kashima
Member of the Board
Years Served as Member of the Board: 5

Takashi Iida
Executive Vice President
Member of the Board
Years Served as Member of the Board: 4

Takao Maaeza
Executive Vice President
Member of the Board
Years Served as Member of the Board: 4

Notes: 1. Number of shares excluding those held by employees of the Company.
2. Includes shares under the Employees' Stock Purchase Plan of the Company.
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. 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.