Message from the CEO

I express my heartfelt sympathy to those who have been infected with COVID-19 and those who have been affected by the spread of the infection. Additionally, with the number of COVID-19 infections increasing, I express our sincere hope that the global spread of this disease will be brought under control as soon as possible. NTT Group is making every effort not only to secure the health and safety of all affected parties, including customers, partners, and employees, but also to ensure that our customers, both in Japan and overseas, are able to use our services without interruption at all times.

NTT Group continues to promote its medium-term management strategy “Your Value Partner 2025,” which was announced in 2018. Under this strategy, the Group is striving to solve social issues.

To promote the B2B2X model, in addition to promoting alliances with Toyota Motor Corporation, Mitsubishi Corporation, Microsoft Corporation, and other companies, we are advancing the development of smart cities in locations including the city of Austin, Texas and the University of California, Berkeley. We plan to build out our 5G coverage to 500 cities, including all government-designated cities, by the end of FY2020. In the global business, we will promote structural reforms by shifting to high value-added services and other measures to strengthen our competitiveness. We will promote the activities of the IOWN Global Forum as part of the globalization of research and development. As for new businesses, we will promote our location business initiatives and support agriculture and e-Sports as a way to contribute to the revitalization of local communities and economies.

Finally, I would like to discuss ESG. In the area of environment, we have set a target to achieve zero environmental impact by increasing our own use of renewable energy to 30% or more by FY2030, and we will contribute to reducing the environmental impact of our customers, companies, and society through the Space Environment and Energy Laboratories, which was established in July 2020. In addition, in the area of society, we are working toward our goal of increasing the ratio of female managers to at least 10% by FY2025, and preparing disaster countermeasures for the flood season. In terms of governance, after the 35th Annual General Meeting of Shareholders, the ratio of independent outside directors was raised to 50%. Furthermore, by adopting an executive officer system, we will improve management agility.

As the NTT Group accelerates our transformation as “Your Value Partner,” we will always act as your valued and trusted partner so that we can help solve social challenges for people, clients and communities.

I sincerely appreciate your continued support and long-term relationship with us.

To resolve social issues through its business operations, NTT Group works together with its partners as “Your Value Partner.”
In response to the global COVID-19 pandemic, in addition to ensuring the health and safety of all stakeholders, including customers, partners, and employees, we have endeavored to ensure stable availability of information and communication services, as they are crucial for people’s lives and corporate activity.

Ensuring Stable Provision of Telecommunication Services as a Designated Public Institution

NTT and its major subsidiaries operating in the telecommunications business have established business plans designed to help prevent the spread of COVID-19 in the interest of fulfilling their responsibilities as designated public institutions and protecting human life.

Data Traffic Volume

The outbreak of COVID-19 has driven up Internet usage and demand for teleworking, leading to a spike in data traffic (telecommunications load) largely on landline communications, and weekday daytime traffic in particular. NTT Group companies typically design their networks to accommodate peak traffic volumes, and at present they are able to ensure sufficient capacity across the network. We will continue to expand facilities as may be required to provide stable communication services.

Telecommunications Network Operation

We will continue to provide network operation, monitoring, and troubleshooting 24 hours a day, 365 days a year as usual. We will also continue to provide line installation work and repairs upon customer request and we will take ample care to ensure safety while providing such services.

Customer Service

While truncating business hours and limiting reception services at our customer service branches as well as running our call centers with reduced staff, we will maintain efforts to provide stable telecommunication service by encouraging the use of our online customer services to handle procedures as well as providing remote consultations using ICT tools to keep our customers’ telecom lines up and running and provide the services required to maintain business operations.

Customer Support Initiatives

Billing

In March 2020, NTT Group companies extended payment deadlines upon requests from customers facing difficulty paying service fees by the normal deadline.

In addition, the government’s eligibility for customers facing difficulty paying service fees by the normal deadline. In addition, the government’s eligibility for customers facing difficulty paying service fees by the normal deadline.

Support for Teleworking and Online Schooling

In the face of the rapidly implementing online teaching and online schooling, in April 2020, NTT DOCOMO and NTT Communications have partially waived data communications fees to customers under the age of 25 to support smartphone-based online learning.

In addition, as part of its support for teleworking, education, and health, NTT Group companies are deploying a variety of measures such as opening consultation desks and providing certain services free of charge. In conjunction with these measures, we have been using mobile handset data to analyze how populations have changed as a result of government response to COVID-19, and we provide that analysis to central and local governments as well as the media.

In the post-COVID-19 era, there may be dramatic changes in the way people conduct their daily lives and in corporate activities. NTT Group aims to solve social issues in this era by helping to establish new social systems that use digital technologies and through other innovations such as technology development.

Also, there has been a rapid increase in working from home, remote healthcare, remote education, and other measures that look to ensure social distancing. NTT Group will accelerate provision of services that promote a remote-type society and will drive the advancement of technologies such as authentication control technology. By introducing digital technology and AI into work that relies on manpower, such as agriculture, manufacturing, and construction, we aim to expand smart operations and contribute to solving the social issue of labor shortages. In addition, by building connected value chains in various fields, such as logistics, we will work to make industry more efficient, leading to optimizing the movement of people and things and the provision of energy.

NTT Group will contribute to the realization of a smart society along with our partners all over the world by leading innovation, such as the development of technology that looks toward a data-driven society which may be possible in the post-infection period.

New Services for Realization of Remote World

- Online work space NeWork
  (Available from NTT Communications free of charge* since August 2020)
  Provides a virtual office environment, complete with light-hearted chit-chat like barrier features

- Business chat ELGANA
  (Available from NTT DOCOMO since April 2020)
  Upgraded corporate security features such as prevention of unauthorized usage

- AceTeal for docomo
  (Available from NTT DOCOMO since June 2020)
  Solution service to support work and 3D design collaboration in remote environments

- Smart local government platform NaNaTsu
  (Available from NTT Data on a trial basis*1 since August 2020)
  Automation of tasks commonly performed by local governments (revenue and expenditure management, etc.) with shared-use RPA / AI OCR

- Window Talk
  (Scheduled for commercialization by NTT Group companies during 2020)
  Enables discussion through closed windows of vehicles or buildings just as if there were no windows

- Use of Smart City Solutions
  (Provided to the City of Las Vegas by NTT Inc. since August 2020)
  Use of sensors to detect people with high body temperatures

- Interactive robot Jibo
  (English version available on a paid-for trial basis from NTT Docomo since March 2020)
  Support for business communication in hospitals, remote medical care, welfare, and public services using AI

*1 We plan to add features gradually, and offer a high-spec version on a for-pay basis
*2 We plan to offer the service for commercial use starting in October 2020
### Financial Highlights (IFRS)

<table>
<thead>
<tr>
<th></th>
<th>FY2017</th>
<th>FY2018</th>
<th>FY2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating revenues</td>
<td>11,782.1</td>
<td>11,879.8</td>
<td>11,899.4</td>
</tr>
<tr>
<td>Operating profit</td>
<td>1,641.1</td>
<td>1,693.8</td>
<td>1,562.2</td>
</tr>
<tr>
<td>Profit attributable to NTT</td>
<td>897.9</td>
<td>854.6</td>
<td>855.3</td>
</tr>
<tr>
<td>Total assets</td>
<td>21,541.4</td>
<td>22,295.1</td>
<td>23,014.1</td>
</tr>
<tr>
<td>NTT shareholders' equity*1</td>
<td>9,050.4</td>
<td>9,264.9</td>
<td>9,061.1</td>
</tr>
<tr>
<td>Earnings per share (EPS) (yen)<em>2</em>3</td>
<td>224.93</td>
<td>220.13</td>
<td>231.21</td>
</tr>
<tr>
<td>Book-value per share (BPS) (yen)<em>2</em>3</td>
<td>2,295.79</td>
<td>2,416.01</td>
<td>2,492.60</td>
</tr>
<tr>
<td>Ratio of profit attributable to NTT (ROE) (%)</td>
<td>10.2%</td>
<td>9.3%</td>
<td>9.3%</td>
</tr>
<tr>
<td>Cash flows from operating activities<em>4</em>5</td>
<td>2,773.2</td>
<td>2,397.9</td>
<td>2,605.2</td>
</tr>
<tr>
<td>Cash flows from investing activities (¥388.3 billion)</td>
<td>1,746.2</td>
<td>1,774.1</td>
<td>1,852.7</td>
</tr>
<tr>
<td>Free cash flows (Cash flows from operating activities - Cash flows from investing activities)</td>
<td>1,027.0</td>
<td>623.8</td>
<td>749.8</td>
</tr>
<tr>
<td>Cash flows from financing activities<em>4</em>5</td>
<td>968.3</td>
<td>584.3</td>
<td>872.3</td>
</tr>
</tbody>
</table>

*1 NTT shareholders’ equity does not include the portion attributable to non-controlling interests.

*2 EPS is calculated based on the average number of shares outstanding during the fiscal year, excluding treasury stock, and BPS is calculated based on the number of shares outstanding at the end of the fiscal year, excluding treasury stock.

*3 NTT conducted a two-for-one stock split of its common stock with an effective date of January 1, 2020. The figures reflect the impact of this stock split.

*4 Amount excluding the impact of the last day of the previous fiscal years having been a non-business day

*5 Excludes the impact on cash flows from operating and financing activities caused by the adoption of IFRS 16 (Leases)
Value Creation Process
— A Cycle of Sustainable Corporate Value Enhancement —

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

Promote the B2B2X Model

NTT Group will accelerate the B2B2X model and provide value to end users (X) by supporting the digital transformation of the “Center B,” a service provider in various fields, while leveraging digitization of information, IoT, AI, and other social and technological trends. As of June a year earlier, representing smooth progress toward our target of taking part in 100 projects by the fiscal year ending March 31, 2022.

NTT’s B2B2X models are divided into four categories in line with the following objectives:

- Evolution of industrial value chains
- Innovation of local economies and improvement of public safety and other city functions through the realization of smart cities
- Enhancement of customer contact point platforms (evolution of customer responses with regard to distribution, services, financing, etc.)
- Development of mobile and cross-data platforms (enhancement of services and creation of businesses by combining mobile data with companies’ data)

In order to further advance the B2B2X model, we have established the B2B2X Strategy Committee to formulate strategies, manage targets, and promote the business of NTT Group. Under this committee, we aim to increase the number of projects by promoting collaboration among the Group companies. For the foreseeable future, the Group will focus on developing new products. At the same time, however, we intend to improve profit margins by evolving digital technologies and increasing the economic feasibility of the scale and scope of digital data utilization.

NTT Group's growth strategies for enhancing competitiveness in its global business entail leveraging the strength of its capacity for one-stop-supply of everything spanning from solutions to communications infrastructure to provide comprehensive solutions for supporting the evolution of customer businesses and to promote innovation with cutting-edge technologies. The Group is also building platforms for concerted efforts as a united “One NTT.” For example, operations are being integrated into a global operating company, NTT Ltd., and its structures are being reformed to grow sales through the supply of high-value-added, high-margin services. Specifically, we are promoting sales of remote solutions in preparation for the period after the global COVID-19 pandemic and strengthening our hybrid cloud-related capabilities through partnership with Microsoft Corporation.
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.

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

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

Digital Twin Computing

Digital twin computing is a significant advance in existing digital twin technology. By performing calculations such as conversions, combinations, and replications for various digital twins representing things and people in the real world, and having those digital twins interact, this new paradigm allows for 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 predictions 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.

IOWN has released a concrete technology roadmap for the development of its “Innovative Optical and Wireless Network” (IOWN) concept, and research and development are moving forward based on this roadmap. Starting in 2021, NTT will establish reference models for key IOWN constitute technologies, promote these to the IOWN Global Forum, accelerate evaluations, and develop specifications. Specifically, four technological directions have been defined in the IOWN Global Forum whitepaper—full-stack communication acceleration; data-centric communication and computing; computing scaling across device, edge, and center cloud; and sustainable growth with energy efficiency. R&D projects are being advanced in accordance with these themes.

IOWN Global Forum, Inc., which was established together with Intel Corporation of the United States and Sony Corporation of Japan in January 2020, released a white paper describing four technological directions in April 2020. We have since commenced technological evaluations of these directions. As of September 10, 2020, the IOWN Global Forum, which is operated by IOWN Global Forum, Inc., had 29 member companies, including its three founders and 26 other companies from Japan and overseas. The first meeting of members of this forum was held in the form of an online conference in September. This meeting served as an opportunity for member companies from around the world to engage with each other and discuss use cases and technologies in working groups.

Going forward, NTT will continue to work with partners from various industries and regions with the aim of quickly making the IOWN concept a reality.
Research and Development for Realizing the IOWN Concept

4D Digital Platform™ Integrates Various Sensing Data in Real-Time and Enabling Future Predictions

In recent years, the remarkable advancement in IT technology enables the collection of large volume of IoT data and their analysis. Accordingly, the government of Japan as well as various companies are moving ahead with research and development for creating systems that merge cyber and physical spaces in a sophisticated manner, as advocated in the government’s Society 5.0 vision. However, in the linkage of sets of statistical data or the matching of misaligned position and time data, there are cases in which the accuracy of future predictions cannot be heightened.

Our proposed 4D digital platform would resolve this by making it possible to precisely integrate position and time information from sensing data while also providing latitude, longitude, height and time data useful in future predictions.

By applying this platform to various industries, we could contribute to the resolution of social issues and the creation of value. The 4D digital platform™ integrates sensing data with highly precise position and time information in real-time into the Advanced Geospatial Information Database, jointly developed with ZENRIN Co., Ltd., to perform high-speed analyses and the construction of future prediction.

(1) Development of the Advanced Geospatial Information Database as a control point for sensing data
(2) Real-time sensing data collection with highly accurate position and time information
(3) High-speed processing of large-volume data and future predictions with various simulations

By combining with various IoT data and industry platforms, it can offer various values such as increasing smoothness of road traffic flow, improving ease of use of urban assets, and enabling cooperative maintenance of social infrastructures.

As a cross-industry platform supporting people’s lives, and as the one of the key elements of Digital Elevation of Urban Environment, it can offer various values such as increasing smoothness of road traffic flow, improving ease of use of urban assets, and enabling cooperative maintenance of social infrastructures.

As a cross-industry platform supporting people’s lives, and as the one of the key elements of Digital Elevation of Urban Environment, it can offer various values such as increasing smoothness of road traffic flow, improving ease of use of urban assets, and enabling cooperative maintenance of social infrastructures.

Demonstration of All-Optical Switching toward Photonic Integrated Circuits for Ultrafast Information Processing

NTT and the Tokyo Institute of Technology have developed an ultrafast all-optical switching operation with the lowest energy consumption ever reported for all-optical switching at less than one picosecond (one trillionth of a second). Previously, it was reported that all-optical switches would have difficulty operating at such a high speed with low energy consumption. The current achievement combines an ultrasmall optical waveguide with a height and width of a few dozen nanometers called a plasmonic waveguide, with graphene, a material that shows great promise for nonlinear optics. Such ultrahigh switching speed cannot be achieved by electrical control. It is expected that this switch will be used in future photonic integrated circuits for ultrafast information processing. In addition, this development shows a promising possibility for applications of plasmonics.

Experimental Demonstration of Ultra-High Precision Optical Frequency Transfer via 340-km Long Telecommunications Fiber

NTT, the University of Tokyo, RIKEN and NTT East have demonstrated experiments of ultra-high precision optical frequency transfer among multiple offices using a commercial optical fiber network over 200 km. This result shows that the optical frequency of optical lattice clock, which is one of the most accurate atomic clocks in the world invented by Professor Hihtoshi Katori of the University of Tokyo, can be distributed in the range of 200 km.

The technical point of this result is an optical frequency repeater that incorporates a quartz-based planar lightwave circuit (PLC). The optical frequency transmitted through the fiber suffers various noises due to temperature changes and vibrations. The repeater reproduces the received light and sends a part of the light to the previous office, where the returned light is used to detect and compensate the fiber noise. We have developed ultra-low noise optical interferometers manufactured on a small PLC chip, which can realize fiber transmission with minimal deterioration. In the future, we are planning to develop a new infrastructure such as ‘elevation difference measurement using relativistic effect (relativistic geodesy)’ using the ultra-high accuracy of optical lattice clocks.

Long-Distance Transmission of 1 Tbit/s Ultra-High-Capacity Optical Signal

NTT and NTT Communications have successfully demonstrated long-distance transmission of a 1 Tbit/s optical signal in a commercial environment. A 1 Tbit/s optical signal using a wavelength division multiplexed technique was successfully transmitted over a world-record breaking distance of 1,122 km. This was achieved using a new large-core low-loss optical fiber cable deployed in NTT Communications’ commercial environment, which reduces optical losses and non-linearity, and original NTT technologies including: (1) a precise calibration technology that compensates for imperfections in the optical transponder and enables high-quality multi-order modulation optical signals to be transmitted and received, (2) an optical transponder integrating a digital signal processor that implements the latest digital coherent technology, and high-bandwidth optical front-end circuits, and (3) transmission line design technology.

This result should lead to transmission speeds 10 times that of systems currently in use (100 Gbit/s per channel) and an 80% or greater reduction of power consumption per bit. As such, it is anticipated as a high-capacity communications network technology for the expansion of 5G services and realizing the IOWN concept in the future.
Initiatives for Realizing a Society Characterized by Remote Interactions

Highly Immersive 12K Wide Live Viewing of MLB Games Using Ultra Reality Viewing Technologies

NTT has concluded a multi-year partnership contract with Major League Baseball (MLB). Through this partnership, we are promoting the use of NTT's cutting-edge technologies for realizing next-generation baseball viewing experiences as a smart sports initiative. In October 2019, MLB and NTT conducted a verification test that used NTT's Ultra Reality Viewing technology for viewing of MLB postseason games. This was the first successful instance of highly immersive live viewing through synthesis and transmission of 12K wide video in the United States.

Verification of Network Technologies for Realizing Fully Autonomous Agricultural Equipment via Remote Monitoring through Collaboration with Hokkaido University and Iwamizawa City

In May 2020, a joint experiment agreement was formed between Hokkaido University, Iwamizawa City, SmartLinkHOKKAIDO Inc., NTT, NTT East, and NTT DOCOMO in relation to joint experiments for realizing smart agriculture centered on smart agricultural equipment. Under this agreement, we will advance verification tests on technologies for predicting fluctuations in connection quality and automatically adjusting the network to which autonomous agricultural equipment is connected accordingly. Goals of this undertaking include reducing the labor requirements of agricultural work by allowing agricultural machinery to be operated in an unmanned manner and helping address global food shortages.

Joint Experiment Fields

1. High-Precision Positioning Technologies
   - Technologies will be developed to allow for high-precision positioning even in areas in which satellite transmissions cannot be received directly due to reasons such as signals being reflected.

2. Next-Generation Network Technology
   - Exceptionally safe, autonomous operation of agricultural equipment will be pursued through the development of technologies for improving the quality of connections to multiple networks and automatically changing networks accordingly.

3. AI Platforms
   - AI analyzes field sensors, weather information, and agricultural machinery operation information, and an AI platform automatically schedules agricultural work and makes it possible to create an optimal agricultural work plan.

Joint Research for Advancing World’s First Unmanned Ship Verification Test

NTT has concluded a joint research contract with NTT Co., Ltd., a research subsidiary of Nippon Yusen Kabushiki Kaisha, for the advancement of the Future of Full Autonomous Ship Project,* the world’s first verification test of unmanned ships in the maritime industry. In May 2020, NTT concluded a comprehensive cooperation agreement with the ITER International Fusion Energy Organization (ITER Organization), which is working to be the first in the world to verify the effectiveness of fusion energy. NTT is promoting innovation through research and development and the reduction of environmental impacts through its business activities with the goal of lowering its environmental footprint to zero. As one facet of these activities, we are contributing to the plans of the ITER Organization with our IOWN and other advanced R&D projects as well as our global infrastructure development capabilities. Specifically, we look to offer technical support for information distribution and control platforms. These platforms will be utilized in ultrahigh-speed, ultralow-latency connections between the fusion reactor and control centers through all-photonic networks that use photonic (light)-based technologies for everything from networks to terminals. Another application of the platforms will be fusion reactor control simulations, using digital twin computing for projecting future trends by comparing the physical world with digital models.

Cooperation with the ITER Organization

In May 2020, NTT submitted a technology verification proposal in response to the No. 3 open application bid by Japan Aerospace Exploration Agency (JAXA) for verification of revolutionary satellite technologies. This proposal, which was adopted, was for the realization of communications with speeds exceeding 20 Gbps between low-orbit satellites and ground facilities and ultrawide range IoT data collection. Based on this theme, NTT will conduct verification tests on the world’s first low-orbit satellite multiple input, multiple output (MIMO) technology and on satellite sensing technologies. Our future plans include launching miniature verification-use satellites in the fiscal year ending March 31, 2023, and exploring and verifying essential technologies and designing and developing satellite equipment for technology verification tests leading up to the fiscal year ending March 31, 2024. In addition, we will seek to realize high-capacity communications (with speeds exceeding 20 Gbps) between low-orbit satellites and ground facilities and develop low-cost sensing technologies for use in areas across the world, including those without on-ground communications networks.

Alliance with Intel

NTT has concluded a joint research contract Intel Corporation, set to conclude in April 2023. The resulting alliance is aimed at the co-creation of technologies for the IOWN. Through this alliance, NTT and Intel will conduct research for advancing the development of technologies that can meet the massive increases in data processing capacity necessary for realizing a smart connected society.
CO2 in the atmosphere. This project has the goal of commencing a verification test on technologies for improving the efficiency of research themes that have never before been imagined. Going forward, this facility will proactively collaborate with external research institutions through means such as joint research in a diverse range of fields. In this manner, the Space Environment and Energy Laboratories is a research facility with a penchant for tackling ambitious research themes that have never before been imagined. Going forward, this facility will proactively collaborate with external research institutions through means such as joint research in a diverse range of fields.

Alliance with NEC for Joint Research and Development and Global Rollout of ICT Products Utilizing Innovative Optical and Wireless Technologies

NTT and NEC Corporation formed a capital and business alliance in June 2020 for the purpose of joint research and development and the global rollout of ICT products utilizing innovative optical and wireless technologies. The companies aim to improve their corporate value by expanding sales of products applying jointly developed technologies. In addition, through these initiatives, the companies will contribute to the enhancement of the industrial competitiveness of Japan and to the improvement of the safety and reliability of communications infrastructure, playing leading roles in working with numerous communications equipment vendors.

To promote open architectures such as O-RAN and to give form to the iOWN concept, NTT and NEC will set up a research and development structure and focus their efforts on the following objectives:

- By developing and utilizing cutting-edge technologies, the companies will develop and sell globally a compact digital signal processing circuit—featuring both world-leading performance and low power consumption as well as quality that meets market needs and greater convenience from the customer point of view—plus optical information communications equipment incorporating this digital signal processing circuit.
- Working with global operators and communications equipment vendors, the companies will promote O-RAN Alliance specifications while developing and selling globally competitive products compliant with such O-RAN specifications. In the future, the companies aim to attain top global market shares under NEC's leadership. Moreover, the companies' development efforts will be aimed at realizing ultrahigh-speed processing, ultralow latency, and ultralow power consumption in these products at a level that has never been attained before, by applying innovative devices utilizing optical and wireless technologies to base station equipment.
- The companies will develop innovative technologies and optical and wireless devices contributing to the realization of NTT's iOWN concept. As part of the development project, the companies will seek to enable greater capacity, higher functionality, and lower-costing submarine cable systems; high-capacity, low-latency, and automatic and autonomous space communications; and more sophisticated technologies to ensure infrastructure network security.

Establishment of Space Environment and Energy Laboratories

The Space Environment and Energy Laboratories is a research facility established in July 2020 with the purpose of developing innovative technologies to help regenerate the global environment and realize a sustainable and inclusive society. This facility is the first NTT laboratory to have the word “space” in its name. Despite this name, however, the Space Environment and Energy Laboratories will not research space itself; rather, it will reevaluate the sun and other aspects of the space environment from earth to research means of regenerating the global environment and adapting to this environment from a dynamic perspective. In the field of next-generation energy, the Space Environment and Energy Laboratories will research nuclear fusion together with the ITER Organization as well as space photovoltaic power generation. Meanwhile, the facility will target the creation of energy systems that improve environmental value through local consumption and production of energy in the field of energy control technologies that optimize energy distribution. As the first step of these efforts, we aim to complete development of a resilient electricity supply system based on direct current microgrid utilization within the fiscal year ending March 31, 2023. In addition, the Space Environment and Energy Laboratories is advancing a project in the field of CO2 conversion technologies, which entail absorption and fusion of CO2 in the atmosphere. This project has the goal of commencing a verification test on technologies for improving the efficiency of the artificial photosynthesis technologies developed by NTT in the fiscal year ending March 31, 2023. This facility is also engaged in R&D projects in the field of environmental adaptation technology, which is used to respond to sudden natural disasters. Specifically, the Space Environment and Energy Laboratories is working to develop a system that uses drones and other aerial equipment to attract lightning to prevent lightning damage to communications equipment and other social infrastructure. The goal is to start a verification test in the fiscal year ending March 31, 2023.

In this manner, the Space Environment and Energy Laboratories is a research facility with a penchant for tackling ambitious research themes that have never before been imagined. Going forward, this facility will proactively collaborate with external research and other institutions through means such as joint research in a diverse range of fields.

New Business and Regional Revitalization Initiatives

New Business Initiatives

Urban Solutions Business

NTT Urban Solutions, Inc. is the sole developer of NTT Group’s real estate business. The company utilizes NTT Group’s telecommunication exchanges and other real estate while laterally drawing on the Group’s real estate- and energy-related personnel and technologies. Moreover, the Group makes maximum use of its assets in a concerted effort to advance collaborative urban development projects with companies and municipal authorities. Through these initiatives, we aim to grow the sales of the urban solutions business to ¥600 billion by the fiscal year ending March 31, 2026. Urban development projects in Japan are targeting the resolution of local issues across the country in areas such as Sendai and Fukuoka. Overseas, we are developing the River Valley Project housing sales project in Melbourne, Australia as well as a housing development project in Dallas, Texas in the United States. Having generated operating revenues of ¥246.0 billion in the fiscal year ended March 31, 2020, we are making smooth progress toward the aforementioned target.

Smart Energy Business

NTT Anode Energy Corporation, NTT Group’s energy business operating company, announced its medium-term vision in November 2019. Guided by this vision, the company will seek to contribute to the realization of a sustainable society through the creation of new energy distribution frameworks that complement existing alternating current networks. These frameworks will be designed to address social issues pertaining to the environment and energy, such as global warming and the need to secure emergency power sources in preparation for large-scale natural disasters. Specifically, NTT Anode Energy will develop five businesses, including green power generation and backup power businesses, in the three fields of power generation, power transmission, distribution, and storage and power retail and wholesale. Through these businesses, we 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 aims to double operating revenues from its energy-related businesses to ¥600.0 billion by the fiscal year ending March 31, 2026. This target will be pursued via smart energy business initiatives advanced through investment in NTT Group as well as through capital and business alliances with and investments in wide-ranging business partners. Operating revenues in the fiscal year ended March 31, 2019 were ¥267.0 billion, and we are making progress toward achieving the target.

Regional Revitalization

Agricultural Field

In July 2019, NTT Group established NTT Agritech Technology Corporation, the Group’s first company devoted to combining agriculture and ICT. This company was created with the aim to contributing to local communities and economic invigoration through next-generation facility horticulture. To accomplish this objective, NTT Agritech Technology will produce agricultural products at its own farm using IoT and AI technologies while accumulating know-how and improving the quality of its solutions. Future endeavors by this company will include utilizing cutting-edge technologies to seek out new value and possibilities in the agricultural field in a quest to invigorate local economies and contribute to urban development.

E-Sports Field

NTT-eSports, Inc. was established in January 2020 with the goals of promoting community building and making contributions to society and to economic invigoration through e-sports. This company develops a wide range of businesses founded on its reliable, high-quality communications networks and state-of-the-art ICT. Examples of these businesses include e-sports facility operation, support and education, platform provision, event solutions, and regional revitalization consulting. NTT-eSports will continue its efforts to combine ICT with e-sports going forward as it seeks to create new experiences and connections along with new cultures and societies.
**Initiatives Aimed at Promoting ESG Management**

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

<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>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>● Reduce environmental impact</td>
<td>● Promotion of zero environmental impact&lt;br&gt;● Promoting business activities that reduce environmental impact&lt;br&gt;● Pushing the limits to create new innovation&lt;br&gt;● Improvement of electricity efficiency&lt;br&gt;● Promotion of e-mobility&lt;br&gt;● Promotion of smart energy business</td>
<td>• Increase the proportion of our renewable energy use to 30% or higher (by FY2030)&lt;br&gt;• Electricity efficiency of telecommunications business 10 times or more (by FY2030)*&lt;br&gt;• Conversion rate of general Company-use vehicles in Japan to Evs 100% (by 2030)&lt;br&gt;• Contribution to reduction of CO2 emissions of society 10 times the Company’s own CO2 emissions or more (by FY2030)&lt;br&gt;• Final disposal ratio of waste Under 1% (by FY2030)</td>
</tr>
<tr>
<td>Social</td>
<td>● Protect personal information&lt;br&gt;● Support customers in reinforcing information security</td>
<td>● Promotion of security systems&lt;br&gt;● Promotion of security business&lt;br&gt;● Securing of stability and reliability of communication services</td>
<td>• Number of accidents of personal information leaks: 0&lt;br&gt;• Stable service provision rate: 99.99%&lt;br&gt;• Number of major accidents: 0&lt;br&gt;• Ratio of female managers: More than 10% (by FY2025)&lt;br&gt;• Ratio of persons with disabilities: 2.2%&lt;br&gt;• Employee satisfaction: Higher than in the previous fiscal year</td>
</tr>
<tr>
<td>Governance</td>
<td>● Strengthen disaster countermeasures&lt;br&gt;● Promote diversity</td>
<td>● Environmental that encourages a drift in work style centered on remote work&lt;br&gt;● Empowerment of women in the workforce&lt;br&gt;● Promotion of global diversity&lt;br&gt;● Initiatives for employing people with disabilities&lt;br&gt;● Respect for human rights in the supply chain&lt;br&gt;● Revision of compensation system for research personnel&lt;br&gt;● Further strengthening governance&lt;br&gt;● Evaluation of Board of Directors’ effectiveness</td>
<td>• Number of incidents of personal information leaks: 0&lt;br&gt;• Stable service provision rate: 99.99%&lt;br&gt;• Number of major accidents: 0&lt;br&gt;• Ratio of female managers: More than 10% (by FY2025)&lt;br&gt;• Ratio of persons with disabilities: 2.2%&lt;br&gt;• Employee satisfaction: Higher than in the previous fiscal year</td>
</tr>
</tbody>
</table>

*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).
Mobile Communications Business

In the Mobile Communications Business Segment, we worked to promote sales of the new billing plans, Gigahiro and Gigalight, which feature simple structures and great value, and docomo Hikari, started to provide 5G services, and collaborated with various business partners in the smart life area, in an effort to provide new value-added 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

Composition by Segment for the Fiscal Year Ended March 31, 2020

Operations in Review

Number of Subscriptions by Mobile Network Operator (Thousand subscriptions)

<table>
<thead>
<tr>
<th>Year 2016</th>
<th>Year 2017</th>
<th>Year 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTT DOCOMO</td>
<td>KDDI</td>
<td>SoftBank</td>
</tr>
<tr>
<td>NTT DOCOMO</td>
<td>KDDI</td>
<td>SoftBank</td>
</tr>
<tr>
<td>NTT DOCOMO</td>
<td>KDDI</td>
<td>SoftBank</td>
</tr>
<tr>
<td>NTT DOCOMO</td>
<td>KDDI</td>
<td>SoftBank</td>
</tr>
</tbody>
</table>

Churn Rate (%)

<table>
<thead>
<tr>
<th>Year 2017</th>
<th>Year 2018</th>
<th>Year 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.22</td>
<td>1.07</td>
<td>0.96</td>
</tr>
<tr>
<td>0.86</td>
<td>0.76</td>
<td>0.72</td>
</tr>
<tr>
<td>0.65</td>
<td>0.57</td>
<td>0.54</td>
</tr>
</tbody>
</table>

Number of d POINT CLUB Members (Million members)

<table>
<thead>
<tr>
<th>Year 2017</th>
<th>Year 2018</th>
<th>Year 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>65.60</td>
<td>70.15</td>
<td>75.09</td>
</tr>
</tbody>
</table>

TOPICS

- In order to reduce customer waiting times at docomo shops, we introduced the ability to book via the internet or by telephone, and extended the time slots during which appointments are possible. In addition, from December 2019, we unified our support approach to explain to customers who purchase a terminal at a docomo shop and wish for initial setup and data transfer, that they may receive this service free of charge.
- We concluded a capital and business alliance agreement with M3 Inc., the largest domestic medical IT company, which counts approximately 90% of Japan’s physicians as members, and established emplace, Inc. to support corporate health management.
- As a result of providing information related to 5G technology and specifications, and offering a 5G technology verification environment free of charge, the number of participants in the DOCOMO 5G Open Partner Program, which is an initiative aimed at creating new solutions with partner companies, had risen to 3,400 as of the end of March 2020.

FOCUS

Collaboration in Various Fields Centered on d POINTs

NTT DOCOMO has formed a business alliance with Recruit Co., Ltd., through which it seeks to grow its ecosystems. Centered on d POINTs, these efforts are aimed at increasing convenience for and improving the quality of services provided to customers of Recruit’s services and d POINT CLUB subscribers.

1. Linking of Recruit Group’s Online Services with d POINTs

By linking the Recruit IDs used for all online services provided by the Recruit Group with NTT DOCOMO’s d ACCOUNTs, we make it possible to accumulate and use d POINTs when using the Recruit Group’s online services.

Going forward, we will examine the possibility of collaborating in supporting sales promotions by d POINT affiliates and in marketing in order to further expand the base of d POINT CLUB subscribers.

2. Enhancement of Coordination with Air Business Tools

From April 2020, Recruit’s AirPAY service was made compatible with d POINTs, adding to prior compatibility with the d PAY payment service and making it possible to accumulate and use d POINTs at AirPAY affiliates.

Note: Using d POINTs through Recruit services requires the registration of d POINT user information.

Collaborative Ventures for Supporting Healthcare Institutions and Patients with ICT and IoT

Phase 1—Commencement of Virtual Outing Trial for Hospitalized Patients

The global COVID-19 pandemic has prompted healthcare institutions to place limits on face-to-face interactions with patients, forcing frontline healthcare workers to provide the necessary healthcare services while limiting their number of interactions with patients. In response to this situation, there is an increased need to introduce ICT- and IoT-powered remote technologies. NTT DOCOMO is examining the potential for collaborative ventures with M3, inc. and Sony Corporation, to utilize ICT and IoT to address such issues in the healthcare field.

As the first phase of these ventures, we have commenced a trial using virtual reality (VR) and augmented reality (AR) technologies to provide hospitalized patients with opportunities for virtual outings and support virtual visits. Specifically, we offer programs that allow patients to become immersed in travel videos with a 360° viewing perspective simply by putting on VR goggles in their hospital room, giving them the opportunity to experience outings that feel almost real. Another offering is a virtual visitation system that allows patients to meet with their families even when face-to-face visits are discouraged due to fear of COVID-19 infection.

Going forward, we hope to contribute to the resolution of a wide range of issues pertaining to improving patient quality of life, facilitating treatment and rehabilitation, enabling remote examinations and remote explanations to patients’ families, and allowing for communication between physicians and patients.

Virtual outing using VT and AR technologies (image)
Regional Communications Business

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

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

Composition by Segment for the Fiscal Year Ended March 31, 2020

<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>22.3% (¥3,079.9 billion)</td>
<td>24.8% (¥398.3 billion)</td>
<td>28.9% (¥525.5 billion)</td>
<td>23.4% (74,754)</td>
</tr>
</tbody>
</table>

Fixed-Line Broadband Services Subscriptions

- NTT East: 12.44 million subscriptions
- NTT West: 9.68 million subscriptions
- Total for NTT East and NTT West: 22.12 million subscriptions

Number and Share of Subscriptions for Fixed-Line Broadband Services

- NTT East: 53.7%
- NTT West: 46.3%
- Total: 53.7% (22.12 million subscriptions)

Topics

- We established NTT AgriTechnology Corporation, NTT Group’s first “Agriculture × ICT” specialist company, aiming to promote urban development through agriculture by utilizing IoT / AI. In addition, in order to promote such initiatives as contributing to the revitalization of local communities and regional economies, we established NTT e-Sports, Inc. as a joint venture with SKY Perfect JSAT Corporation and Taito Corporation.
- NTT East and NTT West collaborated with many local governments nationwide, promoting a variety of initiatives aimed at utilizing ICT for urban development. Beginning in the Kyoto area, NTT West has started the staged deployment of a Local Revitalization Cloud service, which is a shared-usage cloud for universities and local governments.
- In order to address the societal issues of how to save and pass on regional cultural and artistic assets, and to respond to our customers’ expectation that we will help revitalize local communities and convey their appeal through culture and art, we promoted the collection of digital data related to local culture and art, and broadcasted information using cutting-edge technology to contribute to the revitalization of local communities through local artistic and cultural traditions. We also hosted the “Digital × Hokusai (prelude)” interactive exhibition as a means of expressing the concept of this initiative.

Focus

Opening of eXeField Akiba Facility for Creating New Culture and Communities through E-Sports and Provision of eXeLAB Comprehensive Communication Platform

NTT e-Sports, Inc. opened eXeField Akiba, an e-Sports facility located in Akhabara UDX, in August 2020. This facility will function as a pillar supporting NTT e-Sports’ efforts to accomplish its mission of building communities and contributing to local economic invigoration through e-Sports as well as the core that will organically link all of its various undertakings. Moreover, eXeField Akiba is equipped with cutting-edge equipment to allow for distribution of footage from online e-sports events from across Japan. By providing a venue for forming connections between different people and communities through this facility, we aim to help encourage e-Sports culture, build communities, and evolve e-Sports-related technologies.

In conjunction with the opening of this facility, the eXeLAB comprehensive communication platform for gamers was launched, also in August 2020. The recent boom in the video game market seen has been due in no small part to communication between players in the form of nationwide tournaments and exchanges between e-Sports teams and fans. However, the differences in information available by region have led to disparities between the efforts of players. Event organizers, meanwhile, face issues with regard to the hassle of making all the necessary adjustments for arranging events, impeding the continuation of such events. To address these issues, eXeLAB provides forums for communication between gamers as well as tools for the management of tournaments and teams. We hope that these features will help promote the expansion and acceleration of gaming events while making them more efficient. Through eXeLAB, we also aim to support the development of e-Sports and contribute to the creation of new connections amid the new normal.

Establishment of New Company to Realize Sustainable Next-Generation Livestock Production and Dairy Farming and Circular Community Ecosystems

Biostock was established in July 2020 through joint investment by Biomass Research Co., Ltd., and NTT East for the purpose of realizing sustainable livestock production and dairy farming and invigorating regional economies.

The number of people engaged in livestock production and dairy farming is declining in Japan while the number of animals each farmer has to care for is increasing. Meanwhile, many farmers have expressed an interest in introducing biogas plants, which are a means of utilizing animal excrements while eliminating odors, but have been unable to do so because of the high introduction costs, which cannot be covered through their own capital or borrowings.

Given this situation, we are working to eliminate the high hurdle to introduction of biogas plants through a monthly payment model that requires no initial investment. This is made possible by combining the biogas plant introduction expertise of Biomass Research with the ICT capabilities of NTT East. We also intend to coordinate with a diverse range of partners to offer additional solutions, such as sophisticated IoT and AI-powered control systems that can perform farm operation procedures other than excrement disposal remotely without human involvement and optimal growth management systems that analyze environment and growth data.

Going forward, we will promote digital transformations in livestock production and dairy farming through coordination capitalizing on NTT Group’s assets and Biomass Research’s expertise.
**Long Distance and International Communications Business**

In the Long Distance and International Communications Business Segment, in addition to enhancing our ability to provide ICT solutions, which combine network, security and other services, we worked to enhance our 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

**Composition by Segment for the Fiscal Year Ended March 31, 2020**

<table>
<thead>
<tr>
<th>Segment</th>
<th>Revenues (¥)</th>
<th>Profit (¥)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Distance and International Communications \n  Business Segment</td>
<td>16.0%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Data Communications Business</td>
<td>16.4%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Total</td>
<td>16.2%</td>
<td>8.3%</td>
</tr>
</tbody>
</table>

**TOPICS**

- In order to respond to demand for cloud services and data centers, we worked to enhance our service provision structure. In Europe, we began operating Netherlands Amsterdam 1 Data Center and Germany Frankfurt 4 Data Center, while in Asia, we began construction of Indonesia Jakarta 3 Data Center.
- Together with Mizuho Financial Group, Inc., Mizuho Bank, Ltd., and Mizuho Information & Research Institute, Inc., we jointly developed a voice recognition system, a tool which automates the entry of transaction data for market instruments by utilizing voice recognition and processing technology, text mining, and RPA. Mizuho Bank has begun using the system in its market banking operations.

**Data Communications Business**

In the Data Communications Business Segment, we responded to the acceleration of our customers’ digital transformation at a global level, and to their increasingly diversified and sophisticated needs, by working to expand our business in the global market and to extend and consistently provide a range of IT services, such as offerings of 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 around the world

**Composition by Segment for the Fiscal Year Ended March 31, 2020**

<table>
<thead>
<tr>
<th>Segment</th>
<th>Revenues (¥)</th>
<th>Profit (¥)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Distance and International Communications \n  Business Segment</td>
<td>15.5%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Data Communications Business</td>
<td>10.7%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Total</td>
<td>16.2%</td>
<td>8.3%</td>
</tr>
</tbody>
</table>

**TOPICS**

- We were selected as a strategic partner for the digital transformation project of Naturgy Energy Group, SA, a gas and electrical energy utilities company in Spain. We will provide BPO / ITO services for maintaining and operating systems related to gas and electricity distribution and various operations related to utility retail service using a advanced platform that we had developed among others.
- In pursuit of our growth strategy in North America, we converted two U.S.-based companies, Plux7 Labs Inc. and NETESOLUTIONS CORPORATION, to subsidiaries. The acquisitions of these companies will strengthen our capabilities in relation to Amazon Web Services and U.S. federal government healthcare.

**FOCUS**

**GIGA School Pack for Helping Supply a Computer for Every Student**

NTT Communications has teamed up with Lenovo (Japan) Ltd. to develop the GIGA School Pack, which combines educational-use computers for elementary and junior high school students with the Manabi Pocket, a cloud-based education support platform to support the GIGA School Scheme* aimed at helping supply a computer for every student. Applications for this service have been accepted since March 2020. We will look to promote digital transformations at educational institutions by providing the GIGA School Pack to elementary and junior high schools across Japan going forward.

*Scheme aimed at helping supply a computer to every student and to develop high-speed, high-capacity communication networks in an integrated manner to ensure schools across Japan can continue to provide equal and individually optimized learning environments in the future

**Direct Access via Microsoft Azure ExpressRoute from Berlin 1 Data Center**

A Microsoft Azure ExpressRoute connection point allowing for direct access to Microsoft Azure has been installed in the Berlin 1 Data Center of NTT Ltd. The ability to access Azure directly without passing through a standard Internet connection makes it possible for customers to establish hybrid clouds with increased levels of safety and reliability. This connection point can be accessed by customers using our data centers in the EMEA region.

**Evolution of Catch&Go, a Cash Register-Free Digital Store Service that Allows for Shopping via Facial Recognition**

NTT DATA provides Catch&Go, a cash register-free digital store service. In addition to the QR code recognition systems used in prior experimental digital stores, we have introduced facial recognition systems and dynamic pricing using electronic price cards. We will test the new shopping experience that enables customers to enter a store and make payments purely through facial recognition as well as the use of electronic price cards linked to the store’s inventory information to improve sales and reduce waste loss.

**Global Access to Historical Cultural Heritage throughout the ASEAN Region via Digital Archiving**

NTT DATA is participating in the ASEAN Cultural Heritage Digital Archive project, which entails the digitization of important historical cultural heritage from throughout the ASEAN region. Through this project, NTT DATA compiled cultural heritage from across the region into a digital archive system, making around 160 digitized cultural heritage articles from Indonesia, Thailand, and Malaysia available for viewing. This archive includes image, voice, and video data as well as 3D data of structures. In the future, the project aims to provide access to cultural heritage from the entire ASEAN region.
Operations in Review

Composition by Segment for the Fiscal Year Ended March 31, 2020

<table>
<thead>
<tr>
<th>Segment</th>
<th>Revenues</th>
<th>Profit</th>
<th>Investment</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Estate</td>
<td>¥1,401.7 billion</td>
<td>¥10.9 billion</td>
<td>¥238.2 billion</td>
<td>100,000</td>
</tr>
<tr>
<td>Finance</td>
<td>¥331.0 billion</td>
<td>¥65.8 billion</td>
<td>¥53.5 billion</td>
<td>50,000</td>
</tr>
<tr>
<td>System Development</td>
<td>¥147.2 billion</td>
<td>¥15.4 billion</td>
<td>¥22.8 billion</td>
<td>10,000</td>
</tr>
<tr>
<td>Other</td>
<td>¥99.4 billion</td>
<td>¥15.4 billion</td>
<td>¥22.8 billion</td>
<td>10,000</td>
</tr>
<tr>
<td>Total</td>
<td>¥90.9 billion</td>
<td>¥15.4 billion</td>
<td>¥22.8 billion</td>
<td>10,000</td>
</tr>
</tbody>
</table>

Details of Major Initiatives

Real Estate Business
We promoted our mainstay office and commercial business, residential business, and global business through NTT Urban Solutions, Inc., a company managing NTT Group’s real estate business. In Japan, we were involved in urban development projects in Fukuoka, Sendai, and other cities.

Electric Power Business
Led by NTT Anode Energy Corporation, which promotes smart energy business in NTT Group, we worked on initiatives for a safe and secure society that uses natural energy and finite energy resources efficiently without waste, and is resilient to natural disasters and other risks.

System Development Business
In preparation for digital transformation, we have begun developing and deploying a cluster of IT systems that will become the new service platform. We were also engaged in initiatives to develop solutions for resolving societal issues, such as urban security and the revitalization of regions.

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

FOCUS

Collaboration in Renewable Energy and Storage Battery Businesses
In December 2019, NTT Anode Energy Corporation reached an agreement with Mitsubishi Corporation to examine possibilities for collaboration in the energy field as part of their business alliance for the promotion of industrial digital transformations.

Specific Initiatives
1. Renewable Energy Projects
The company will investigate the possibility of joint investment in domestic and overseas renewable energy projects and of supplying electricity to NTT Group companies.

2. Energy Management Businesses with Electric Vehicles and Storage Batteries
Mitsubishi Corporation and NTT Anode Energy are looking into the possibility of developing microgrid platforms* that incorporate electric vehicles and storage batteries, new decentralized power businesses that use microgrid platforms, and new energy solutions businesses that utilize the business networks of both companies.

Through these initiatives, we will combine NTT Group’s ICT and direct current supply technologies with the Mitsubishi Corporation Group’s power business insight and expertise to provide customers with clean power options and the kind of energy-management services that will make them more resilient to change in the energy landscape.

* Business platforms that provide optimal energy solutions to customers by organically linking storage batteries, electric vehicles, and chargers throughout a given area via ICT

Launch of Corporate Wellness Support Service—Support for Health Management via Big Data Analysis
In April 2020, NTT Life Science Corporation launched Genovision, a new health management support service to help promote corporate health management and employee health.

As employee health is becoming an important issue for companies, there is an increase in need for health management that approaches employee health from a management perspective and implements it strategically.

To cater to the demand associated with this trend, NTT Life Science offers Genovision packages bundling Genovision Dock, a genetic testing service for employees; Genovision Action, a lifestyle habit improvement support service for employees; and Genovision Insight, a health management consulting service for companies. Based on the ICT and security technologies, NTT Group has developed thus far, these services combine big data analysis with healthcare data and genome data acquired through genetic testing to deliver lifestyle habit improvement support that is optimized for every employee.

We are rolling out these services for use by domestic employees via healthcare institutions operated by NTT Group, and we plan to gradually expand the scope of availability to the various healthcare institutions across Japan with which Group companies have contracts. These services will also be made available for external companies, and we aim to support the health improvement and health management efforts of companies nationwide and their employees through Genovision services.
Corporate Data

Name: NIPPON TELEGRAPH AND TELEPHONE CORPORATION

Head Office: 1-1-1, Hibiya, Chiyoda-ku, Tokyo 100-8116, Japan

Date of Establishment: April 1, 1985

Paid-In Capital: ¥938 billion (As of March 31, 2020)

Total Number of Shares Issued: 3,900,788,940 (As of March 31, 2020)

Paid-In Capital: ¥938 billion (As of March 31, 2020)

Number of Employees: 319,050 employees (As of March 31, 2020, on a consolidated basis)

Organization Chart

Access
Otemachi First Square
Tokyo Metro: Chiyoda Line / Tozai Line / Hanzomon Line / Marunouchi Line
Tokyo Subway: Mita Line
Otemachi Station, direct connection from exit C8, C11, and C12
JR lines
Tokyo Station, Marunouchi North Exit, 5 minute walk from exit

Supporting Information