

# 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.

	Relevant Management Resources	Relevant Sustainable Development Goals	Material Issues	Status of Initiatives for the Medium-Term Management Strategy	Major Initiatives	Targets
<div style="background-color: #4CAF50; color: white; padding: 20px; text-align: center; font-size: 48px; font-weight: bold;">E</div> <h2 style="text-align: center; color: white;">Environment</h2>			<h3>Reduction of Environmental Impact</h3>	<ul style="list-style-type: none"> <li>Reduce environmental impact</li> <li>Leverage ICT to contribute to the environment</li> </ul>	<ul style="list-style-type: none"> <li>Promotion of zero environmental impact                             <ul style="list-style-type: none"> <li>Promoting business activities that reduce environmental impact</li> <li>Pushing the limits to create new innovation</li> </ul> </li> <li>Improvement of electricity efficiency</li> <li>Promotion of e-mobility</li> <li>Promotion of smart energy business</li> </ul>	<ul style="list-style-type: none"> <li>Increase the proportion of our renewable energy use to <b>30%</b> or higher (by FY2030)</li> <li>Electricity efficiency of telecommunications business <b>10</b> times or more (by FY2030)*</li> <li>Conversion rate of general Company-use vehicles in Japan to EVs <b>100%</b> (by 2030)</li> <li>Contribution to reduction of CO<sub>2</sub> emissions of society <b>10</b> times the Company's own CO<sub>2</sub> emissions or more (by FY2030)</li> <li>Final disposal ratio of waste Under <b>1%</b> (by FY2030)</li> </ul>
	R&D Capabilities Human Resources Brand Image ICT Infrastructure Financial Base Customer Base		<h3>Strengthening of Security</h3>	<ul style="list-style-type: none"> <li>Protect personal information</li> <li>Support customers in reinforcing information security</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of security promotion systems</li> <li>Promotion of security business</li> </ul>	<ul style="list-style-type: none"> <li>Number of incidents of personal information leaks: <b>0</b></li> </ul>
			<h3>Strengthening of Disaster Countermeasures</h3>	<ul style="list-style-type: none"> <li>Strengthen disaster countermeasures</li> </ul>	<ul style="list-style-type: none"> <li>Securing of stability and reliability of communication services</li> </ul>	<ul style="list-style-type: none"> <li>Stable service provision rate: <b>99.99%</b></li> <li>Number of major accidents: <b>0</b></li> </ul>
			<h3>Utilization of Diverse Human Resources</h3>	<ul style="list-style-type: none"> <li>Promote diversity</li> </ul>	<ul style="list-style-type: none"> <li>Environment that encourages a shift in work styles centered on remote work</li> <li>Empowerment of women in the workforce</li> <li>Promotion of global diversity</li> <li>Initiatives for employing people with disabilities</li> <li>Respect for human rights in the supply chain</li> <li>Revision of compensation system for research personnel</li> </ul>	<ul style="list-style-type: none"> <li>Ratio of female managers: More than <b>10%</b> (by FY2025)</li> <li>Ratio of persons with disabilities: <b>2.2%</b></li> <li>Employee satisfaction: <b>Higher than in the previous fiscal year</b></li> </ul>
<div style="background-color: #395468; color: white; padding: 20px; text-align: center; font-size: 48px; font-weight: bold;">G</div> <h2 style="text-align: center; color: white;">Governance</h2>			<h3>Reinforcement of Governance for Sustainable Growth</h3>	<ul style="list-style-type: none"> <li>Enhance structure on the basis of the intent of Japan's Corporate Governance Code</li> <li>Strengthen global corporate governance</li> </ul>	<ul style="list-style-type: none"> <li>Further strengthening governance</li> <li>Evaluation of Board of Directors' effectiveness</li> </ul>	

\* 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

Commendation by Outside Parties



MEMBER OF  
**Dow Jones Sustainability Indices**  
In Collaboration with RobecoSAM



**FTSE4Good**



**FTSE Blossom Japan**



2020 CONSTITUENT MSCI JAPAN  
ESG SELECT LEADERS INDEX



Internet IR  
Grand Prize  
2019  
Best Investor Relations



2018 Award for Excellence in Corporate Disclosure  
— Industries —  
SAI The Securities Analysts Association of Japan



2018年度  
企業文化賞  
BEST CULTURE



work with Pride  
**WWP Gold 2018**



**TWOO**  
Telework Pioneer



Derwent  
Top 100  
Global  
Innovator  
2020  
Clarivate

Material ESG Issue **1** Reduction of Environmental Impact

NTT Group has formulated its new Environmental and Energy Vision, which targets zero environmental impact, to clearly indicate its enhanced initiatives aimed at reducing its environmental impact. In addition to its own initiatives to reduce environmental impact, NTT aims to reduce the environmental impact of customers, companies, and society through its provision of green ICT services and social infrastructure.

In addition, in May 2020, NTT endorsed TCFD. We will continue to carry out disclosure of environmental information, with emphasis on our efforts to eliminate our burden on the environment.

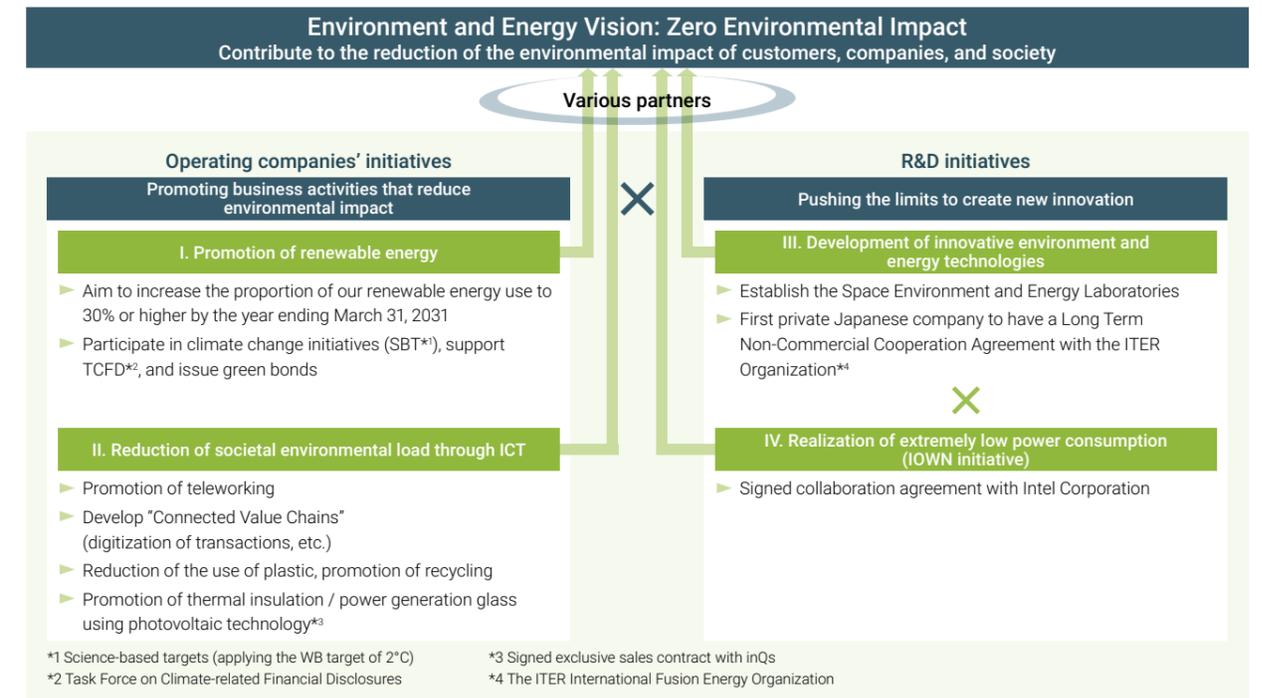


We disclose important information related to governance, strategy, risk management, and indicators and targets, as recommended by the Task Force on Climate-related Financial Disclosures (TCFD). The relevant items of information are marked with the TCFD symbol for confirmation.



Formulation of the Environment and Energy Vision

In May 2020, NTT Group unveiled its Environment and Energy Vision, which targets zero environmental impact. The vision comprises four pillars: the promotion of renewable energy, reduction of societal environmental load through ICT, development of innovative environment and energy technologies, and realization of extremely low power consumption. By promoting business activities that reduce environmental impact and pushing the limits to create new innovation through R&D, we will help reduce the environmental impact of our customers, companies, and society as a whole.



Initiatives for the Promotion of Renewable Energy

NTT Group endeavors to develop renewable energy resources itself, promote its own use of this energy, and provide it to other companies.

Promoting the development of renewable energy sources

We aim to secure renewable energy sources worth 4.5 million kilowatts by the year ending March 31, 2026. As well as investing itself, NTT Group will enter alliances with a wide range of business partners, promoting efficient investment. In addition to large-scale sources of electricity, such as solar and wind power, we plan to acquire smaller sources of electricity, such as biomass and geothermal generating facilities.

Examples of specific initiatives

- ▶ Collaboration with Mitsubishi Corporation on businesses related to renewable energy and storage batteries (June 2020)
- ▶ Capital alliance with Furusato Netsuden Co., Ltd. (headquarters: Oguni-cho, Aso-gun, Kumamoto Prefecture) in the geothermal power business (July 2020)
- ▶ Capital and business alliance with Forest Energy Inc. (headquarters: Shinagawa-ku, Tokyo) in the biomass power generation business (August 2020)
- ▶ Expansion in the wind power business (September 2020)

Promoting our own use of renewable energy

We are engaging in a variety of initiatives to raise our ratio of renewable energy use to 30% or more by the fiscal year ending March 31, 2031. To meet this target, NTT Group will develop renewable energy sources itself and promote the shift to renewable energy in Japan at office buildings, telecommunications buildings, data centers, and research laboratories.



### Goals for the Reduction of Environmental Impact

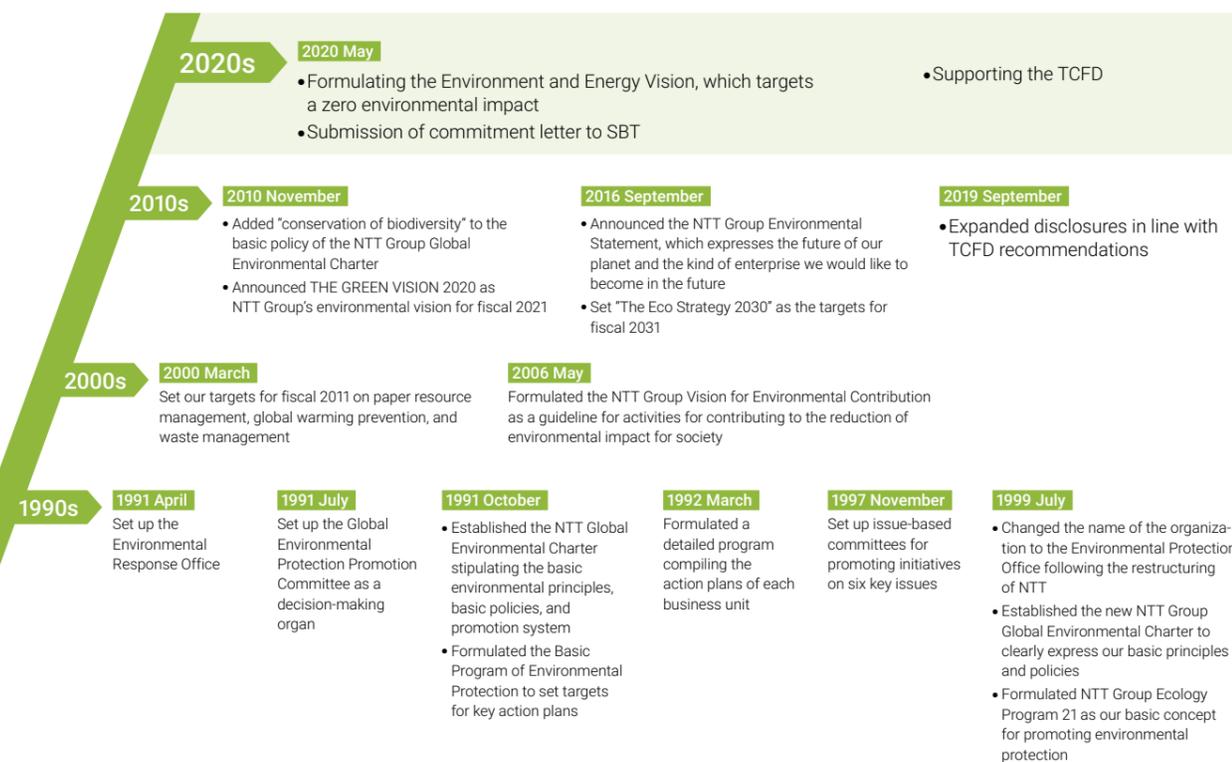
In addition to reducing environmental impact through its business activities, NTT Group prioritizes the reduction of environmental impact within society through the use of ICT. Based on our analysis of materiality issues related to environmental problems, we have set targets for environmental activities to undertake by the fiscal year ending March 31, 2031, and we are working to reduce environmental impact accordingly.

	Goals	Quantitative Indicators	KPIs	Goal Achievement Time	Results (FY)		
					2017	2018	2019
<b>Reduce environmental impact of business operations</b>	Working to increase our usage of renewable energy by developing green power sources and using our own green power	Our own ratio of renewable energy use	More than 30.0%	FY2030	—	—	7.9%
	Improve power efficiency to reduce the environmental impact of business operations	Power efficiency of communications services (Power efficiency per unit of communications volume)	At least 10 times higher than in FY2013	FY2030	3.6 times	4.5 times	5.4 times
			At least 2 times higher than in FY2017	2025	—	1.2 times	1.5 times
		Electric vehicles as a percentage of general vehicles in Japan	100% 50%	2030 2025	—	0.34%	1.45%
<b>Use ICT to contribute to the environment</b>	While reducing CO <sub>2</sub> emissions of the Company, contribute to the reduction of CO <sub>2</sub> emissions of all society, including value chains, through the utilization of ICT	Amount of contribution to the reduction of CO <sub>2</sub> emissions of all society	At least 10 times the Company's emissions	FY2030	10.1 times	10.8 times	12.5 times
<b>Effectively use resources</b>	Control the final disposal ratio of waste and work toward the effective use of resources	Final disposal ratio of waste	Zero emissions (under 1%)	FY2030	1.18%	0.91%	1.17%

### 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



### Impact of Climate Change on Businesses

Climate change has the potential to affect the cost of electricity for providing communications services and other purposes, and may lead to large-scale disasters causing enormous damage to communications infrastructure. NTT Group takes the following perspectives on the risks of climate change in terms of business operation, measures to deal with those risks, as well as opportunities.

#### 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. 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.

- Our own use of renewable energy
  - 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)
  - Installation of high-voltage direct current (HVDC) systems and systems for analyzing the status of electricity usage
  - Securing the stability and reliability of telecommunications services in anticipation of large-scale natural disasters
- \* Scale of assumed risks: Effect of increases in environmental tax (¥720 million per year), effect of FIT (¥19.1 billion-¥22.7 billion per year)

#### 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
- Expansion of the business continuity solutions business leveraging ICT and cloud technologies in line with the corporate migration to the cloud and digitalization
- Growing demand for ICT services as teleworking and remote working become more familiar and mainstream, and to support workstyle transformation due to digital transformation (DX), as well as to reduce environmental impact
- Increasing demand for BCP-oriented ICT services addressing such factors as natural disasters and system failures



### Organization for Environmental Management

To address climate change and other environmental issues, following deliberation by the Company's directors we introduced the Environment and Energy Vision in May 2020. This vision incorporates items deliberated by all members of the Board, including the outside directors.

We also 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 regularly throughout a year, is chaired by the general manager of the NTT Environmental Protection Office (Head of Research and Development Planning) with membership comprising heads of environmental departments at major Group companies (NTT East, NTT West, NTT Communications, NTT DOCOMO, and NTT DATA, etc.). 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 CO<sub>2</sub> 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

NTT Anode Energy spearheads NTT Group's smart energy business.

The aim of this 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.

By maximizing synergies within NTT Group, NTT Anode Energy is working with partner companies to create a new framework for energy distribution, invigorating industry and aiming for a sustainable society.

#### Components of the Business

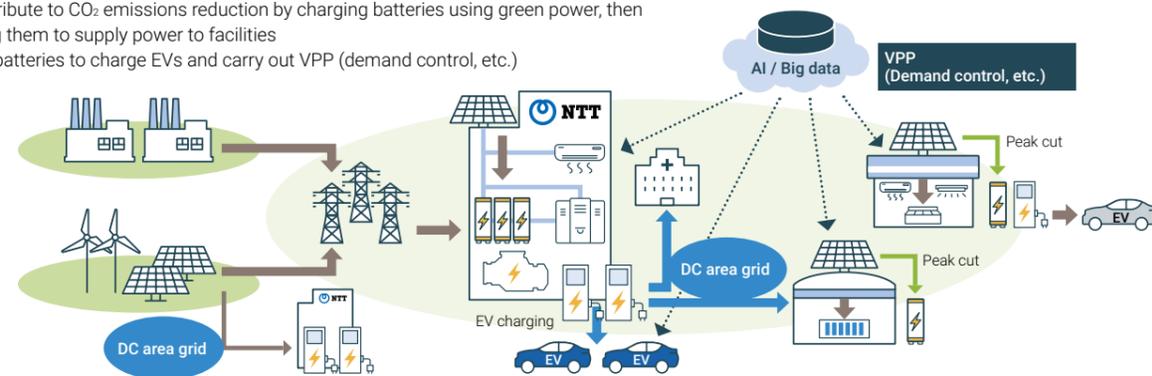
We conduct five projects in the three areas of power generation; power transmission and distribution and storage; and retail and wholesale. NTT Group aims to double the sales of its energy-related businesses by the fiscal year ending March 31, 2026.

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

#### Overview of the Business

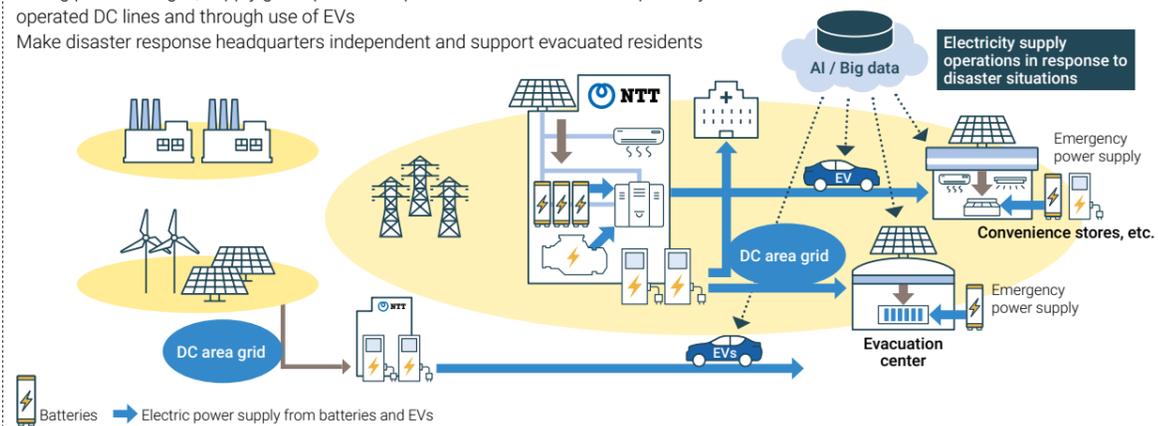
##### During Ordinary Times

Contribute to CO<sub>2</sub> emissions reduction by charging batteries using green power, then using them to supply power to facilities  
Use batteries to charge EVs and carry out VPP (demand control, etc.)



##### During Disasters

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

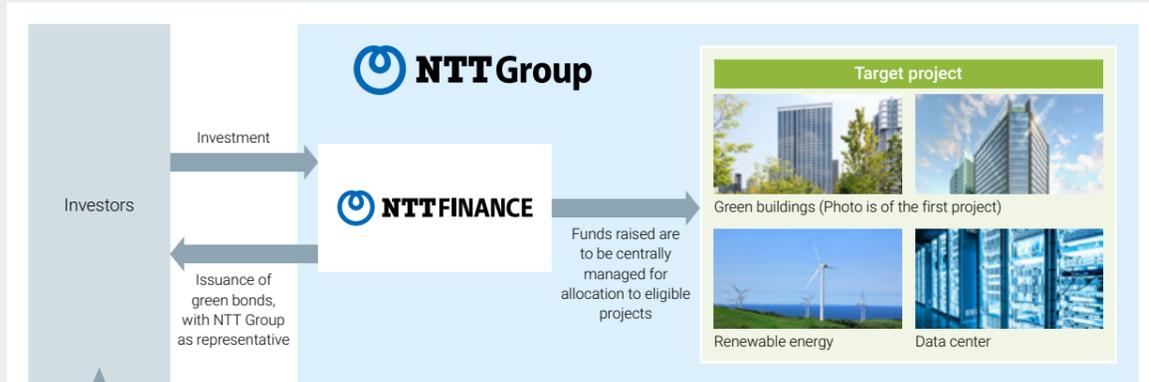


### COLUMN

#### NTT Group Issues Green Bonds

NTT Group issued green bonds for the first time in 2020. Green bonds are issued to raise funds for green projects (renewable energy, energy conservation, and other environment-improving businesses) being promoted by companies, regional government bodies, and other entities.

NTT Group places top-level priority on environmental issues. Accordingly, as a group we are undertaking a host of measures to address these issues. One example is the issuance of NTT Group green bonds by NTT Finance, the Group's core financial firm. The funds raised through this issue will be used to fund projects that address environmental issues (green buildings, which deliver strong environmental performance; the generation of wind, power, and other renewable energy; and data centers that are highly efficient but conserve electricity).



#### Statement of Investment in No. 1 Green Bond Issue (As of the time covenants were agreed upon, in Japanese syllabary order)

- Asset Management One Co., Ltd.
- Seven Bank, Ltd.
- Tokio Marine Asset Management Co., Ltd.
- The Bank of Nagoya, Ltd.
- The Nomura Trust & Banking Co., Ltd.
- Hanno-Shinkin Bank
- Sumitomo Mitsui Trust Asset Management Co., Ltd.
- MUFG Bank, Ltd.
- Midori Life Insurance Company
- Meiji Yasuda Asset Management Company Ltd., others

#### State of Green Bond Issuance

Here, we show the status of appropriation to qualified businesses of funds that have been raised through green bonds, as well as the environmental impact of qualified businesses based on the NTT green bond framework.

##### <Reporting on the appropriation of funds>

- Status of appropriation of funds raised through the issue of the green bonds to qualified businesses
- Ratio of new financing and refinancing

Amount issued	Amount appropriated	Amount unappropriated	Refinancing ratio
¥40.0 billion	¥40.0 billion	¥0	100%

- Overview of qualified businesses to which funds raised are to be appropriated
- Funds appropriated to qualified businesses and unappropriated funds

Use of funds	Project name	Years elapsed	Useful life remaining	Amount appropriated	Amount unappropriated
Green buildings	Shinagawa Season Terrace	5 years	33 years	¥35.0 billion	All appropriated
	Urbannet Nagoya Nexta Building	Under construction	Under construction	¥5.0 billion	All appropriated

- If unappropriated amounts remain, expected timing for appropriation  
Not applicable

##### <Impact Reporting>

- Scheduled for release in the year ending March 31, 2022

## Material ESG Issue 2 Strengthening of Security

With a full-fledged digital society, risks and opportunities by digitalization are emerging. Against this backdrop, the role of security is expanding. It is no longer simply a defensive measure that protects information assets and gives rise to expenses. Security is also a target for strategic investments aimed at transforming and growing businesses and forming new markets.

As a global ICT corporate group that believes in the potential of digital society, NTT Group is committed to contributing to global cyber-resilience. Further, we will proactively help realize cybersecurity worldwide by providing cybersecure ICT services.

### Internal Factors

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

### Social Demand

- ▶ Increasing sophistication and diversity of cyberattacks
- ▶ Reports of the vulnerability of ICT devices
  - ➔ Due to the importance of cyber-resilience, companies are expected to take security measures, 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 usability 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 fundamental research and development to strengthen the security of our services and the provision of security solutions
- ▶ Use of advanced technology and external partnership for early detection of and responses to security threats
- ▶ Hiring and development of security personnel and community building
- ▶ Distribution of pioneering knowledge through participation in and contribution to global communities

## Policies on Initiatives in the Security Field

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



As the socio-economy digitalizes and the international situation changes, cyberattacks and other security threats are becoming increasingly advanced and serious. In such conditions, NTT Group's responsibility is to protect the infrastructure of ICT services as well as clients' information assets and to provide sound platforms with a view to the growth of the digital economy.

In accordance with the medium-term management strategy, NTT Group has defined its mission as supporting the infrastructure of the digital economy and contributing to the construction and development of free, open, and safe ICT platforms. NTT Group must realize its own digital transformation and those of clients in a reliable, safe manner. Moreover, these capabilities should be the reason why NTT Group is the first choice of clients. In other words, our vision is for clients to choose us because we offer security.

The impact of COVID-19 shows no signs of abating. Although socio-economic activity is beginning to return to previous levels in countries around the world, including Japan, we expect remote working and online activity to increase beyond past levels. This situation represents a new challenge for NTT Group, which provides telecommunications and IT systems. Security will also become an increasingly important issue in the post-COVID world. Realizing our vision for the future will necessitate security across all activities, including customer response, research and development, operations, finance, human resources, and other administrative areas. We are pursuing initiatives aimed at ensuring NTT is considered the number one company in terms of security.



Shinichi Yokohama  
Head of the Security and Trust Office  
Chief Information Security Officer (CISO)  
NTT

### Vision

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

#### Provision of Comprehensive Security Solutions Based on Development and Verification that Leverage Business Scale

- Demand** Growing demand for comprehensive security
- Superiority** Unique position that allows the provision of a wide range of ICT-related services on a global scale
- Specific strategies** Development of "verified by NTT" solutions that take advantage of the Company's global operating environment, value chain, and digital transformation

#### Early Detection of and Rapid Responses to Security Threats

- Demand** Shift in focus toward demand for damage minimization, which is arising from an increased awareness that 100% protection is impossible
- Superiority** Advanced analysis capabilities and analysts, such as a SIEM engine, and personnel with a high level of integrity
- Specific strategies** Advanced analysis systems and professional support provided by analysts

### Differentiation Strategy

#### Development of a Security Workforce with Common Values

- Superiority** More than 3,500 advanced and intermediate cybersecurity personnel who have a shared sense of integrity and are committed to realizing a secure digital society
- Specific strategies** Creation a system that uses formal and informal methods to attract, hire, and develop personnel

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

- Superiority** The only Japanese company with a dedicated cyber-advocacy team (a team that makes policy recommendations and society-related recommendations)
- Specific strategies** Proactive formation of cooperative relationships with major global companies and governments of key countries

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.

## Initiatives Aimed at Promoting ESG Management

### Initiatives Aimed at Strengthening Security

#### Strengthening of the Security of Our Services

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

#### Global Coordination

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

#### Participation in and Contribution to Global Communities

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

##### Progress of Initiatives

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

\*1 ICT-ISAC Japan: ICT Information Sharing and Analysis Center Japan

\*2 FIRST: Forum of Incident Response and Security Teams

\*3 CSDE: Council to Secure the Digital Economy

\*4 IABG: International Anti-Botnet Guide

\*5 EC3: European Cyber Crime Centre

\*6 NCFTA: National Cyber-Forensics and Training Alliance

\*7 JC3: Japan Cybercrime Control Center

#### Training of Security Experts

We aim to increase the quality and number of security personnel. In these efforts, Group companies are advancing personnel development measures designed for respective personnel categories and skill level. 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 47,000 certified cybersecurity personnel as of March 31, 2019. Of these personnel, 3,500 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

Level	Title		Job classification
	Advanced	Intermediate	Security management consulting / Security operation / Security development
	Security master / Security principal	Security professional	Produce first-rate experts with best performance in the industry
	Security expert	Security expert	Reinforce the pool of specialists with deep experience and judgment
			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, in 2019, we established a new global research center, where pioneering, world-class researchers are tackling projects focused on cybersecurity and encryption technologies. We have also established the IOWN Global Forum, Inc. to facilitate our collaboration with industry-leading companies to formulate security architecture for next-generation communication infrastructures.

### Security and Management Systems

The Group CISO Committee leads the construction of a governance system that coordinates the activities of Group companies. In the fiscal year ended March 31, 2020, the Group CISO Committee convened three times, while the Information Security Liaison Meeting met twice. In addition, systems have been put in place for dialogue with the senior management team, which receives regular reports on trends in external threats related to security at the Executive Officers Meeting. Also, management receives timely reports when security incidents occur.



### COLUMN

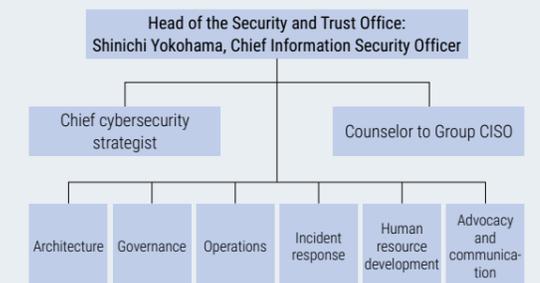
#### Establishment of the Security and Trust Office

In July 2020, we established the Security and Trust Office to reinforce Group governance by centralizing and consolidating security functions at the holding company. This organization has three main missions:

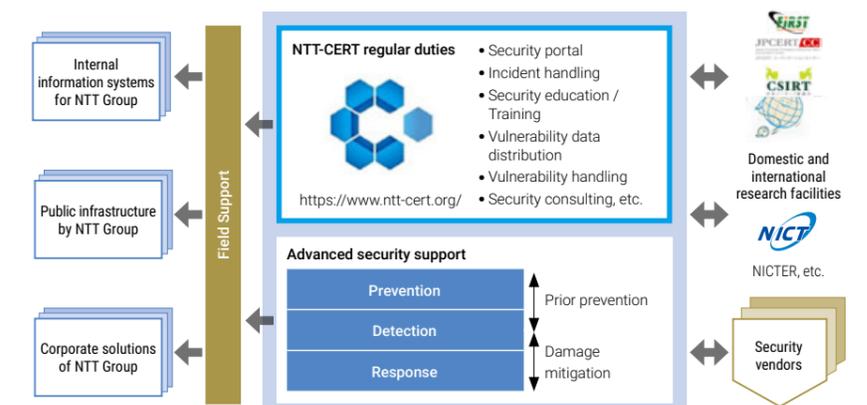
- ▶ Proposing and presenting cybersecurity measures across the Group and promoting activities at each operating company,
- ▶ Conducting cybersecurity activities (including incident response) at the holding company (including laboratories), and
- ▶ Serving as the Group's representative on cybersecurity issues, disseminating information and fostering external alliances.

\* The scope of the three missions outlined above includes OT systems, as well as internal IT systems.

#### Structure of the Security and Trust Office



Further, in 2004 we have already 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.



Enhancing Our Ability to Cope with Increasingly Ingenious and Sophisticated Cyberattacks

Looking at Attacks from the Attacker's Perspective

As cyberattacks grow increasingly ingenious in their methods and affect more people, we are having to adopt the attacker's perspective in order to strengthen our ability to deal with the attacks. Although recent cyberattacks have not displayed particularly novel technologies, they have become increasingly diverse and ingenious in their methodology and thus more difficult to detect by attempting to infiltrate Group companies and affiliates whose cybersecurity measures are weak and by pretending to represent actual commercial transactions.

Against the backdrop of increasingly unstable world affairs, concerns are growing about cyberattacks stepping up their targets from IT systems to important infrastructure and moving on from economic benefit to the pursuit of political gains.

To minimize the damage from cyberattacks under these circumstances, it is important to adopt the attacker's mindset and anticipate how and why they will perpetrate an attack. Understanding the need to augment security measures to protect important Company assets and step up our ability to minimize damage, we are cultivating verification teams with white hacker expertise. They probe our systems and address systematic vulnerabilities from a cyberattacker's perspective, helping to make our security measures more visible and improve them.

Practical Cybersecurity Training

The ability to respond to recent-day cyberattacks appropriately requires an operational engineer's technical knowledge. Also, it requires the experience to act appropriately and make decisions swiftly. People responding to cyberattacks must also be appropriately armed with the leading-edge information about cyberattacks, and maintain their ability to judge situations.

Conventionally, this expertise and knowledge has mostly been gained on the job, as employees familiarized themselves with the technological measures and organizational settings required for cyberattacks. Efficiently training personnel to act of their own accord required time and an appropriate atmosphere.

To address this issue, we have developed a training environment that provides a framework for virtually recreating an actual cyberattack experience, with conditions that emulate an actual attack, and helping employees learn technological and organizational responses. In this way, in addition to employees who have the on-the-job experience that equips them with knowledge about the most recent cyberattack methods, we can help operations engineers who have relatively little experience increase their skills and strengthen their response capabilities.

Summary of key training

- ▶ Experiencing simulated response to sophisticated cyberattacks
- ▶ Catching up with the latest cyberattacks and tools
- ▶ Compliance with global standards (NIST Framework)
- ▶ Line up of 28 training courses in 4 fields (security operations, incident response, forensics, and penetration testing)

Other Beginner and Intermediate-Level Cybersecurity Training

Follow-up training for certified personnel

In the fiscal year ended March 31, 2020, we provided an environment in which all of our approximately 42,000 certified personnel can undergo Web-based cybersecurity training about case studies of recent cyberattacks and incidents. As all employees may become responsible for cybersecurity strategy implementation, we will expand the scope of security education to include all employees as we strive to enhance their security awareness.

Online CTF contest

We adopt a game-based approach in which each company forms teams of up to four people and competes by answering questions related to cybersecurity within a limited amount of time. After the close of the contest, we distribute videos showing explanations of the questions, which was highly effective as a learning tool.

Due to the impact of COVID-19, this fiscal year represented our first online contest, which was attended by 153 people, comprising 50 teams from 12 companies. Through this contest, we expect to increase knowledge and drive up an interest in cybersecurity. By making participation anonymous and entry easy, we aim to continue working to increase interest in security even among employees who do not currently work in that area.

Catalog-based education

We systematize the learning of knowledge and skills required for beginner- and intermediate-level certification, and have built up a catalog of commercially available training programs and made it available to Group companies.

Enhancement of Security Services

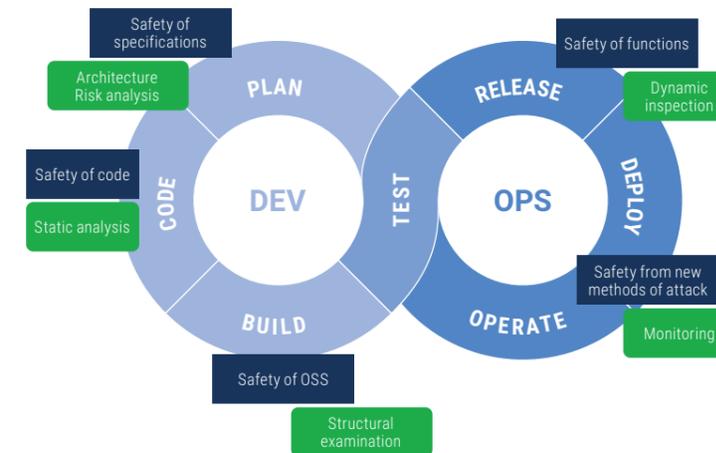
To establish its top-class industry position in the field of security, NTT Group is enhancing its presence in the area of application security and DevSecOps (an application development and operational model that incorporates security from the outset) through WhiteHat Security, Inc., a U.S. subsidiary.



In the application security field, WhiteHat provides the tools and services necessary to create and operate software safely, and the company has earned high praise in the market. WhiteHat's application security platform provides an ongoing risk assessment of organizations' software assets, incorporates security measures, and makes it possible to achieve DevSecOps.

WhiteHat's forte in the application security field lies in its ability to test for Web applications' vulnerabilities using software tools and AI. This is combined with expert verification to reduce false positives in the testing results. In general, designing and producing applications without security vulnerabilities is effective at preventing Web systems from the danger of outside attacks. By taking advantage of WhiteHat's strengths, we can efficiently confirm whether security has been ensured at each stage of the process, from application production through to operation. In addition to network and endpoint security, we expect to help ensure more secure system environments by also incorporating security response into the content of application design.

The DevSecOps Perspective



Provision of an Integrated Portal for Application Security

COLUMN

Further Reinforcement of NTT Group's Security System

NTT Group provides services to augment customers' cybersecurity. We give top priority to providing customers with safe and secure network, cloud, and other services. When security incidents occur, we provide a swift customer response. We also introduce wide-ranging groupwide measures to prevent recurrence and otherwise keep our business from being affected.

In addition to putting in place measures to stop intrusion into its own systems, NTT Group understands the importance of early-stage detection and swift response. While this is an area of strength for NTT, we are also investing to augment our capabilities. Recent cyberattacks have underscored the importance of preparedness, so we are introducing behavior detection\* functions as a more sophisticated approach to early-stage detection throughout the Group. Going forward, we will endeavor to further enhance NTT Group's security system.

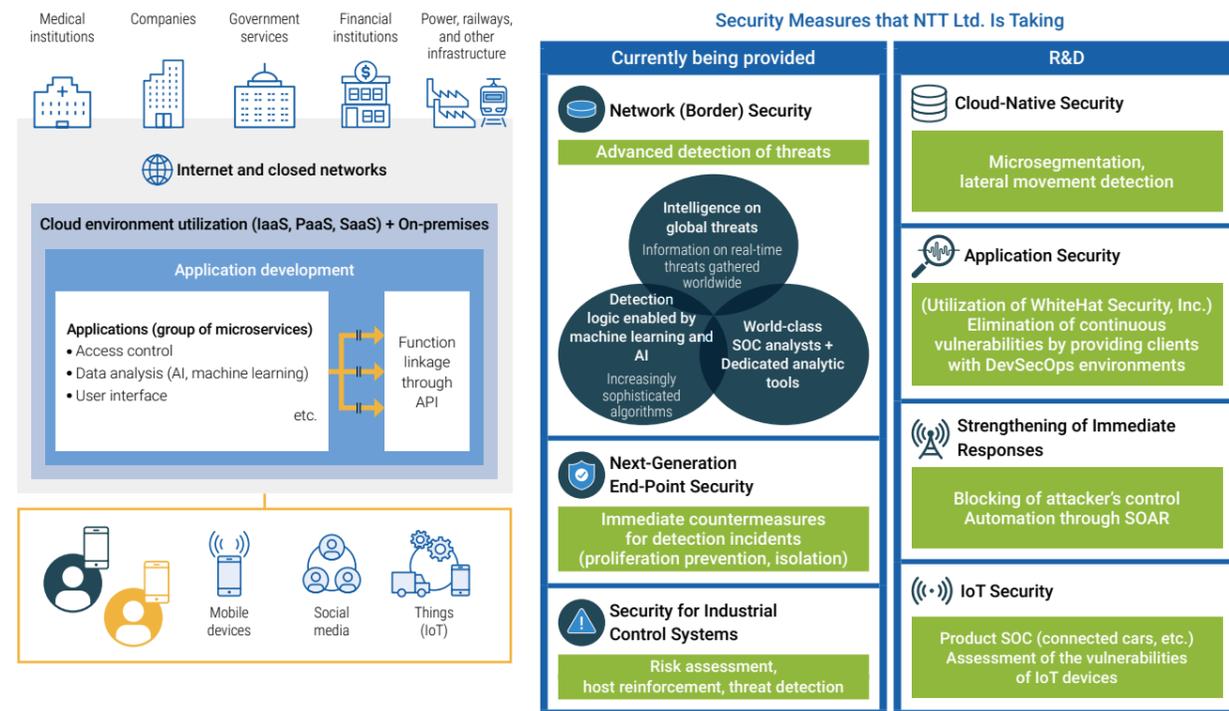
\* Behavior detection: A framework for using behavior to detect unknown malware that cannot be detected by conventional pattern matching methods. The system uses endpoint detection and response (EDR) technology, which detects dubious behavior on a user's PC or server and responds rapidly.

## Initiatives Aimed at Promoting ESG Management

### Security Business for Major Corporate Clients

As digital transformation diversifies ICT environments, cyberthreats 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 cyberthreats through managed security services and immediate responses to threats through managed detection and response. Further, the company offers DevSecOps, which provides both security and the flexible agile development of applications that are important for digital transformation, as well as micro-segmentation-enabled security technologies, which determine the lateral movement of threats that have penetrated from outside or inside (including insiders) and realize access control or isolation on a segment or terminal basis.



Also, in response to the increase in cyberthreats 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



Use of risk assessment to identify issues and establish countermeasure policies

#### Application of Leading-Edge Technologies



Use of segmentation and host reinforcement to reduce the risk of shutdown due to malware infection or proliferation

#### Real-Time Monitoring and Operation



Threat detection and incident response through continuous monitoring

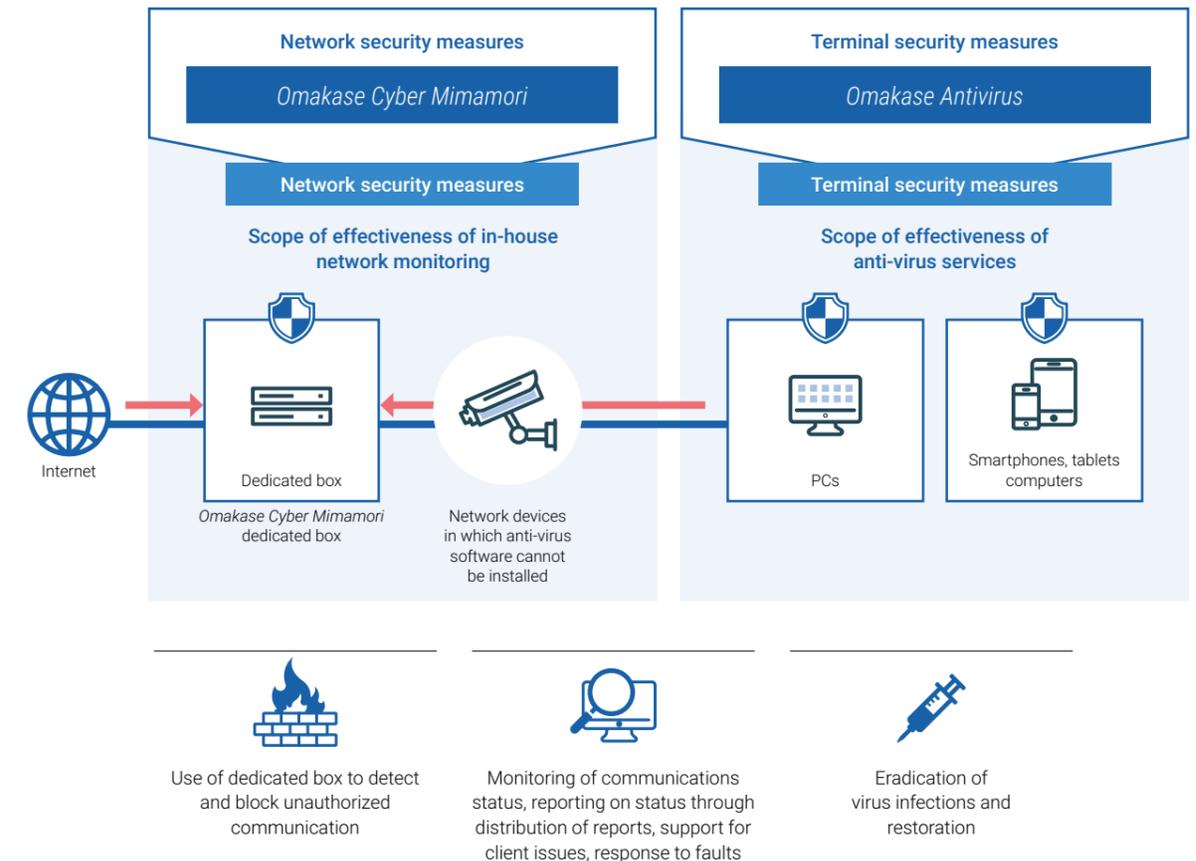
### Security Business for Small and Medium-Sized Enterprises

IT is becoming indispensable for businesses. At the same time, regardless of whether their businesses are large or small, all kinds of companies are facing increasing security risks. In particular, many small and medium-sized enterprises lack specialized security personnel. Consequently, some clients are anxious because they feel that their security measures may be inadequate and they do not have anyone to consult with regarding security measures.

Given this situation, NTT Group provides comprehensive security solutions that perform the role of a specialized security manager for clients. Specifically, we provide clients with wide-ranging support that covers everything from normal operations through to the occurrence of incidents. As well as detecting and blocking unauthorized communications, the Group's services monitor communications status, report on status through the distribution of reports, and support restoration if virus infections occur. Our lineup of services includes *Omakase Cyber Mimamori*, *Omakase Antivirus* (NTT East), *Security Omakase Plan* (NTT West), and *Security Support Desk* (NTT Communications).

The number of contracts for such *omakase*-type security services has been growing in recent years. (In Japanese, *omakase* means "leave it to us.") Going forward, we will continue creating safe, reliable ICT environments for clients.

#### Examples of NTT East's Security Solutions



### Material ESG Issue 3 Strengthening of Disaster Countermeasures

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

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

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

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

In recent years, natural disasters have been becoming more frequent and causing wider, bigger, and more lasting damage. Recognizing the potential for natural disasters to have greater impacts on telecommunications facilities and services and for recovery efforts to be prolonged, NTT is increasing the resilience of its facilities and taking steps to expedite recovery efforts.

In the fiscal year ended March 31, 2020, no serious telecommunications disruptions\*<sup>1</sup> occurred at four telecommunications business companies (NTT DOCOMO, NTT East, NTT West, and NTT Communications), while service stability was maintained at 100.00%\*<sup>2</sup> under normal circumstances.

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

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

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

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

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

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

#### Provision of Multilingual Information on Service Disruptions due to Disasters

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

#### Past initiatives

##### 1 Improve Communications Network Reliability

- Transmission trunk line multi-routing
- Install large-zone base stations
- Build disaster-resistant facilities

##### 2 Secure Critical Communications

- Secure 100,119 and other emergency services
- Provide tools to check safety status (171)

##### 3 Prompt Restoration

- Disaster countermeasure equipment (Power supply vehicles, Portable satellite equipment, etc.)
- Procure and convey materials and equipment for restoration purposes
- Use drones

**Lessons from the Great Hanshin-Awaji Earthquake and the Great East Japan Earthquake**

#### Further efforts

##### Major Facility Resilience Initiatives

- Expansion of medium-zone base stations with countermeasures for blackouts and natural disasters
- Blackout countermeasures at base stations using electric vehicles
- Integrated management and operation of NTT Group's power supply vehicle fleet (approx. 400 vehicles)
- Examination of possibility of installation of underground cables or wireless fixed-line telephony systems for disaster preparedness purposes

##### Major Initiatives for Expediting Recovery Efforts

- Advanced establishment of recovery teams (nationwide support teams, etc.) through AI-powered prediction of damages
- Reinforcement of recovery teams and securing of staff through mobilization of retired NTT employees, etc.

##### Reliable Provision of Communications Services under Normal Circumstances

- Provision of accurate, easy-to-understand information to support evacuation, etc. (information on communications disruptions, recovery status, charging points, emergency-use public telephones, support for non-Japanese visitors and residents of Japan, etc.)
- Establishment of local trouble support stations in disaster stricken regions to respond to issues and consultations regarding communication services
- Coordination with municipal government agencies, etc. to secure communications capabilities in times of disaster through installation of Wi-Fi systems and storage batteries for public telephones

**Disaster which causes wider, bigger, or lasting damage**

### COLUMN

#### Mutual Support Agreement with KDDI for Transporting Supplies in Times of Disaster

##### Conclusion of Social Contribution Coordination Agreement for Resolving Social Issues

In September 2020, NTT concluded a social contribution coordination agreement for resolving social issues with KDDI CORPORATION. Under this agreement, should a major natural disaster occur, the two companies will promote mutual utilization of their ships for transporting the necessary supplies. In addition, the companies will work together to conduct disaster response drills and awareness-raising activities.

Specifically, the cable-laying ships of both companies will be used to transport supplies (portable base stations, power generators, fuel, mobile phones, water, food, etc.) to the affected areas in the event of a disaster. In this manner, the companies will support disaster victims by expanding the scope of relief activities and swiftly transporting supplies. This arrangement makes it possible to swiftly launch a recovery effort in disaster-stricken regions, even if it is impossible to transport supplies via land routes, such as in the case of a major earthquake directly under Tokyo, so long as the cable-laying ships of either company can be used. The companies will also continue looking into the areas of disaster recovery efforts in which reciprocal coordination can expedite recovery. Under normal circumstances, the companies will consider jointly soliciting services that have disaster preparedness benefits and holding disaster preparedness events.

Through these efforts, KDDI and NTT aim to help achieve swifter and more abundant resolutions to social issues in order to contribute to the realization of a sustainable society by means such as the development of social infrastructure that is more resilient to environmental changes. Going forward, the companies will investigate areas in which their assets can be utilized to aid in the resolution of social issues pertaining to supporting job seekers, promoting healthy smartphone usage, and addressing climate change. These efforts will be advanced alongside disaster preparedness initiatives. By engaging in joint social contribution activities over a period of several years, the companies will acquire experience to be used together with cutting-edge ICT to implement disaster countermeasures and resolve various social issues. This social contribution campaign has been dubbed the "Tsunagu x Kaeru (Link and Transform) Project."



Joint press conference held together with KDDI President & CEO Makoto Takahashi

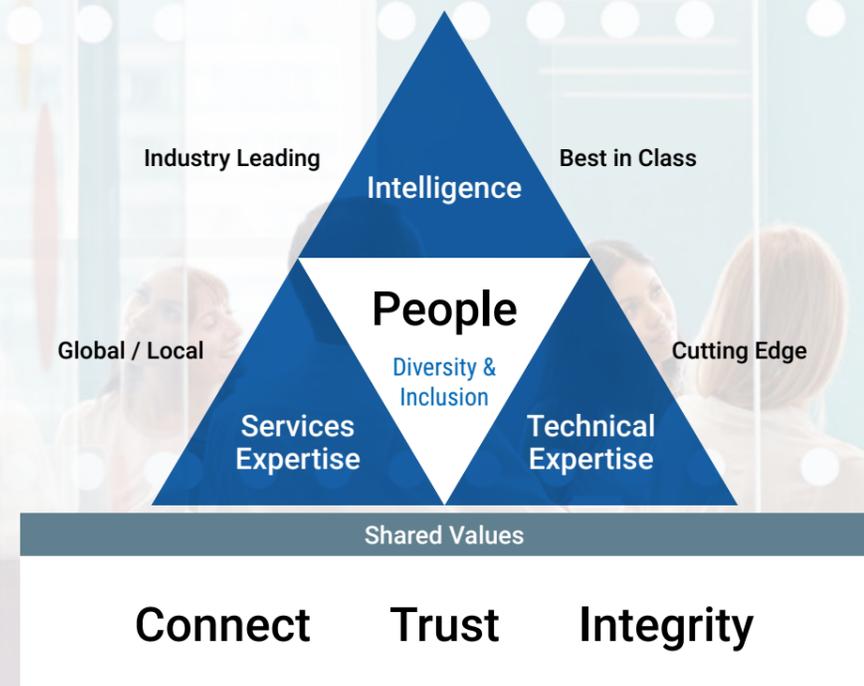


Ships owned by NTT World Engineering Marine Corporation (Kizuna (top) and Subaru (bottom))

Material ESG Issue **4** 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. We will realize innovation by respecting and utilizing employees’ diverse values, promoting diversity and inclusion, and providing an environment that will make the most of employees’ capabilities.

As the scale of our business expands, so too do the opportunities for our employees to take active roles spread worldwide. We will work to provide equal opportunities for all, regardless of race, nationality, religion, creed, culture, place of origin, mental or physical challenges, sex, sexual preference, or gender identity, and will aim to become an organization where each and every one of our employees can work with peace of mind toward solutions to society’s challenges. While respecting individuality, we will hold common values as “One NTT” and go forth to achieve our vision.



<p><b>Ratio of female managers*1</b></p> <p><b>6.3%</b> (FY2019)</p> <p><b>Target:</b> Ratio of female managers of 10% by the year ending March 31, 2026</p>	<p><b>Male employees using childcare leave*2</b></p> <p><b>112%</b> (FY2019)</p> <p><b>Target:</b> 80% of eligible male employees taking childcare leave by the year ending March 31, 2021</p>	<p><b>Working from home*3</b></p> <p><b>96.7%</b> (FY2019)</p> <p><b>Target:</b> 90% of people making use of working-from-home system by the year ending March 31, 2021</p>	<p><b>Total work time*4</b></p> <p><b>1,833 hours</b> (FY2019)</p> <p><b>Target:</b> 1,800 hours (first half) by the year ending March 31, 2023</p>	<p><b>Employment of people with disabilities*4</b></p> <p><b>2.44%</b> (As of June 1, 2020)</p> <p><b>Target:</b> 2.2% or more</p>
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\*1 Domestic Group companies (29 companies)  
 \*2 Percentage of total number of male workers using paternity leave or leave for purposes of child raising (items disclosed by companies with "Platinum Kurumin Certification")  
 Number of employees with children entering grammar school by the fiscal year ended March 31, 2020, who took time off work for child raising / number of employees who gave birth (or whose partners gave birth) in the fiscal year ended March 31, 2020.  
 \*3 Only NTT (holding company) Percentage of employees who have worked from home at least once  
 \*4 Domestic Group companies (more than 45.5 employees)

NTT Group's Workstyle Reforms

NTT Group is undertaking a host of initiatives targeting increasing diverse workstyles. We are also improving compensation schemes and environments to support telework-centered workstyles.

"Family is Part of the Team"

As one of the many available workstyles, we recommend working from home. To enable employees to work at home stress-free, we have adopted "Family is Part of the Team" as our motto for fostering big-heartedness and a spirit of mutual cooperation.

**FAMILY IS PART OF THE TEAM**

Promoting Working from Home

In response to COVID-19, people throughout the Group have been working at home. In corporate and other departments where working from home was possible, even after June 2020 we set 50% as the maximum level for office work. To prevent the infection from spreading and in response to repeated government requests to refrain from going out, in July 27 we encouraged employees to take advantage of summer holidays and otherwise endeavor to keep the office-work ratio at 30% or less.

Expansion of Workstyle-Related Systems

To create an environment that encourages remote workstyles, in October 2020, we will begin providing an allowance for people working at home and in other remote locations, discontinue reimbursement for regular commuter passes, and introduce the Super Flex-time System. We will also review compensation to better reflect remote workstyles, address team management and the cultivation of human resources, and further review job-based and other compensation schemes.

Name of System	Details
<b>Remote Work Allowance</b>	The Company pays people working at home or in other remote locations under all forms of employment ¥200 per day of working remotely.
<b>Introduction of Framework for Paying Actual Commuting Costs</b>	For departments that are able to make use of remote working, the Company will discontinue reimbursement of commuter passes, instead paying actual commuting costs based on the number of times commuting.
<b>Super Flex-time System</b>	On an organization-specific basis, employees will have the option of not setting core working times (working at least three hours per day).

Shift of Telephone Exchanges to Satellite Offices

To put in place an environment that encourages a shift in workstyles centered on remote work, we are swiftly creating satellite offices from telephone exchanges' station facilities. We are also making use of general satellite offices and otherwise working to make office facilities more dispersed. We plan to open our first satellite office at a station facility in October 2020 in Noborito, Kawasaki City. The facility is equipped with booths for online conferences and other facilities suited for working in a post-COVID world. Looking closely at employees' needs, such as those related to the areas where they live, we will consider expanding this initiative to Kansai and other regions outside the Tokyo metropolitan area.



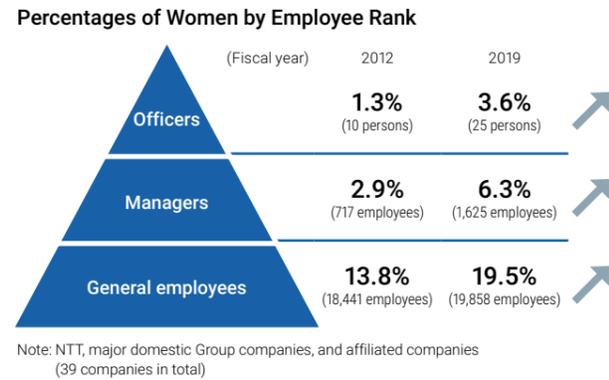
## Initiatives Aimed at Promoting ESG Management

### Empowerment of Women in the Workforce

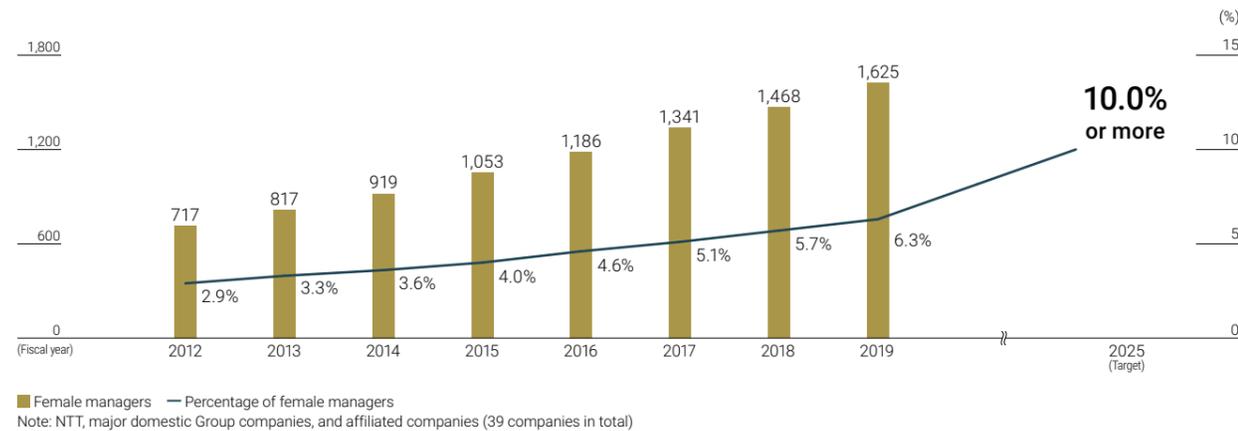
As one facet of personnel diversification, we are focusing on gender and taking steps to empower women. In the fiscal year ended March 31, 2013, when women accounted for 2.9% of our managers, we prepared a plan for a twofold increase in the number of female managers. The plan called for lifting this percentage to 6.0% by the fiscal year ending March 31, 2021. We reached this target one year early, in the fiscal year ended March 31, 2020. We have now set a new target, of raising the ratio of female managers to 10% or more by the year ending March 31, 2026.

Aiming for more proactive hiring of female employees, in the fiscal year ended March 31, 2014, we formulated our "At Least 30% Female New Graduate Hire" project, and have achieved at least 30% every fiscal year since then.

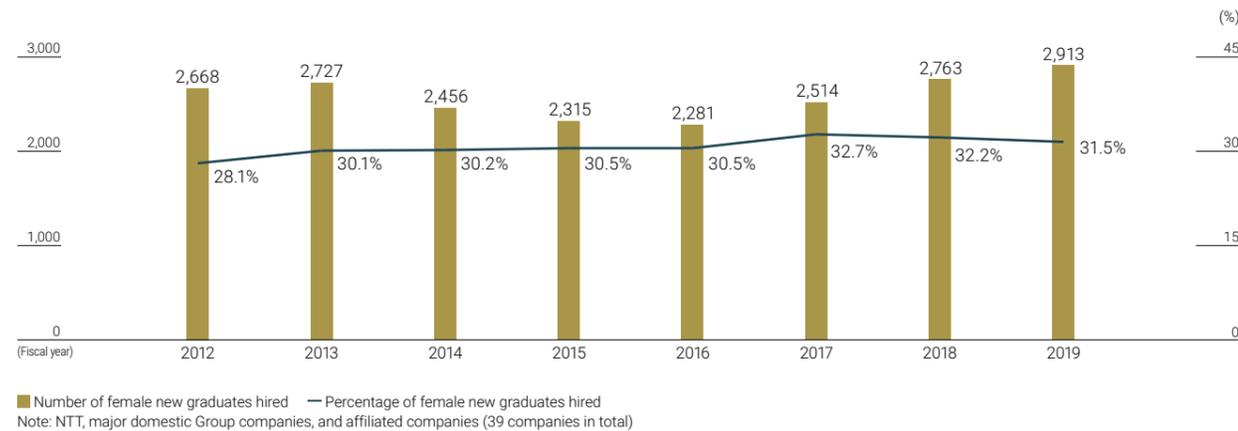
By advancing workstyle reforms through the establishment of workplace conditions and systems that help employees achieve a work-life balance, including the meeting of such commitments as child-rearing and family-care, we are creating an environment that enables even more women to play important roles 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.



### Number of Female Managers



### Hiring of Women (New Graduates)



### Initiatives to Empower Women / Initiatives to Increase the Ratio of Female Managers

We are cultivating women for management positions in the aim of increasing the number of female employees in positions of leadership and their participation in management decision-making. Specifically, we are boosting the percentage of women we send on manager-oriented training programs in Japan and overseas an augmenting opportunities for growth. We set up a mentoring system for senior management positions and deploying women so they can gain an awareness of tough assignments. We are creating a new e-learning environment that managers who are on childcare leave can easily take part in and fostering stronger personal networks among women across NTT Group. In these ways, we are encouraging increases in both skills and awareness.



Training of female managers

### Formulation of an Employee Value Proposition

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

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

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



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



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

### Promotion of Global Diversity

Each year, we conduct Group training for senior managers of NTT Group in Japan and overseas, called Global Leadership Development Program Leadership Excellence and Accelerating Diversity (GLDP LEAD). This training is designed to foster leadership among managers aiming to move to higher positions, and female managers account for more than half of participants. This training emphasizes diversity and innovative culture as organizational capabilities of topmost importance. In the fiscal year ended March 31, 2020, 30 employees from 10 countries underwent this training in Switzerland.



GLDP LEAD

## Initiatives Aimed at Promoting ESG Management

### Initiatives for Employing People with Disabilities

#### Utilization of OriHime-D, a Robot That Is Controlled Remotely by People with Physical Disabilities

We have begun using OriHime-D\*, a robot that can be controlled remotely by people who have physical disabilities or find it difficult to go outdoors, to perform such tasks as receiving visitors and guiding them to conference rooms and reception areas. With this robot, we aim to provide more opportunities for people with disabilities to contribute to society, as well as to ensure social distancing when greeting people. We began trialing the robots in February 2020, followed by a full-fledged launch on July 1, 2020.

With COVID-19 prompting major changes in workstyles, ICT is being deployed in new ways to help maintain social distancing and provide employment opportunities for people with disabilities. This is the first example of OriHime-D being used to perform office work by people with disabilities.



\* An avatar robot about 120cm tall developed by OryLab Inc., OriHime-D is controlled remotely and can be used for greeting guests or performing physical labor. "OriHime" is a registered trademark of OryLab Inc.

#### Lectures by Employees with Disabilities as Training for Group Companies on Maintaining a Barrier-Free Mindset

An employee who is also a para athlete is encouraging employees to have barrier-free hearts and supporting para sports at elementary and junior high schools. For these activities, NTT Group was cited as an exemplary company under the Tokyo metropolitan government's "Heart Barrier Free Project."



#### Participation in The Valuable 500

In December 2019, we joined "The Valuable 500," an international initiative to promote the participation in business of people with disabilities. Being in accordance with the purposes of The Valuable 500\*, NTT promotes the following initiatives.



\* "The Valuable 500" was launched at the World Economic Forum's Annual Summit in Davos in January 2019. This initiative aims to get global leaders to commit to accountable action on disability inclusion to bring the business, social, and economic value of people living with disabilities across the world.

1. By sharing values, the core principles that support our activities ("connect," "trust," and "integrity"), we will encourage a culture of diversity and inclusion by creating a workplace where all employees, including employees with disabilities, can feel that they belong and they can work as who they are.
2. We have set a target for the employment rate for employees with disabilities in our business goals.
3. We will actively share our activities regarding disability internally and externally.
4. We will aim to develop services and products that enable people with disabilities to become more integrated into society, and we will keep reviewing the accessibility we build and deploy.
5. We will keep educating our employees to learn about diversity and inclusion, including the understanding of people with disabilities, and to become more inclusive.

### Respect for Human Rights in the Supply Chain

In recent years, a variety of problems have come to light across corporate supply chains, such as long working hours, child labor, inappropriate disposal of chemical substances, bribery, and other forms of impropriety. In their procurement activities, companies are being called upon to conform to social norms, laws, and regulations, and to meet their corporate responsibilities.

Given these circumstances, in 2013, NTT Group formulated its Supply Chain CSR Promotion Guidelines for working with its suppliers to ensure corporate responsibility in its procurement activities. The guidelines spell out specific requirements of suppliers in six areas: human rights and labor, health and safety, the environment, fair trading and ethics, quality and safety, and information security.

We have made these guidelines available in Japanese and English, and we disseminate them widely among suppliers across NTT Group, both in Japan and overseas. We request that suppliers comply with these guidelines, our basic policy on procurement and the Green Procurement Guidelines, which indicate NTT Group's fundamental stance on green procurement. Each year, we conduct supply chain CSR surveys of our suppliers. In the fiscal year ended March 31, 2020, these surveys uncovered no suppliers in the high-risk category. The surveys cover seven categories (human rights and labor, health and safety, the environment, fair trading and ethics, quality and safety, information security, and social contribution activities). In the category of human rights, for example we monitor such activities as respect for the rights to freedom of association and to exercise the right to collective bargaining, as well as such on child labor and forced labor.

### Initiatives for Securing Personnel to Support R&D

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 introduced a new compensation system in April 2019 that reflects medium- to long-term research results and revised career tracks. These changes will enable us to reflect strong research results in top-class researchers' compensation, helping us to retain talented research results and focus on fields that require medium- to long-term focus and decisions.

In addition to its existing in-house recruiting system, in 2020, NTT Group introduced Lab-Chale, an internal job-search site specifically for laboratories. This system gives employees easy access to internal job postings. Employees can also become internal "free agents," seeking out positions where they can pursue specific research themes. In these ways, we aim to create a more attractive workplace in which researchers can make the most of their capabilities. We also expect the system to help us retain talented research personnel engaging in budding research themes.

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

### Balance between Work and Childcare or Nursing Care

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, regardless of reason, that is separate from annual leave. NTT sets having male 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, 2020, the ratio of childcare leave and child-rearing leave taken by male employees reached 112%, up 64 pt.s from the previous year.

<b>Work</b>	Special leave (childbirth, family care), life plan leave, nursing care leave, short-term leave for nursing care, childcare leave, long-term care leave, shorter working hours to provide childcare or nursing care, limit on or exemption from overtime work, shift work on an individual unit basis to provide childcare or nursing care, reemployment of employees who resigned to provide childcare or nursing care
<b>Welfare</b>	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

### Initiatives Related to LGBTQ

#### (1) Systems

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

<b>Salary</b>	Allowance for dependent, allowance for working away from home, expenses of returning home, relocation expenses (family relocation expenses)
<b>Work</b>	Special leave (marriage, bereavement), life plan leave, nursing care leave, short-term leave for nursing care, childcare leave, long-term care leave, shorter working hours to provide childcare or nursing care, limit on or exemption from overtime work, shift work on an individual unit basis to provide childcare or nursing care, reemployment of employees who resigned due to childcare, nursing care, or the relocation of their spouse's job
<b>Welfare</b>	Congratulatory / condolence payments (special payments for marriage, condolence payments), company housing, NTT Benefits Package, M3PSP (health consultations with specialist physicians, "best doctor" referrals, and healthcare policy proposals)
<b>Work overseas</b>	Family members included in the calculation of cost-of-living in their home country, spouses in receipt of empty home allowance, handling of relocation expenses of family members of employees working overseas

#### (2) Major Initiatives

Pride House Tokyo: Legacy\*, which provides LGBTQ information, will be recognized for the first time as an authorized program in the Organizing Committee of the Olympic and Paralympic Games in October 2020. In addition to providing information on diversity and inclusion, including LGBTQ topics, we are collaborating with other companies and will sponsor events to strengthen LGBTQ initiatives.

\* "Pride House Tokyo: Legacy" provides multipurpose spaces for the planning of off-line and online events, has individual spaces for counseling support, and has a free library housing Japan's LGBTQ Community Archives.

Material ESG Issue **5** Reinforcement of Governance for Sustained Growth

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

A History of Strengthening Corporate Governance

**2020-** Separation of the functions of managerial decision-making / supervision and business execution

**2020**

- Optimizing the size of the Board of Directors  
Ratio of outside directors: 27% → 50%
- Adoption of executive officers system  
Separation of the functions of managerial decision-making / supervision and business execution
- Disclosure of specific KPIs for officers' earnings-linked remuneration

**2018-** Further reinforcement of oversight function by enhancing diversity, Advancement of disclosure

**2018**

- Establishment of NTT, Inc. (strengthening of the governance of the global business), appointment of three foreign-national directors
- Conducting of evaluation questionnaire on the effectiveness of the Board of Directors
- Commencement of ESG information disclosure in notices of convocation

**2019**

- Appointment of two female directors (one inside and one outside), a Company first
- Increase in the number of outside Members of the Board: 2 → 4
- Strengthening of the reflection of KPIs in performance-linked compensation
- Expansion and improvement of statements regarding the compensation of directors, strategic shareholdings, succession plans, and evaluations of the effectiveness of the Board of Directors
- Inclusion of summary of directors in notices of convocation

**2011-** Strengthening of information disclosure with an awareness of dialogue with stakeholders

**2011**

- Appointment of first female corporate officer (1 outside Audit & Supervisory Board Member)

**2015**

- Response to Corporate Governance Code
- Establishment of independence standards for independent Members of the Board and independent Audit & Supervisory Board Members
- Commencement of issuance of sustainability reports
- Commencement of disclosure of the notices of convocation before they are sent (henceforth, 42-45 days before the date of the convening of the Ordinary General Meeting of Shareholders, in Japanese and English on the same date)

**2017**

- Introduction of notices of convocation that are viewable via smartphones

**2006-** Strengthening of supervisory function and improvement of corporate governance transparency

**2006**

- Increase in number of outside Audit & Supervisory Board Members: from 2 members → 3 members
- Appointment of financial expert as Audit & Supervisory Board Member
- Commencement of disclosure of Corporate Governance Report

Establishment of a foundation for corporate governance

**1985**

- Appointment of multiple outside Members of the Board

**2003**

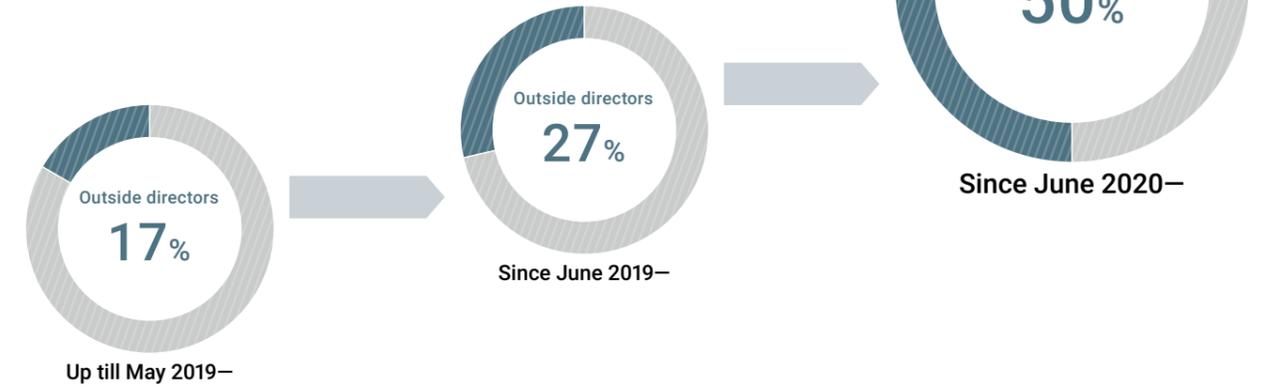
- Increase in number of Audit & Supervisory Board Members: from 4 members (2 inside members, 2 outside members) → 5 members (3 inside members, 2 outside members)
- Establishment of Disclosure Committee

**2005**

- Establishment of Appointment and Compensation Committee
- Commencement of issuance of CSR reports

Toward Even Stronger Corporate Governance

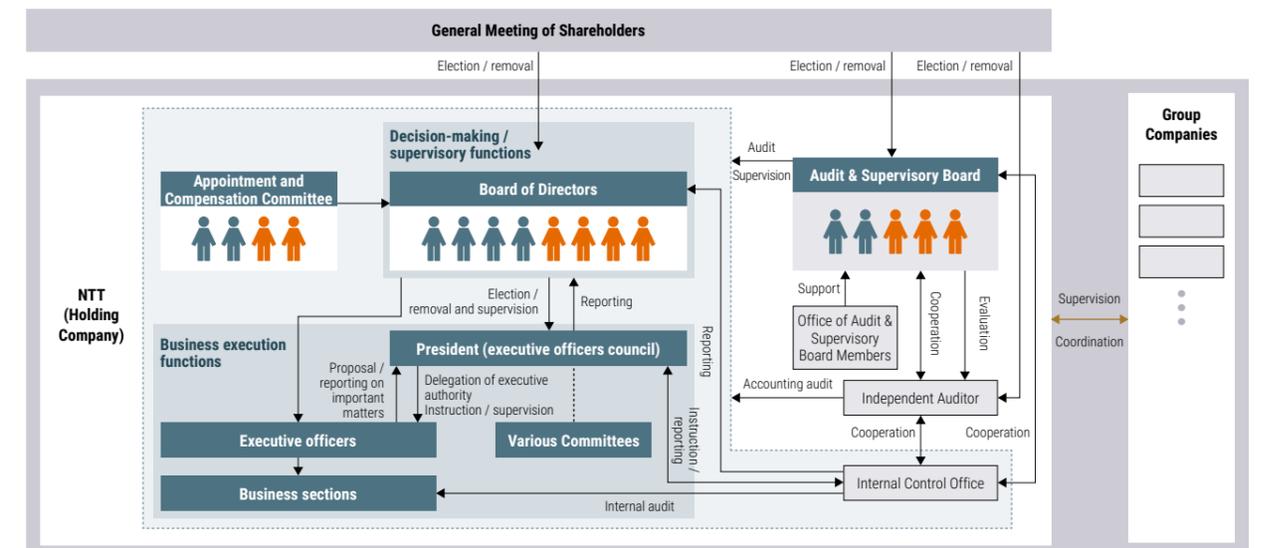
To further stimulate strategic discussion by the Board of Directors, we have worked to optimize the size of the Board, and we made 50% of the Board outside directors. We have also adopted an executive officers system, and by clearly separating the functions of managerial decision-making / supervision and business execution, we will implement an even stronger corporate governance and work to improve our business mobility.



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. With our adoption of an executive officers system, we are also configured to clearly separate the functions of managerial decision-making / supervision and business execution, and we are working to improve our business mobility. 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, and it has determined that the governance functions of the Audit & Supervisory Board structure are thoroughly effective.

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



👤 Outside independent directors and outside independent Audit & Supervisory Board Members 👤 Inside directors and inside Audit & Supervisory Board Members

As of June 2020

## Board of Directors

### Members of the Board

\* As of June 30, 2020



#### Hiromichi Shinohara

Chairman of the Board

Years Served as Member of the Board: ..... 11  
 Shares Owned: ..... 44,300  
 1978 Joined Nippon Telegraph and Telephone Public Corporation  
 2018 Chairman of the Board of the Company



#### Jun Sawada

President and Chief Executive Officer

Years Served as Member of the Board: ..... 6  
 Shares Owned: ..... 34,400  
 1978 Joined Nippon Telegraph and Telephone Public Corporation  
 2018 President and Chief Executive Officer



#### Akira Shimada

Senior Executive Vice President

Years Served as Member of the Board: ..... 8  
 Shares Owned: ..... 21,908  
 1981 Joined Nippon Telegraph and Telephone Public Corporation  
 2018 Senior Executive Vice President



#### Naoki Shibutani

Senior Executive Vice President

Years Served as Member of the Board: ..... —  
 Shares Owned: ..... 9,200  
 1985 Joined the Company  
 2020 Senior Executive Vice President



#### Katsuhiko Shirai

Outside Independent Member of the Board

Years Served as Member of the Board: ..... 8  
 Shares Owned: ..... 9,600  
 2012 Member of the Board of the Company  
 2016 Honorary Advisor of Waseda University



#### Sadayuki Sakakibara

Outside Independent Member of the Board

Years Served as Member of the Board: ..... 8  
 Shares Owned: ..... 20,500  
 2012 Member of the Board of the Company  
 2018 Honorary Chairman of the Japan Business Federation  
 2019 Outside Director of SHIMANO INC.  
 2019 Outside Director of Nitori Holdings Co., Ltd.  
 2019 Director and Chairperson of the Board of Japan Investment Corporation  
 2020 Chairman of the Board of The Kansai Electric Power Co., Inc.



#### Ken Sakamura

Outside Independent Member of the Board

Years Served as Member of the Board: ..... 1  
 Shares Owned: ..... 900  
 2002 Director of YRP Ubiquitous Networking Laboratory  
 2014 President of Vitalizing Local Economy Organization by Open Data & Big Data  
 2017 Professor and Dean of Faculty of Information Networking for Innovation and Design of Toyo University  
 2017 Emeritus Professor of the University of Tokyo  
 2019 Member of the Board of the Company  
 2019 President of Association for IoT Services Coordination



#### Keiko Takegawa

Outside Independent Member of the Board

Years Served as Member of the Board: ..... 1  
 Shares Owned: ..... 600  
 2019 Member of the Board of the Company  
 2019 Audit & Supervisory Board Member of MITSUI MINING & SMELTING CO., LTD.  
 2020 Professor and Dean of Faculty of Global Business of Showa Women's University

### Executive Officer

\* As of July 31, 2020

#### Jun Sawada

Representative Member of the Board  
 President  
 CEO (Chief Executive Officer)

#### Akira Shimada

Representative Member of the Board  
 Senior Executive Vice President  
 In charge of business strategy  
 CFO (Chief Financial Officer)  
 CCO (Chief Compliance Officer)  
 CHRO (Chief Human Resource Officer)

#### Naoki Shibutani

Representative Member of the Board  
 Senior Executive Vice President  
 In charge of technical strategy  
 CTO (Chief Technology Officer)  
 CIO (Chief Information Officer)  
 CDO (Chief Digital Officer)

#### Katsuhiko Kawazoe

Executive Vice President  
 Head of Research and Development Planning

#### Eiichi Sakamoto

Senior Vice President  
 Head of General Affairs

#### Ryota Kitamura

Senior Vice President  
 Head of Corporate Strategy Planning

#### Atsuko Oka

Senior Vice President  
 Head of Technology Planning

#### Tadao Yanase

Senior Vice President  
 Head of Business Strategy

#### Shinichi Yokohama

Senior Vice President  
 Head of Security and Trust  
 CISO (Chief Information Security Officer)

#### Hideaki Ozaki

Senior Vice President  
 Head of Global Business

#### Kazuhiko Nakayama

Senior Vice President  
 Head of Finance and Accounting

#### Katsuichi Sonoda

Senior Vice President  
 Head of Strategic Business Development

#### Akiko Kudo

Senior Vice President  
 Head of Public Relations  
 Deputy Head of Business Strategy

#### Hiroki Kuriyama

Senior Vice President (part time)  
 In charge of 2020 Project and Business Collaboration

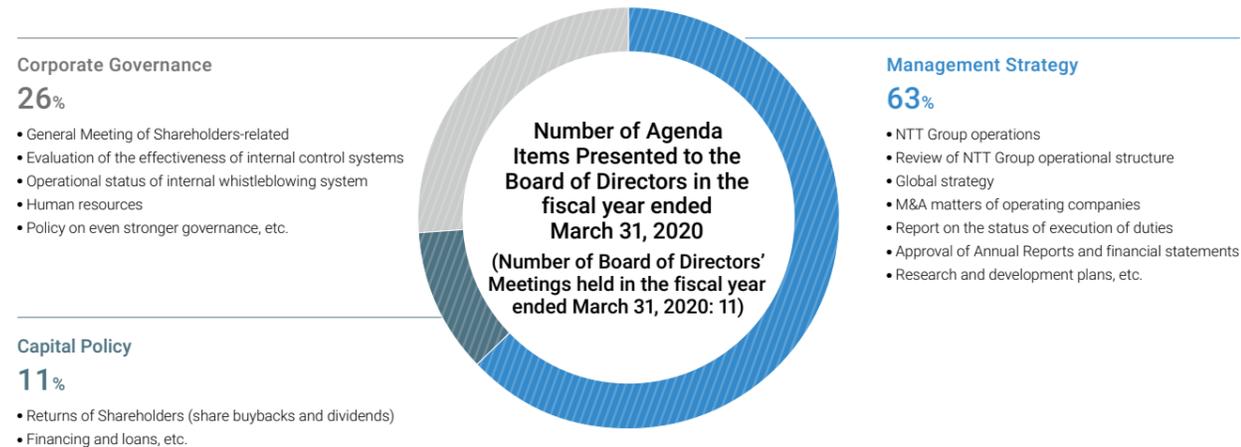


## Initiatives Aimed at Promoting ESG Management

### Board of Directors

The Board of Directors is sized according to the content of our business portfolio and is structured in consideration of balance and diversity of fields of specialization. The Board consists of eight directors, including four independent outside directors, who have been appointed in order to enhance the supervision of business execution. In addition, in principle, a regular Board meeting is held once a month, with extraordinary Board meetings held as necessary. The Board determines matters stipulated by the "Board of Directors Regulations," which include matters stipulated by law and important matters pertaining to Company and Group management. It also supervises the execution of duties by directors and executive officers by regularly receiving reports on the status of duty execution from those directors and executive officers.

### Breakdown of Agenda Items Presented to the Board of Directors



### Status of Activities of Independent Outside Members of the Board (FY2019)

Name	Statements made at Board of Directors' Meetings	Rate of attendance at Board of Directors' Meetings
Katsuhiko Shirai	Outside Member of the Board Katsuhiko Shirai made comments mainly concerning the circumstances of Group management and global strategies from his perspective as an operational director of an educational institution with extensive experience.	11/11 (100%)
Sadayuki Sakakibara	Outside Member of the Board Sadayuki Sakakibara made comments mainly concerning the circumstances of Group management and shareholder return from his perspective as a corporate executive with extensive experience.	11/11 (100%)
Ken Sakamura	Member of the Board Ken Sakamura made comments mainly concerning organizational operations and human resources strategies from his perspective as an administrator of universities and other research institutions with extensive experience.	8/8 (100%)
Keiko Takegawa	Member of the Board Keiko Takegawa made comments mainly concerning system design from her perspective with extensive experience in PR and diversity measures at government institutions.	8/8 (100%)

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

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

## Evaluation of the Effectiveness of the Board of Directors

### ► Overview of Evaluation

<b>Participants</b>	All 15 directors and all 5 corporate auditors
<b>Evaluation Implementation</b>	April 2020
<b>Questionnaire Format</b>	Anonymous surveys comprised 25 questions involving 4-level rankings as well as open-ended questions
<b>Major Subjects</b>	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
<b>Results Aggregation and Analysis Method</b>	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 evaluation of the fiscal year ended March 31, 2020, positive responses were received for all questions, indicating that the Board of Directors is effectively fulfilling its important expected roles and responsibilities. We received particularly high marks for the appropriate number and percentage of outside directors, and that the Board has amply discussed items that are of great importance for business management. At the same time, there were opinions stated about the composition of the Board, namely that there were too many overall directors, as well as opinions about support for outside directors, specifically that there should be more and better opportunities for outside directors to gain knowledge. Other opinions stated concerned the clear separation of the functions of managerial decision-making / supervision and business execution, the need for discussion of overall strategies and other issues regarding the duties of the Board of Directors, as well as other means of making corporate governance more effective.

### ► 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.

#### Regarding the scale and composition of the Board of Directors

**Responses** Reduce the number of directors from 15 to 8 (June 2020)

#### Regarding support for outside directors

**Responses** Conduct dialog on what kind of themes should be discussed and secure opportunities to explain previous efforts that will form the basis of discussion and analysis

#### Board of Directors' Operation Practices

**Responses** Adopt an executive officers system (June 2020)  
Utilize exchange-of-opinion meetings between directors, including outside directors, for discussions on overall strategies and market analysis in new fields

### Executive Officers Meeting

In principle, important decisions are made by the Company after deliberation by the "Executive Officers Meeting" consisting of executive officers and other officers. The Meeting will convene approximately once a week. Moreover, to enhance the transparency of decision-making, one corporate auditor will also participate in the Executive Officers Meeting.

### Various Committees

A number of committees have been established under the Executive Officers Meeting to discuss important matters related to business execution. 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 executive officers and others.

## Messages from Outside Independent Members of the Board

I believe that the needs and expectations for information and communications technology will become even greater and more widespread as new lifestyles and workstyles take hold. As NTT is an information and communications company, I believe that it must fulfill its expected social role and continuously improve corporate value.

Based on my experience as a science and engineering educator and as a manager of an educational institution, I make recommendations and appropriate decisions after rigorously confirming the integrity and competitiveness of each business, and the potential risks and response scenarios for new partnerships and collaboration projects. For example, I have brought up the necessity collaboration with the academic community to take the initiative in the new field of life science, and the need for the Group as a whole to engineer efficient and beneficial systems. I have also confirmed and called attention to the future potential of the SmartInfra business as well as financing policies during the uncertain circumstances caused by the COVID-19 pandemic. I also support generous shareholder return measures amid these unpredictable times caused by COVID-19.

Management supervision is also an important role of outside directors, and when it comes to monitoring the business execution status of each director, I provide advice for global business governance and perform other checks to achieve sustainable growth.

Furthermore, with the reassessment of the operation, scale, and composition of the Board of Directors in June 2020, I believe there will be more active strategic discussions, which will be utilized in Group management. I will continue to contribute to proper business operations and enhancement of enterprise value by flexibly and continuously monitoring business execution and providing appropriate support risk-taking for the sake of growth.



**Katsuhiko Shirai**  
Outside Independent Member  
of the Board

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

**Ken Sakamura**  
Outside Independent Member  
of the Board

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



Innovations based on AI and IoT are evolving day by day, and we are seeing escalating global competition that transcends regional and national boundaries. We are also facing new challenges. As society evolves from its experience with COVID-19, we are certain to see further digitization. At the same time, though, we will need to defend against cyberattacks, and respond to new laws and regulations in business operations, new concepts of privacy, and standardization of ethics in the information field.

Against this backdrop, in addition to NTT's various management resources such as its R&D, ICT infrastructure, and human resources, collaboration with partners is indispensable for the achievement of NTT Group's digital transformation (DX) and for the DX of NTT customers. I have experience contributing to the realization of ubiquitous computing and IoT. I have been involved in an open architecture research and development project centered on a real-time OS called TRON (The Real-time Operating system Nucleus) for over 40 years, and released the fruits of those efforts openly and free of charge throughout the world. Based on that experience, I have supported the success of NTT's medium-term management strategy by advising on the importance of securing human resources and protecting personal information and the need for an open platform for the development and expansion of new businesses for further DX.

The reassessment of the operation, scale, and composition of the Board of Directors in June 2020 has good prospects for enhancing the effectiveness of the Board of Directors. I aim to contribute to the sustainable growth of NTT by objectively supervising management's strategy formulation and job execution, making appropriate judgments and evaluations, and supporting the success of medium-term management strategies through lively discussions between management and outside directors.

**Sadayuki Sakakibara**  
Outside Independent Member  
of the Board

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

strengthen the effectiveness of governance.

On the Board of Directors, I have made recommendations and voiced various observations regarding global business strategy and governance, the monitoring of individual business segments, feasibility and risk response in investment and collaboration projects and new businesses, as well as shareholder returns.

This spring, I had the first opportunity as an outside director to hold dialog with institutional investors. It was a beneficial opportunity to exchange opinions on a wide range of issues such as shareholder returns, growth investment in R&D and new businesses, capital efficiency, governance, and diversity, as well as to obtain knowledge and suggestions from those investors. While keeping the views of shareholders and investors constantly in mind at meetings of the Board of Directors and other forums, I will continue to monitor management from a medium- to long-term perspective with the aim of achieving sustainable growth and enhancing NTT's enterprise value by providing proactive input utilizing my independence as an outside director and my experience in corporate management.

During this turbulent period when digital transformation is making rapid progress and it is on the verge of transforming into a Smart World and Smart Society, as a leader in telecommunications, NTT has tremendous growth potential. In anticipation of changes in the global economy and society in the post-COVID era, I hope NTT will become a company capable of achieving greater growth beyond its medium-term management strategy into 2030 and 2040.

Taking advantage of my long experience in corporate management at Toray Industries, Inc. and Japan Business Federation (Keidanren), I work to supervise management from the perspective of solving social issues through business activities and contributing to the Sustainable Development Goals (SDGs), as well as enhancing governance. In the last two years, NTT's governance system has taken a big step up, but it is still a work in progress, and I believe one of the major roles of outside directors is to further



As a civil servant, I have long been involved in the promotion of diversity, and I have been working on the active participation of women in various fields, particularly the promotion of corporate initiatives and support for the appointment of female corporate executives.

Innovation and the creation of new services are indispensable for solving social issues. Such innovation requires the securing of talented human resources as well as the promotion of diversity. Particularly in the rapidly evolving ICT industry, I believe it is necessary to incorporate new perspectives and values by promoting diversity.

As COVID-19 demands accelerated adoption of ICT, I am aware that NTT has a number of issues that still require attention. It needs to coalesce its Group abilities to deal with a competitive environment that is changing faster and faster, and enhance Group governance as a corporate entity active on the global stage. NTT also has abundant business resources including a diverse work force, while it has a great social responsibility as well. I will put my experience in diversity to use to make appropriate decisions. In terms of corporate ethics, I will make recommendations on the need to create mechanisms to address harassment of external entities such as business partners and contractors, and to avoid and handle risks by collecting and analyzing information from multiple angles for the growth of global business.

Furthermore, with the revisions to the structure of the Board of Directors this year, I hope that more strategic discussions and enhanced management supervision will be promoted, and that outside directors from different backgrounds will exchange opinions from a variety of perspectives at Board of Directors' meetings. I aim to continue contributing to NTT's sustainable growth and medium- to long-term enhancement of enterprise value through important decision-making and oversight of business execution as an outside director.

**Keiko Takegawa**  
Outside Independent Member  
of the Board

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



## Audit & Supervisory Board

\* As of June 30, 2020

### Members of the Audit & Supervisory Board



#### Takao Maezawa

Full-Time Audit & Supervisory Board Member

Years Served as Audit & Supervisory Board Member: ..... 4  
Shares Owned: ..... 20,008

1978 Joined Nippon Telegraph and Telephone Public Corporation  
2016 Full-Time Audit & Supervisory Board Member



#### Kanae Takahashi

Full-Time Audit & Supervisory Board Member

Years Served as Audit & Supervisory Board Member: ..... —  
Shares Owned: ..... 4,200

1987 Joined the Company  
2020 Full-Time Audit & Supervisory Board Member



#### Takashi Iida

Outside Independent Audit & Supervisory Board Member

Years Served as Audit & Supervisory Board Member: ..... 6  
Shares Owned: ..... 6,900

1974 Registered as Attorney-at-Law (Daini Tokyo Bar Association) (registration up-to-date)  
2012 Established Kowa Law Office  
2013 Outside Director of Alps Electric Co., Ltd. (currently registered as Alps Alpine Co., Ltd.)  
2014 Outside Audit & Supervisory Board Member of the Company



#### Hideki Kanda

Outside Independent Audit & Supervisory Board Member

Years Served as Audit & Supervisory Board Member: ..... 1  
Shares Owned: ..... 0

2016 Professor of Professional School of Law (Law School) of Gakushuin University  
2016 Emeritus Professor of the University of Tokyo  
2017 Director of Sumitomo Mitsui Trust Bank, Limited  
2019 Outside Audit & Supervisory Board Member of the Company



#### Kaoru Kashima

Outside Independent Audit & Supervisory Board Member

Years Served as Audit & Supervisory Board Member: ..... 1  
Shares Owned: ..... 0

1985 Registered as a Certified Public Accountant (registration up-to-date)  
2019 Outside Audit & Supervisory Board Member of the Company  
2019 Director of Sumitomo Mitsui Trust Bank, Limited  
2020 Audit & Supervisory Board Member of Kirin Holdings Company, Limited (present post)

### 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 lawyer, university professor, and certified public accountant—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, Audit & Supervisory Board Member Takao Maezawa has experience in the accounting division of NTT and its affiliated companies, while Audit & Supervisory Board Member Kaoru Kashima, a Certified Public Accountant, has considerable knowledge in the areas of finance and accounting.

### Activities of the Audit & Supervisory Board

Amid global business reorganization, expansion of business domains, and other major changes in the running of its business, in the fiscal year ended March 31, 2020, based on its auditing plans, we worked to achieve efficient and effective audits in collaboration with its Internal Control Office, accounting auditors, and Group company corporate auditors on initiatives for legally-mandated audits as well as progress on the medium-term management strategy and maintaining and improving corporate governance. In addition, due to the global COVID-19 pandemic, we have partially canceled the local exchange of opinions with overseas subsidiaries that was scheduled after the end of February 2020, but by taking measures such as substituting with web conferencing, we avoided any major impact on auditing activities.

Our corporate Audit & Supervisory Board Members, which include independent outside corporate Audit & Supervisory Board Members, ascertain the status of the execution of duties by directors and make recommendations as necessary, by attending important meetings such as the Board of Directors, and holding theme-based discussions with representative directors and discussions with individual directors and Group company representative directors. We also implement initiatives that help improve the audit activities of Group company corporate auditors by receiving reports on audit results from corporate auditors of major Group companies, exchanging opinions, and holding regular training sessions for corporate auditors by outside experts.

Through such activities, we promote sound and sustainable growth and development for NTT and our Group companies from an independent standpoint different from that of business executives, and we help strengthen corporate governance systems and raise awareness of compliance.

#### Summary of Opinion Exchanges

Exchanges with Representative Members of the Board	10
Discussions with Representative Members of the boards of Group companies	42
Exchanges with Independent Auditor	10
Exchanges with the Internal Control Office	10
Listening to and discussing the status of corporate governance and efforts to maintain and improve it from the representative directors of major Group companies	19
Number of major domestic bases visited	19

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

### Status of Activities of Outside Independent Members of the Audit & Supervisory Board (FY2019)

Name	Statements made at Board of Directors' meetings and Audit & Supervisory Board meetings	Attendance rate	
		Board of Directors' meetings	Audit & Supervisory Board meetings
Takashi Iida	Audit & Supervisory Board Member Takashi Iida made comments mainly concerning corporate governance based on the professional perspective fostered through his extensive experience as a lawyer.	11/11 (100%)	23/23 (100%)
Hideki Kanda	Audit & Supervisory Board Member Hideki Kanda made comments mainly concerning corporate governance from his expert perspective based on his abundant experience as a university professor.	8/8 (100)	14/15 (93)
Kaoru Kashima	Audit & Supervisory Board Member Kaoru Kashima made comments mainly concerning accounting auditing from her expert perspective based on her abundant experience as a certified public accountant.	7/7 (100)	14/14 (100)

### Evaluation of the effectiveness of the Audit & Supervisory Board

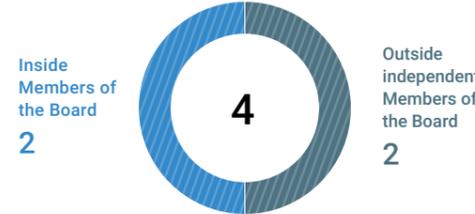
In the fiscal year ended March 31, 2020, we evaluated the effectiveness of the Audit & Supervisory Board to review our audit activities and reflect them in our audit plan for the next fiscal year and improve our audit quality. After discussion and verification by all Audit & Supervisory Board Members based on the results of questionnaires by each individual member, it was determined that the Board had effectively fulfilled its role and duties. Increasing opportunities for the exchange of opinions with representative directors has enabled us to more actively share management issues, confirm risk awareness, and make recommendations from Audit & Supervisory Board Members. It also helped ensure that accounting audit processes are appropriate by augmenting communication with the auditing firm. While these positive points were acknowledged, we also recognized the need to strengthen cooperation with the Internal Control Office and corporate auditors of Group companies in light of global business restructuring and expansion of business domains. We will continue to further improve the effectiveness of the Audit & Supervisory Board.

## Nomination of Directors

### 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, 2020, in addition to holding meetings of the Appointment and Compensation Committee five times, committee members met to exchange opinions and ideas on multiple occasions and engaged in active discussions.

#### Composition of the Appointment and Compensation Committee



**Number of Appointment and Compensation Committee Meetings in the Fiscal Year Ended March 31, 2020: 5**

### 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. Moreover, with the revisions to the structure of the Board of Directors in June 2020, 50% of the Board are now outside directors, including one woman.

### 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, and business senses and motivation necessary to contribute to the overall development of NTT Group in order to facilitate the improvement of the Group's corporate value. The Board of Directors is of a size appropriate to the Group's business, and the composition of the Board of Directors takes into account a balance of specialties and diversity. From the perspective of strengthening the function of supervising business execution, for outside independent Members of the Board, NTT elects individuals who present no risk of a conflict of interest with general shareholders. In principle, NTT appoints several outside independent Members of the Board.
- Nomination of Candidates for Audit & Supervisory Board Members**  
 NTT has the policy of electing candidates for Audit & Supervisory Board Members who have the capacity to provide audits based on specialized experience and insight. From the perspective of guaranteeing fair audits of the execution of duties by Members of the Board, with respect to outside independent Audit & Supervisory Board Members NTT elects individuals who present no risk of a conflict of interest with general shareholders. In accordance with the Companies Act, NTT ensures that outside independent Audit & Supervisory Board Members make up half or more of the Audit & Supervisory Board.

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

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

To see NTT's independence standards, please refer to the NTT corporate website.  
[https://www.ntt.co.jp/ir/mgt\\_e/governance/04.html](https://www.ntt.co.jp/ir/mgt_e/governance/04.html)



### Succession Plan

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

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

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

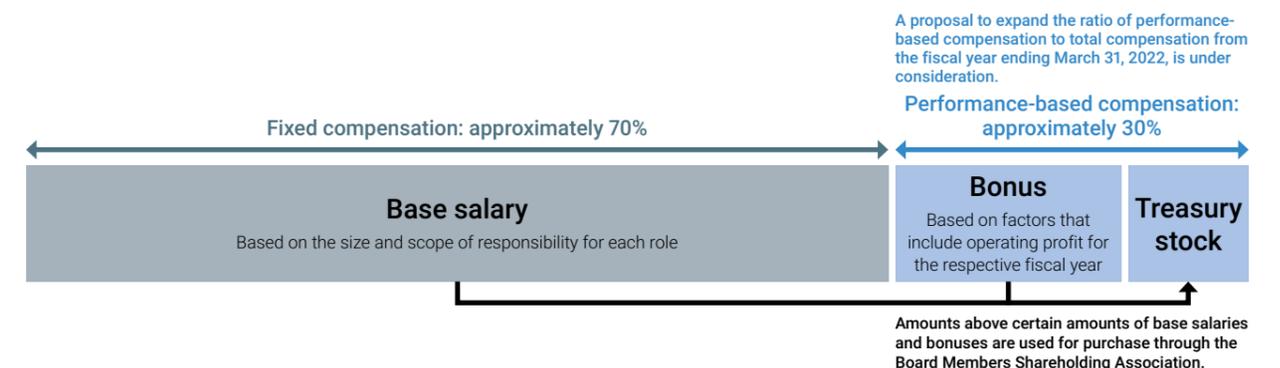
Compensation of Members of the Board (excluding outside Members of the Board) consists of a base salary and a bonus. The base salary is paid monthly on the basis of the scope of each Member of the Board's roles and responsibilities. The bonus is paid taking into account factors including the degree of achievement of performance indicators, such as EPS for the fiscal year ended March 31, 2020. Moreover, regarding earnings metrics, we have adopted the financial objectives set out in our medium-term management strategy as metrics. Specifically, we evaluate our performance based on EPS, operating profit, ROIC, Capex to Sales, overseas sales, overseas operating profit ratio, and the number of B2B2X projects.

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.

In addition, 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 expanding the ratio of overall compensation occupied by performance-related compensation from fiscal 2021.

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

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



### Total Compensation of Members of the Board and Audit & Supervisory Board Members (Fiscal Year Ended March 31, 2020)

Class	Number of Persons Paid (persons)	Monthly Remuneration (millions of yen)	Board Member Bonuses (millions of yen)	Total Amount (millions of yen)
<b>Members of the Board (excluding Outside Members of the Board)</b>	11	447	98	545
<b>Audit &amp; Supervisory Board Members (excluding Outside Audit &amp; Supervisory Board Members)</b>	2	74	—	74
<b>Total</b>	13	521	98	619

Notes: 1. Maximum limits on total annual compensation of Members of the Board and Audit & Supervisory Board Members were set at ¥750 million for Members of the Board (15 members or less) and ¥200 million for Audit & Supervisory Board Members (five members or less) at the 21st Ordinary General Meeting of Shareholders held on June 28, 2006.  
 2. In addition to the above, there was a bonus of ¥18 million paid to six Members of the Board who concurrently serve as employees.  
 3. With respect for the performance indicator targets for the payment of executive bonuses for the fiscal year under review, all of the targets have been achieved except for overseas sales and overseas operating income margin.  
 4. The total amount of compensation, etc. paid to outside Members of the Board and Audit & Supervisory Board Members in fiscal 2019 was ¥97 million to nine persons (including two outside Audit & Supervisory Board Members who resigned on June 25, 2019, at the conclusion of the 34th Ordinary General Meeting of Shareholders).

## 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 any shares to create stable shareholders, and has no plans to hold them in the future.

NTT primarily hold shares strictly for portfolio investment, seeking financial return on short-term fluctuations in interest rates and currencies and securities market prices, or market disparities. However, we also pursue collaboration and open innovation with partners in various industries to contribute to medium- to long-term improvement in corporate value. Based on this policy, we own strategic shares of partner companies as necessary.

NTT's policy on strategic shareholdings is to own shares of partner companies as necessary 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. Moreover, regarding strategic shareholdings of NTT Group companies as well, we conduct annual reviews of the appropriateness of each individual stock and move to sell off those deemed unnecessary.

With respect to exercising voting rights of strategic shareholdings, 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.

A History of Internal Control / Risk Management	
<p><b>2002</b></p> <ul style="list-style-type: none"> <li>Establishment of Business Risk Management Committee</li> <li>Establishment of Corporate Ethics Committee</li> <li>Establishment of NTT Group Corporate Ethics Charter</li> <li>Establishment of Groupwide Corporate Ethics Help Line</li> </ul>	<p><b>2006</b></p> <ul style="list-style-type: none"> <li>Establishment of Internal Control Office</li> <li>Establishment of Basic Policies Concerning the Development of Internal Control Systems</li> </ul> <p><b>2010</b></p> <ul style="list-style-type: none"> <li>Establishment of Risk Management Rules</li> </ul>
	<p><b>2018</b></p> <ul style="list-style-type: none"> <li>Establishment of the IT Strategy Office</li> <li>Improvement of the management and operation of the Groupwide Corporate Ethics Help Line (establishment of a reporting route to Audit &amp; Supervisory Board Members that is separate from reporting routes to the senior management team)</li> </ul>

More information on the Basic Policies Concerning the Maintenance of Internal Control Systems for NTT Group can be found on NTT's corporate website.

[https://www.ntt.co.jp/ir/mgt\\_e/governance/06.html](https://www.ntt.co.jp/ir/mgt_e/governance/06.html)



## Promotion of Risk Management

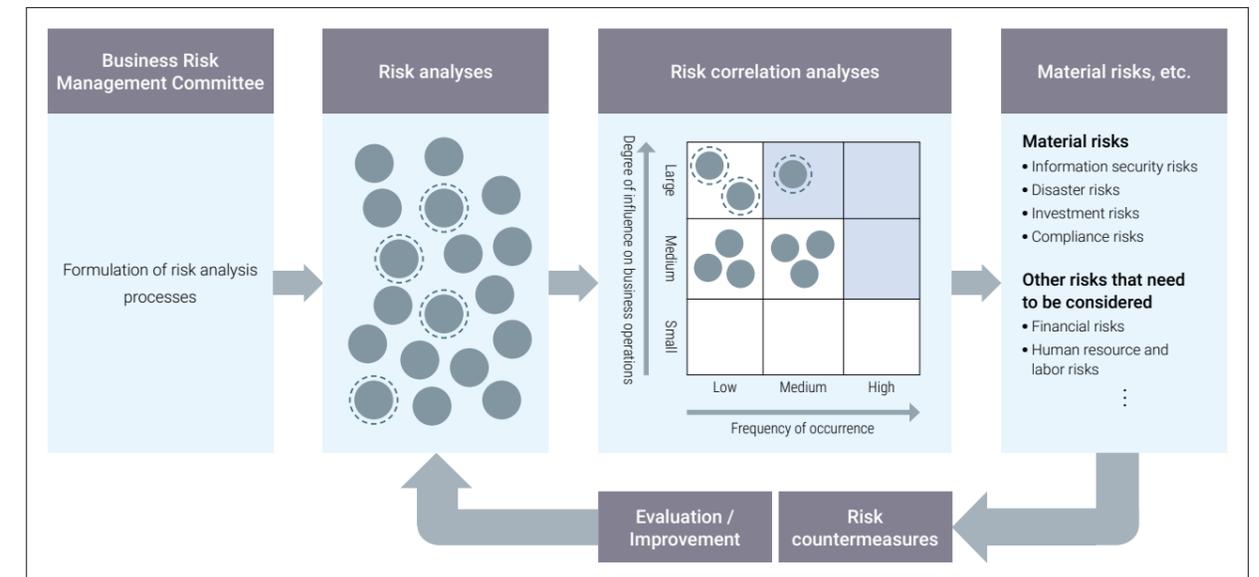
With respect to business risk management, NTT has established Risk Management Rules stipulating basic policies on risk management with the aims of, among others, anticipating and preventing the materialization of potential risks and minimizing losses if any risk materializes. Chaired by a senior executive vice president, the Business Risk Management Committee spearheads efforts to develop and operate a PDCA cycle for managing risks. During the fiscal year ended March 31, 2020, the committee held one meeting during which discussions involved identifying risks that could potentially have a Companywide impact, policies for managing such risks, and other such matters.

NTT has also formulated the NTT Group Business Risk Management Manual and distributed it to each Group company, in order to facilitate Groupwide risk management initiatives. On the basis of the manual, which stipulates matters that include proactive measures for potential risks, collaborative Groupwide approaches and policies for addressing risks that materialize, and pathways for communicating information, systems have been developed and implemented that enable swift action to be taken.

### Identification of Risks and Specified Material Risks

From time to time, NTT reviews assumed risks and management policies based on changes in the social environment.

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



### Designated Priority Risks

<b>System failure, network failure, and related risks</b>	<ul style="list-style-type: none"> <li>Damage to network caused by major disasters</li> <li>Indirect damage caused by major disasters</li> <li>Impact of COVID-19</li> <li>Service level compromised or other damage caused by cyberterrorism</li> </ul>
<b>Risk of operating revenues decline due to changes in market structure and increased competition</b>	Decline of NTT Group's consolidated operating revenues
<b>Domestic and overseas investments not producing expected returns</b>	Investments do not produce expected returns
<b>Domestic and overseas scandals, contractual issues, and related risks</b>	Loss of social trust and damage to income stemming from compliance violations
<b>Risk of terrorism or similar incidents domestically or internationally</b>	Loss of ability to conduct business due to employees or companies falling victim to terrorist or similar incidents

For more information on risk factors, please refer to NTT's corporate website.

[https://www.ntt.co.jp/ir/mgt\\_e/risks\\_factors.html](https://www.ntt.co.jp/ir/mgt_e/risks_factors.html)



# Stakeholder Engagement

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

