In today’s society, there exist conflicting phenomena that cannot be understood in a black-and-white manner, whether it be global versus local, environmental versus economic, or human rights issues. It is also true that a single phenomenon can have a different meaning and significance based on the perceiver.

NTT believes that realizing a paraconsistent society, in which these opposing concepts and phenomenon are included and diverse values are accepted, will contribute to the realization of a sustainable society.

Through this concept, people are encouraged to find themselves within the “We” and to realize that we are supported by the connections between diverse people, things, and technologies. We look to implement various initiatives founded on the principles of altruistic co-existence through which people will seek to increase their happiness along with the happiness of others. The “Self as We” concept casts light on the need to contribute to the realization of a sustainable society through initiatives for ensuring the positive coexisting of nature and humanity, improving prosperity for all people and cultures, and maximizing well-being for all.

**NTT’s Vision for a Sustainable Society**

**Vision for a “Sustainable Society”**

- Basic Philosophy
  - Promoting “Self as We”
- Conflicting phenomena exist in society
  - Events differ depending on the actor
  - Cannot be understood with traditional dualistic thinking
  - Different reality or meaning depending on perspective
  - *Paraconsistent* (concepts achieved inclusively)

**Process for Selecting Important Issues (Comprehensiveness and Priority of the 30 Activities)**

**STEP 1: Identifying material issues**

Using evaluation organizations like third party institutions, ISO 26000 and GRI Standards, global trends, internal workshops, and materiality at other companies as a guide, we identify material issues through comprehensive review of new problems related to sustainability, in order to discuss and select important issues that the NTT Group should address on a global scale.

**STEP 2: Setting priorities**

NTT assesses the priorities to be addressed based on their impact on two aspects, “Growth as a company” and “Solving social issues.” To achieve management that simultaneously helps resolve social issues and achieve business growth, NTT assesses priorities by incorporating the opinions of outside experts.

**STEP 3: Confirming validity & approval**

NTT also incorporates the opinions of third parties from a global perspective, which are then deliberated by the Sustainability Committee and approved by the Board of Directors.

* These are reviewed regularly (once per year) and revised when necessary.

**Organization for Implementation**

The NTT Group regards the promotion of sustainability as an important management issue, and items of particular importance, such as creating environmental targets for the entire Group, are decided based on discussions held with directors. Under the governance structure overseen by the Directors, we have established a Sustainability Committee (chaired by the President and Chief Executive Officer) directly reporting to the Board. This committee is responsible for managing the policy direction and progress of sustainability initiatives across the entire Group. Policies related to sustainability (the Charter and creating and abolishing accompanying policies, particularly deciding critical indicators) will be decided by the Board of Directors via the Sustainability Committee. In addition, the Sustainability Committee includes the Corporate Ethics Committee, Human Rights Committee, and Green Innovation Committee to handle the individual topics relevant to each sub-committee. Furthermore, Group Sustainability Committee meetings (with senior executive vice presidents and others from major group companies) are held to share common challenges and successful examples from each Group company, as well as to monitor progress on sustainability implementation with respect to PDCA cycles and further promoting a sense of unity throughout the Group.
## Key Sustainability Issues and Topics for Fiscal Year 2023

Out of the 30 activities outlined in NTT Group Global Sustainability Charter, 16 have been selected as key sustainability issues for this year. These issues are organized under the four main categories of Climate Change, Human Capital, New Value Creation, and Resilience, and key indicators have been established for each.

### Selection of Material Issues (16 Items)

<table>
<thead>
<tr>
<th>Four Key Categories</th>
<th>Principal Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Climate change</strong></td>
<td>• Greenhouse Gas Emissions</td>
</tr>
<tr>
<td><strong>Human capital</strong></td>
<td>• Employee Engagement Rate</td>
</tr>
<tr>
<td></td>
<td>• New Female Manager Promotion Rate</td>
</tr>
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<td></td>
<td>• Male Childcare Leave Rate</td>
</tr>
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<td></td>
<td>• Direct Dialogue Rate with Key Suppliers</td>
</tr>
<tr>
<td><strong>New value creation</strong></td>
<td>• Amount of B2B2X Revenues</td>
</tr>
<tr>
<td><strong>Resilience</strong></td>
<td>• Number of Serious Incidents</td>
</tr>
<tr>
<td></td>
<td>• Number of Telecommunications Service Interruptions due to External Cyberattacks</td>
</tr>
</tbody>
</table>

### Four Key Categories

#### Ensuring the positive coexisting of nature and humanity
- **Moving toward a decarbonized society**
  - 1) Promoting energy conservation
  - 2) Reducing power consumption by introducing IOWN technologies
  - 3) Developing and expanding the use of renewable energy
  - 4) Providing new services that contribute to carbon neutrality
  - 5) Creation of innovative environment and energy technology

- **A commitment to a resource-recycling future**
  - 6) Increasing the reuse and recycling of communications equipment, mobile terminals, and other technologies
  - 7) Reduction in plastics use and promotion of recycling
  - 8) Proper treatment, storage, and management of hazardous waste
  - 9) Appropriate and efficient management of water resources

- **A future where people and nature are in harmony**
  - 10) Thoroughly implementing environmental assessments
  - 11) Contributing to natural ecosystem conservation

#### Improving Prosperity for All People and Cultures
- **Establish shared ethical standards**
  - 12) Establishing and thoroughly complying with ethical standards
  - 13) Appropriately managing conduct risk
  - 14) Thoroughly reinforcing corporate governance and compliance
  - 15) Sharing high ethical standards with business partners

- **Prepare for a new future with the power of digital technologies**
  - 16) Promoting the B2B2X model
  - 17) Protection and respect for intellectual property
  - 18) Contribution to the revitalization of local communities and economies

- **Moving toward a safe, secure, and resilient society**
  - 19) Ensuring the stability and reliability of services
  - 20) Strengthening information security and personal information protection
  - 21) Promoting a decentralized society based on remote work

#### Maximizing Well-being for All
- **Respect for human rights**
  - 22) Compliance with the NTT Group Global Human Rights Policy
  - 23) Encouraging society as a whole to respect human rights

- **Diversity & Inclusion**
  - 24) Promoting recruitment, training, and education of diverse human resources and women’s advancement in the workplace
  - 25) Encouraging understanding of LGBTQ and promoting the advancement of disabled people
  - 26) Support for balancing work and life such as childcare and nursing care
  - 27) Achieving zero fatal accidents as well as maintaining and promoting employee health
  - 28) Supporting autonomous capacity development

- **Creating new work styles and workplaces**
  - 29) Promoting remote work and other workplace models
  - 30) Promoting paperless operations

### 3 Themes | 9 Challenges | 30 Activities

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>1</td>
<td>Promoting energy conservation</td>
<td>1) Promoting energy conservation</td>
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<tr>
<td>2</td>
<td>Reducing power consumption by introducing IOWN technologies</td>
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<tr>
<td>3</td>
<td>Developing and expanding the use of renewable energy</td>
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<tr>
<td>4</td>
<td>Providing new services that contribute to carbon neutrality</td>
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<tr>
<td>5</td>
<td>Creation of innovative environment and energy technology</td>
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</tr>
<tr>
<td>6</td>
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<td>7</td>
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<td>9</td>
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<tr>
<td>10</td>
<td>Thoroughly implementing environmental assessments</td>
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<tr>
<td>11</td>
<td>Contributing to natural ecosystem conservation</td>
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<td>20</td>
<td>Strengthening information security and personal information protection</td>
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</tr>
<tr>
<td>21</td>
<td>Promoting a decentralized society based on remote work</td>
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</tr>
<tr>
<td>22</td>
<td>Compliance with the NTT Group Global Human Rights Policy</td>
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<tr>
<td>23</td>
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<td>Promoting paperless operations</td>
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</tr>
</tbody>
</table>
Strategies Related to Climate Change

Risks

Given the widespread acknowledgement of climate change as a significant global risk, insufficient measures or disclosures on NTT Group’s part for climate change and resource circulation could potentially undermine the understanding and support of our stakeholders, including customers, partners, shareholders, employees, and communities, thereby affecting our business operations. Additionally, the introduction of new laws and regulations, or the tightening thereof, could increase our costs, impacting the NTT Group’s business performance and financial conditions.

Addressing Risks

To address these risks, NTT Group formulated its NTT “Green Innovation toward 2040” environment and energy vision and is advancing initiatives to reduce its environmental impact to achieve carbon neutrality by 2040. Besides promoting renewable energy usage as part of its overall efforts to promote green power, the company is also working to enhance its environmental energy initiatives and information disclosure by promoting IOWN research and development aimed at achieving extremely low power consumption, introducing an internal carbon pricing system, and utilizing green bonds.

Opportunities

With regard to opportunities, we are focusing on expanding renewable energy options at data centers, aiding in the development of processes for visualizing greenhouse gas emissions, and broadening the sale of green energy to both corporate and individual clients.

Indicators and Targets Related to Climate Change

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Target</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenhouse Gas Emissions</td>
<td>[Scope 1, 2]  80% reduction (compared to FY2013)</td>
<td>[Scope 1, 2]  2.55 million tons, 45% reduction (compared to FY2013)</td>
</tr>
<tr>
<td></td>
<td>FY2040: Carbon neutrality</td>
<td>[Scope 3]  19.49 million tons, 18% reduction (compared to FY2014)</td>
</tr>
<tr>
<td></td>
<td>FY2040: Net zero</td>
<td></td>
</tr>
</tbody>
</table>

*Note 1: The scope of the greenhouse gas emissions calculations include our company and its consolidated subsidiaries.

*Note 2: Scope 1 and 2 are in line with the Plan for Global Warming Countermeasures which is used by the Japanese government, using fiscal 2013 as the base year. For Scope 3, the base year was set to fiscal 2018, and the year calculations began under the same calculation scope currently being used, including our overseas Group companies.

Reduction of greenhouse gas emissions for Scope 1, 2

Illustration of NTT Group Greenhouse Gas Emission Reductions (Domestic + Overseas)

- Increased use of renewable energy; Reduce greenhouse gas emissions by 45%*1
- Lower energy consumption with IOWN technologies; Reduce greenhouse gas emissions by 45%*1

*1 GHG Protocol: Scope 1 and 2

Overview of Shifts in NTT Group’s Energy Consumption (Domestic + Overseas)

Energy consumption outcome will be approximately doubled by FY2040
- Approximately half of energy consumption will be reduced by introducing IOWN
- Renewable energies will be introduced for the other approximate half*1

Related New Medium-Term Management Strategy Initiatives

1. NTT as a Creator of New Value and Accelerator of a Global Sustainable Society
   - Establishment of manufacturing for electronic-convergence devices
   - Advancement of Research and Development (R&D) for environmental energy
   - Development of metaverse and digitalized business
   - NTT Global Network
   - NTT Green Innovation toward 2040

2. NTT as a Carrier of Value Creating Digital Ecosystems
   - Development of a Global Ecosystem for digital convergence
   - NTT Global Network
   - NTT Green Innovation toward 2040

3. NTT as a Carrier of Value Adapting to a Global Environment
   - Development of a Global Ecosystem for digital convergence
   - NTT Global Network
   - NTT Green Innovation toward 2040

4. NTT as a Carrier of Value Adapting to a Global Environment
   - Development of a Global Ecosystem for digital convergence
   - NTT Global Network
   - NTT Green Innovation toward 2040
Climate Change

Expansion of Renewable Energy Generation Business

Acquisition of Green Power Investment Corporation and Other Renewable Energy Operators

On August 3, 2023, NTT Anode Energy and JERA Co., Inc. (JERA) completed the acquisition of shares in Green Power Investment Corporation (GPI), owned by U.S. renewable energy operator Pattern Energy Group LP, based on the stock purchase agreement concluded on May 18, 2023. Moving forward, NTT Anode Energy, JERA, and GPI will synergize their respective expertise, insights, and strengths in renewable energy operations, with the goal of contributing to Japan’s goal of becoming carbon neutral by 2050 through further initiatives, thereby promoting the adoption of renewable energy within Japan.

<table>
<thead>
<tr>
<th>Private</th>
<th>Total power generation capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solar</td>
<td>5.6</td>
</tr>
<tr>
<td>Onshore wind</td>
<td>28.1</td>
</tr>
<tr>
<td>Offshore wind</td>
<td>8.0</td>
</tr>
<tr>
<td>Offshore wind</td>
<td>11.2</td>
</tr>
<tr>
<td>In development</td>
<td>Offshore wind</td>
</tr>
<tr>
<td>Offshore wind</td>
<td>Before Public Announcement</td>
</tr>
</tbody>
</table>

In the NTT Group, as declared in our Environment and Energy Vision “NTT Green Innovation toward 2040”, announced in September 2021, we are working towards the development of renewable energy power plants to achieve our target of an 80% reduction in greenhouse gas emissions by 2030. We have set a goal of introducing about 8 billion kWh of renewable energy by 2030, and this acquisition has brought us much closer to achieving this goal.

Examples of Business Opportunities Resulting from Climate Change


NTT DATA Japan provides the greenhouse gas emissions visualization platform C-Turtle to aid in the achievement of carbon neutrality for society as a whole. Recently, there has been a growing demand for companies to make their greenhouse gas emissions transparent. However, there are numerous options for calculation methods, making it challenging to select the most appropriate one. Typically, a company’s emissions are calculated using the formula “Activity Level × Emission Coefficient” (a fixed emission level determined for each product, based on industry averages). One problem with using industry averages is that it does not reflect any emission reductions made by individual suppliers in the company’s indirect emissions (Scope 3 Categories 1 and 2). An alternative is the “Total Emissions Allocation Method,” which uses the formula “Activity Level (amount of transactions per supplier) × Emission Coefficient per Supplier (emissions per unit revenue for each supplier)” instead of industry averages. A unique feature of C-Turtle is its adoption of the “Total Emissions Allocation Method,” which not only calculates emissions but also incorporates actions taken by suppliers to reduce emissions, enabling collaborative efforts.

In August 2022, we became the first Japanese company to sign a usage license agreement for greenhouse gas emissions data and other data on global companies held by the international NGO CDP. This allows C-Turtle to combine data collected by NTT DATA Japan with data held by CDP, enabling accurate emission calculations consistent with each company’s actual emissions.

Helping Reduce Society’s Environmental Impact (2): Introducing N.mobi, an EV Adoption and Operational Support Solution for Municipalities and Corporations

NTT Business Solutions Corporation (NTT Business Solutions) has teamed up with NTT Anode Energy Group to launch N.mobi, a comprehensive solution to assist municipalities and corporate clients in adopting EVs and optimizing electricity use through both EVs and EV batteries. Amid a growing call for carbon neutrality initiatives, there is an increasing demand for using EVs as commercial vehicles. However, the higher vehicle costs of EVs compared to gasoline cars, as well as issues such as the rise in electricity bills due to increased peak demand from EV charging and limitations on driving range due to a lack of charging infrastructure, pose significant challenges for municipalities and corporations looking to adopt EVs. Against this backdrop, we offer visibility into the use of commercial vehicles by municipalities and corporations in an effort to optimize fleet sizes. We also assist in devising plans for a cost-effective transition to EVs. In addition to offering a charge control platform to manage electricity costs during EV operation and address the inconveniences related to mid-journey charging, we provide a one-stop solution for introducing EV vehicles, charging/discharging equipment, and the design and construction of solar power generation facilities for PPA. This allows us to offer ongoing support for our customers’ transition to EVs for their commercial fleets.

Going forward, NTT Business Solutions and NTT Anode Energy Group aim to further enhance the utility of EVs by developing new features such as EV sharing between municipalities and corporations, and VPP services that utilize numerous EVs within a community as virtual batteries. Together with municipalities and corporations, we will contribute to the creation of prosperous and sustainable local communities through optimal EV utilization.

Initiatives Related to Climate Change in the New Medium-Term Management Strategy (Develop Sustainability Solutions for Customers)

We are looking to promote green solutions achieved through the combination of green energy and ICT, with an investment of approximately one trillion yen over the next five years. We plan to expand renewable energy generation projects while ensuring stable power supply optimized at the local level, utilizing technologies like storage batteries and EMS:

1. Renewable Energy Generation
2. Stable Supply of Energy Directed towards Local Production for Local Consumption
3. Green Energy
4. Local Grid Networks
5. Solar Power
6. Wind Power
7. Storage Batteries
8. Energy Storage
9. Decentralized Data Centers
10. ICT
11. Green Energy Management System
12. Data gathering and AI-based analysis/predictions
13. EMS
14. IOWN
15. Factory
16. Storage
17. Peak control
18. EV charging/discharging equipment
19. Energy Management System
20. Power Purchase Agreement
21. Post-implementation analysis report
22. Corporate Governance
23. Philosophy
24. Message from the CEO
25. NTT Group Sustainability
26. Growth Strategy
27. Data Section
INTEGRATED REPORT 2023
**Governance**

The NTT Group regards the promotion of sustainability as an important management issue, and items of particular importance, such as creating environmental targets for the entire Group, are decided based on discussions held with directors.

Under the governance structure overseen by the Directors, we have established a Sustainability Committee (chaired by the President and Chief Executive Officer) directly reporting to the Board. This committee is responsible for managing the policy direction and progress of sustainability initiatives across the entire Group. Policies related to sustainability (the Charter and creating and abolishing accompanying policies, particularly deciding critical indicators) will be decided by the Board of Directors via the Sustainability Committee.

In FY2021, for the processes selected as key issues and activities to be addressed among the sustainability-related issues, we used evaluation organizations like third party institutions, ISO 26000 and GRI Standards, global trends, internal workshops, and materiality at other companies as a guide to identify material issues through comprehensive review of new problems related to sustainability, in order to discuss and select issues that the NTT Group should address on a global scale. In addition, NTT assessed the priorities to be addressed based on their impact on two aspects, “Growth as a company” and “Solving social issues.” To achieve management that simultaneously helps resolve social issues and achieve business growth, NTT assesses priorities by incorporating the opinions of outside experts.

The validity of the specific issues we have identified and their level of priority is subject to an annual review by the Board of Directors, following discussions within the Sustainability Committee. During the Board of Directors held on April 20, 2023, we determined four key categories for sustainability in fiscal 2023 based on the reviewed priorities: 1) Climate Change, 2) Human Capital, 3) New Value Creation, and 4) Resilience.

In relation to climate change, we are managing progress on greenhouse gas emissions and other factors through the Green Innovation Committee, a subcommittee under the Sustainability Committee, and the Group Green Innovation Committee, which includes all companies within the NTT Group.

**Risk Management**

The NTT Group discusses risks and opportunities related to key sustainability issues at Sustainability Committee meetings and reports these to the Board of Directors. Additionally, as part of the NTT Group’s risk management process, the Business Risk Management Promotion Committee—chaired by the senior executive vice president—along with the Group Business Risk Management Promotion Committee is central to establishing and operating a PDCA cycle for risk management, with the aim of anticipating and preventing the occurrence of the potential risks close at hand and minimizing losses in the event that risks do materialize. The processes concerning the identification, evaluation, and management of sustainability-related risks are integrated into the NTT Group’s overall risk management framework.

Climate change is treated as one of the business environment and strategy-related risks within the Business Risk Management Promotion Committee.

**Strategy**

The NTT Group formulated its Environment and Vision “NTT Green Innovation toward 2040” and is advancing initiatives to reduce its environmental impact to achieve carbon neutrality by 2040. Besides promoting renewable energy usage as part of its own efforts to promote green power, the company is also working to enhance its environmental energy initiatives and information disclosure by promoting IOWN research and development aimed at achieving extremely low power consumption, introducing an internal carbon pricing system, and utilizing green bonds.

With regard to opportunities, we are focusing on expanding renewable energy options at data centers, aiming in the development of processes for visualizing greenhouse gas emissions, and broadening the sale of green energy to both corporate and individual clients.

Also, in alignment with our new medium-term management strategy announced in May 2023, the NTT Group is committed to achieving a Circular Economy Society. This includes promoting green solutions through the combination of Green Energy and ICT, expanding our renewable energy generation business, optimizing and efficiently securing a stable supply of locally produced, locally consumed electricity, recycling resources among various industries, and further accelerating regional development, all with the aim of creating a sustainable society. At the same time, we aim to extend the scope of “NTT Green Innovation toward 2040” to include Scope 3, as part of our efforts to achieve net-zero emissions.

### Step 1 Scenario Definitions

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Overview</th>
<th>Reference Methodology for Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transition Risk Scenario</td>
<td>a future in which the decarbonization of society is achieved rapidly, a future in which the target increase of 1.5°C has been attained</td>
<td>IEA World Energy Outlook 2022</td>
</tr>
<tr>
<td>Physical Risk Scenario</td>
<td>a future in which the average temperature has risen by 4°C</td>
<td>IPCC Sixth Assessment Report, Climate Change 2022. Summary for Policymakers (SPM) Based on Natural Science</td>
</tr>
</tbody>
</table>

### Step 2 Risks and Opportunities Identified with Scenario Analysis (Overview)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Target</th>
<th>Results</th>
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</table>

**Indicators and Targets**

**Climate Change Indicators and Targets**

<table>
<thead>
<tr>
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**Notes:**
1. The scope of the greenhouse gas emission calculations includes our company and its consolidated subsidiaries.
2. Scope 1 and 2 are in line with the Plan for Global Warming Countermeasures, which is outlined by the Japanese government, using fiscal 2013 as the base year. For Scope 3, the base is fiscal 2016. The year calculations began under the same calculation scope currently being used, including our overseas Group companies.
Climate change

Initiatives to reduce greenhouse gas emissions for Scope 3

To reduce greenhouse gas emissions under Scope 3, we will further strengthen cooperation with suppliers to reduce emissions during product manufacturing, and contribute to customers’ decarbonization efforts by reducing emissions during product use.

As for our initiatives for suppliers, we are deepening understanding of decarbonization initiatives through briefings and direct dialogues on the NTT Group’s initiatives toward net zero emissions, as well as providing support for visualization of suppliers’ greenhouse gas emissions and formulation of emission reduction targets. In addition, we promote the introduction of renewable energy and energy-saving equipment to our customers.

In fiscal 2022, we became the first telecommunications carrier in Asia to join Joint Audit Co-Operation (JAC), a joint audit consortium of global telecommunications carriers. Discussions are underway within the JAC through participation in the WorkStream toward reducing greenhouse gas emissions, and the entire telecommunications industry, beyond just our own companies, is working to reduce Scope 3 emissions.

Procurement Through NTT Group Green Finance

NTT Group has formulated the NTT Group Green Finance Framework with the goal of strengthening its commitment to Group-wide efforts to achieve a sustainable society and promoting them vigorously, including from a financial perspective. Since its establishment in June 2020 as the NTT Group Green Bond Framework, this framework has been revised in accordance with the Group’s initiatives for making a sustainable society a reality. NTT FINANCE CORPORATION (NTT FINANCE), the Group’s core financial company, will issue green bonds or procure funds through green loans in accordance with the Green Finance Framework. The funds raised will be invested in projects that contribute to solving environmental issues at Group companies.

When raising funds, NTT FINANCE will evaluate and select investment projects based on conformity with the NTT Group Global Sustainability Charter. It will also centrally manage procured funds and confirm their appropriation for projects. The Group will report annually on the allocation of funds and the project’s environmental impact.

The Green Finance Framework as well as Fund Allocation Reporting and Impact Reporting are available on the NTT FINANCE website.

Contributing to Biodiversity Preservation and Transitioning to a Circular Economy

In our core business of telecommunications, the NTT Group is somewhat reliant on certain natural capital when conducting business activities.

With regard to our impact on natural capital, we investigated our impact on ecosystems with respect to the impact of mining on ecosystems and water resources resulting from use of metals in smartphones, and effects on the ecosystem with regard to the creation and operation of communication buildings, cables, wireless base stations, data centers, and renewable energy facilities. We acknowledge that we have a limited impact on natural capital.

That being said, we believe the increasing focus on biodiversity and a recycling-oriented society opens up new business opportunities. We will continue to contribute to the achievement of a sustainable society through our business activities.

We will continue to verify and disclose risks and opportunities related to biodiversity and resource circulation for the NTT Group.

Procurement Through NTT Group Green Finance

• Green Bond Issuance Status
  - June 2020: ¥100 billion total
  - October 2021: ¥300 billion total
  - December 2021: ¥1.5 billion total
  - July 2022: ¥5 billion total
  - July 2023: ¥100 billion total

Eligible projects:
- 5G-related investments, FTTH-related investments, R&D for achieving the iDWN concept, is considered equivalent

NTT Group Sustainability

Corporate Governance

INTEGRATED REPORT 2023

NIPPI TELEGRAPH AND TELEPHONE CORPORATION
### Human Capital Strategy 1: Strengthening Employee Engagement

**Risks**

In both the telecommunications and information services markets, various players, both domestic and international, are rapidly joining the fray. With services and equipment diversifying and becoming increasingly sophisticated, we anticipate that this landscape will continue to evolve at an accelerating pace, especially around cloud services. Given the situation, enhancing employee engagement is pivotal for improving productivity, sparking creativity, and retaining top-tier talent. Decreased engagement could adversely affect areas such as the development of new technologies, the introduction of new services, the refinement of existing services, and the execution of growth strategies, potentially impacting the NTT Group's financial performance.

**Addressing Risks**

To address such risks, the NTT Group conducts employee engagement surveys and is intensifying efforts to tackle the challenges identified. We introduced a new personnel and salary system in April 2023 that is grounded in specialization. This system aims to cultivate an environment where each employee can acquire and exhibit higher degrees of expertise and skill. At the same time, through the expansion of open recruitment, we are providing more opportunities for our employees to challenge themselves and excel. In terms of managerial positions, we have adopted a job-based personnel system that facilitates optimal staff assignments irrespective of age or tenure. Additionally, we are establishing forums for bi-directional communication between management and employees to ensure that our corporate strategy is communicated and understood. Also, given that creating an environment where diverse talent can thrive serves as a foundation for improving employee engagement, we will continue our efforts to realize a balanced work-life environment.

**Opportunities**

In terms of opportunities, we anticipate that boosting employees’ willingness to take on challenges and acquire specialized skills will enhance their job satisfaction and sense of fulfillment. This, in turn, is expected to elevate employee engagement, thereby improving labor productivity and creativity across the NTT Group.

### Indicators and Targets Related to Strengthening Employee Engagement and Ensuring Diversity of Human Resources

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Target</th>
<th>FY22 Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Engagement Rate</td>
<td>To be improved (year-over-year)</td>
<td>57%</td>
</tr>
<tr>
<td>New Female Manager Promotion Rate</td>
<td>Each year: 30%</td>
<td>29.7%</td>
</tr>
<tr>
<td>Male Childcare Leave Rate</td>
<td>FY2023: 100%</td>
<td>FY2022: 114.1%</td>
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</tbody>
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**Note**

1. The scope of implementation of initiatives related to human capital described on page 32-38 applies to the main domestic group companies.

---

### Human Resources Strategy

**Group Human Resources Strategy**

People are the driving force behind creating a sustainable society by delivering value to the world. We place a strong emphasis on Employee Experience (EX) and are committed to creating a positive cycle where people are the key drivers of value.

Within the NTT Group, we believe that the key to improving EX lies in a diverse group of employees taking charge of charting their career paths from the moment they are hired, gaining work experience, supplementing skills through training, and taking on new challenges after reflection and self-assessment.

To enable each employee to independently shape their career, as shown in the below diagram, we provide an environment of implementing various HR policies from both perspectives of **Supporting Growth** and **Developing Diverse Work Styles and Work Environments**. We strive to create an environment where each individual employee takes the initiative to act, thereby generating a sense of growth, job satisfaction, and excitement, and ultimately improving their EX.

---

### Initiatives Related to Human Capital in the New Medium-Term Management Strategy (Support Career Growth)

We will expand our human capital investments to assist employees in autonomously shaping their careers, thereby supporting the growth of our business.

In line with the specialized personnel system introduced this past April, we will enhance support for obtaining external qualifications and enrich training programs across 18 specializations. We will also expand career consulting functions to offer career design advice. Additionally, we will offer comprehensive career development support that includes life events like childbirth, childcare, and nursing care.

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### Developing Diverse Work Styles and Work Environments

- **Supporting Growth**
  - Improve Expertise by Repeating the Cycle
  - EX Improvement
  - • Growth opportunities
  - • Work satisfaction
  - • Excitement

- **Experiencing (EX)**
  - Joining the Company
  - Onboarding
  - Career Design
  - Work Experience
  - Training/ Skill improvements
  - Review/ Stock-taking
  - New Challeng/ Travels

- **Developing Diverse Work Styles and Work Environments**
  - Challenge for the NTT Group
  - Onboarding
  - Career Design
  - Work Experience
  - Training/ Skill improvements
  - Review/ Stock-taking
  - New Challeng/ Travels
  - EX Improvement
  - • Growth opportunities
  - • Work satisfaction
  - • Excitement

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**Human Capital Strategy 1: Strengthening Employee Engagement**

**Philosophy Message from the CEO**

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1. The scope of implementation of initiatives related to human capital described on page 32-38 applies to the main domestic group companies.
**Supporting Growth: Reviewing the Human Resources System**

As we shift our business structure and new value creation becomes a necessity, it is crucial to heighten the synergy between our business strategy and human resources more than ever. The job-type personnel salary system we introduced for all management positions in October 2021 aims to break away from annual and seniority-based systems. It shifts the focus from placing the right person in the right job to finding the right job for the right person. This system more closely aligns compensation with both company and individual performance, thus enabling the positioning of talent where it is most needed to achieve strategies and creating expanded opportunities for employees to take on challenges.

● **Job-Grade System**

For regular employees, we introduced a new personnel and salary system this April aimed at nurturing them into true professionals with high levels of expertise and skills who can carve out their own careers. Specifically, we have established 18 specialized areas with an awareness of external markets, including sales (sales, SE, etc.), development (services, product development, etc.), IT (IT architects, IT specialists, etc.), infrastructure engineers, corporate (general affairs, human resources, finance, etc.), real estate and construction, smart energy, and research and development. We have also established “grading standards” that clarify the required expertise and level of action for each area. In addition, based on these “grading standards,” we have implemented an absolute evaluation system that allows the assigned post duties to be fully recognized, abolished the minimum years of service required for promotions, and established a system in which employees are promoted and paid according to the degree of expertise they have acquired and demonstrated.

Moving forward, in every phase—from recruitment and development to placement—we aim to shift towards operations that emphasize specialization, thereby facilitating the autonomous career development of our employees.

In addition, coinciding with the introduction of our new personnel and salary system for regular employees focusing on specialized expertise, we have also established a Specialist Grade. This grade offers higher compensation to employees who possess particularly marketable skills and deliver exceptional performance.

By implementing a framework that allows for treatment on par with management roles based solely on high levels of specialization—without the need to become a manager—we intend to broaden career options for our employees, thereby boosting motivation and performance even further.

**Supporting Growth: Training Options and Career Consulting**

To enhance the effectiveness of skill acquisition in the 18 specialized areas attuned to external markets, we have expanded our training programs. These now include roughly 650 courses structured around three main frameworks: (1) Training to support acquiring external certifications tailored to each area of specialization, (2) Training to improve unique specialized skills not solely obtained through certifications, and (3) Training to gain common skills necessary in various fields, such as facilitating meetings. Employees can select from these training programs based on their own career plans and skill development goals, and proceed with their learning accordingly.

However, we recognize that employees may find it challenging to choose the most suitable training program from the multitude of options available. To address this issue, we plan to introduce recommendation features into our Group-wide talent management system that are tailored to each employee’s specialized field and rank.

In the context of our new personnel and salary system, it is essential that employees take an active and autonomous approach to designing their careers, leveraging their high levels of specialized expertise. However, a variety of factors, including the field in which they wish to work, desired roles and positions, specialized skills, strengths and weaknesses, and life events, can impact career planning. As such, some employees may require targeted support. To meet this need, we deployed Group-specific career consultants starting in July 2023. These consultants, who hold national certifications and are rich in experience, will provide individualized career advice to each employee.

Additionally, we plan to educate supervisors (primarily department heads; about 10,000 target individuals in fiscal 2023), who are considered the consultants most accessible to regular employees, on career consulting methodologies. By elevating the career consulting abilities of our supervisors, we aim to offer day-to-day and periodic interview-based support to employees as they shape their autonomous career paths.

**Column**

**NTT University**

In an ever-changing business environment, we operate NTT University as an initiative for developing a diverse range of management personnel who possess broad perspectives and experience and are fitted with the ambition to lead the world. In addition to the Next Executive Course (Next EC) aimed at those striving to be promoted to executive officers within five years, in July 2023, we launched the Future Executive Course (Future EC) aimed at potential future executives.

We select personnel regardless of their years of service or age who are committed to becoming executives based on meritocratic principles, and we support their growth as management-level personnel. Centered around difficult assignments that entail solving critical and challenging management issues, we provide a mentoring program that offers opportunities for learning and insights through dialogue with current executives, as well as external conferences, seminars, training, and other supportive programs.

A total of approximately 180 students (30% women) spanning the first through third years in Next EC, as well as 130 first-year students in Future EC, are committed to becoming the next generation of leaders.
Supporting Growth: Diverse Career Paths (Diversified Hiring and Employment) and Side Jobs

We conduct a wide range of recruitment activities, and we do not limit ourselves to hiring new graduates, but also actively recruit experienced professionals. While we set a target of 30% for fiscal 2023, our performance for fiscal 2022 significantly exceeded this, reaching 40.7%.

Additionally, for both new graduates and experienced hires, we avoid uniform grading at the time of recruitment. Instead, to assign appropriate grades, we assess employee expertise and skills.

Moreover, we offer titles such as Fellow, Senior Special Researcher, and Special Researcher to individuals who have demonstrated high expertise in specific fields and are recognized globally as truly exceptional, top-class researchers with significant achievements.

In terms of career planning after employees join the company, we have introduced a Specialist Grade and a Professional Employee System to better reward high-performing staff. Our employees are excelling across various industries and sectors.

For non-routine assignments, with the intention of training female employees, we offer dedicated on-the-job training, including putting employees in tough situations and conducting putative appraisal processes. Moreover, we offer titles such as Fellow, Senior Special Researcher, and Special Researcher to individuals who have significant achievements.

Further, at NTT Group, to foster skill development and independent career growth, we encourage side jobs. This system allows employees to allocate a portion of their work hours to tasks in other departments while maintaining their responsibilities in their current roles.

Specifically, up to 20% of an employee’s work hours can be devoted to tasks in another department for training purposes. This not only facilitates the practical application of their current skills, but also offers the opportunity to acquire new skills and higher levels of specialization that may not be achievable in their existing roles. This system has been making headway in some Group companies, including NTT East, NTT West, and NTT DOCOMO.

Going forward, we plan to further expand the scope and create an environment that fosters proactivity and self-growth for employees within the NTT Group.

Column

NTT Group Job Board (Open Recruitment)

To enable each employee to take ownership of their careers and develop them autonomously, we have introduced a mechanism that supports personnel transfers for those who wish to take on challenges called the “NTT Group Job Board,” which facilitates constant and timely application opportunities.

Since the initiation of this program on July 1, 2023, 602 job postings were listed by August.

We aim to continue transforming our company into one where employees are more active and each individual can experience growth, job satisfaction, and excitement.

Developing Diverse Work Styles and Work Environments: Diversity & Inclusion

We promote diversity and inclusion for the sustainable growth of NTT Group and the realization of a sustainable society. We believe that in order to be a company that flexibly adapts to changes in the external environment and continues to create innovation, we must transform ourselves from a homogeneous organization to one in which a diverse workforce thrives. We also believe that we can contribute to the realization of work-life balance and a sustainable society by improving the wellbeing of our employees, providing fair opportunities, and creating an environment in which diverse human resources can play an active role.

Developing Diverse Work Styles and Work Environments: Women’s advancement in the workplace

In the NTT Group, we have established numerical targets for female board members, female managers, and newly-appointed female managers to ensure that a diverse range of opinions is represented in decision-making processes. In June 2023, the percentage of female directors was 21.0% (+3.3 points year-on-year). With regard to fiscal 2022 results, the percentage of new female managers was 29.7% (+0.6 points year-on-year), and the percentage of female managers was 10.4% (+1.7 points year-on-year).

In terms of ensuring diversity, we aim for a continuous promotion of female employees into key managerial roles. At NTT University, we have maintained a female ratio of over 30% among the targeted participants. We carry out various training programs targeted at female employees across all layers of the organization, as well as for those returning from maternity leave and their superiors.

Also, in addition to off-the-job training, we provide on-the-job training, including putting employees in tough assignments, with the intention of training female employees with the skills, mindsets and experiences necessary for promotions.

In our human resources and salary system, there is no wage gap based on gender. The main factors for the wage disparity between men and women are as follows:

(1) For regular employees:
the ratio of women in managerial positions is lower than that of men

(2) For non-regular employees:
men occupy a larger percentage of high-paying specialized posts

NTT Group announced the Plan to Double the Number of Female Managers in December 2013, setting a target of 30% women in new graduate hires. Since fiscal 2013, we have been actively hiring women, leading to a younger age demographic among female employees, and currently, most are in non-managerial roles.

In September 2021, as part of the Transformation to a New Management Style, we set a target for 30% of newly appointed managers to be women. The numbers have been making steady gains, increasing to 29.1% in fiscal 2021 and 29.7% in fiscal 2022.

Developing Diverse Work Styles and Work Environments: Gender pay gap (indicator)

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Developing Diverse Work Styles and Work Environments: Empowering Those with Disabilities

The NTT Group has an employment rate of people with disabilities of 2.51% (+0.04 points over the previous year), and employs approximately 4,000 people with disabilities. Among them, about 1,000 are working in our special subsidiary companies. In addition to direct employment at workplaces, at our special subsidiaries, examples of work that are performed by people with disabilities include web accessibility diagnosis, production of hand-made paper from recycled paper, office massages, and agricultural and cleaning projects in cooperation with local communities. As a part of the initiative to promote the active participation of people with disabilities, we have been pushing forward with the NTT Art Contest and various initiatives using the remote-controlled robot Orihime.

Developing Diverse Work Styles and Work Environments: LGBTQ Initiatives

The NTT Group conducts training for managers and holds ally meetings across the Group to foster understanding of LGBTQ people. In addition, the NTT Group actively supports various events, and participates in Tokyo Rainbow Pride, which indicates achievement in all five indicators of the certification criteria.

Developing Diverse Work Styles and Work Environments: Balancing Work and Childcare/Nursing Care/Medical Treatment

NTT Group encourages active participation in childcare to enhance the work-in-life of employees. In accordance with the revision of the Act on Childcare Leave, Caregiver Leave, and Other Measures for the Welfare of Workers Caring for Children or Other Family Members, NTT Group revised its childcare leave system on April 1, 2022, prior to the revision of the Act, and enhanced the leave system for the period up to eight weeks after childbirth. Since fiscal 2021, we have been conducting seminars to encourage employees to actively participate in childcare, and are also working to foster such a workplace culture.

Ratio of Male Employees Taking Time Off For Work for Childcare

The rate of paternal leave for childcare is calculated based on the Kurenin certification formula. Following amendments to the Act on Childcare Leave, Caregiver Leave, and Other Measures for the Welfare of Workers Caring for Children or Other Family Members, we actively encouraged our employees to take advantage of the available leave systems through individual meetings and other channels. We managed to achieve a result of 114.1%, exceeding our fiscal 2022 target of 100%. However, the uptake is mostly for short-term leave at 71.6%, while long-term childcare leave is at 28.4%. To forge an environment in which it is easy to take long-term childcare leave, we will continue to not only promote uptake among individuals, but also actively encourage organizations and supervisors to support this.

Balancing Work and Nursing Care

In anticipation of an era of intensive nursing care, we are holding nursing care study sessions across Group companies to create an environment in which employees can balance work and nursing care. There is high interest among employees, and many have taken part. We plan to continue holding these sessions going forward.

Balancing Work and Medical Treatment

To create a comfortable work environment for employees who have constraints due to medical treatment, we are implementing training to build human networks and to educate those around them (especially superiors) to foster better understanding and a transformed mindset and corporate culture.

We have established systems for balancing work with taking leave for medical treatment and are working to create an environment in which it is easy to take leave. Optional seminars to foster understanding are being planned.

Developing Diverse Work Styles and Work Environments: Remote Standard, Hybrid Work

At NTT Group, to further the “work as a part of life” concept, we are creating a flexible work environment through enhancements such as a remote work system, remote work allowances, flexible hours, split shifts, and expanded satellite offices. In July 2022, we introduced the Remote Standard, aiming to eliminate the traditional work style that assumes relocations or temporary solo assignments away from family.

- Any residence in Japan is acceptable
- Any reasonable transportation method to and from work that can be considered travel expenses (lodging expenses provided as well) is acceptable
- No need to relocate to a remote location if the new location is an organization that accepts the Remote Standard

Since the introduction of the remote standard system, we have been enhancing work-life balance, including the decrease in the number of employees given solo transfer assignments by about 800, and the increase in the number of employees who work while residing in remote locations. The remote work implementation rate for fiscal 2022 was 74%. We also increased the number of satellite office locations to 580 by the end of FY2022, with the goal of 360 or more by the end of FY2023, in order to establish places to work outside of the home and office.

Due to the introduction of the Remote Standard and other measures, there is greater freedom in terms of working hours, locations, and places of residence, thereby expanding the options for work styles suited to individual lifestyles. However, depending on the state of the team and the work situation, sometimes it is necessary to focus autonomously on work through remote work, while other times call for coming in to the office and working on-site to experience the work firsthand or to enhance teamwork. We believe that there is a need to devise further ways of working according to our objectives.

Moving forward, we will aim to implement an optimal work style (hybrid work) that combines the strengths of both face-to-face and remote interactions, aiming for both flexibility in the way employees work and increased organization and team productivity.

Trial & Error

- Overcome fear of failure and move forward
- Learn from failures by falling small and fast

Openness

- Open discussions
- Transparency
- Healthy debate
- Psychological safety

Connect

- Shared Values
- Trust
- Integrity

Collaboration

- Collaborate globally
- Value differences

ntt group
**Human Capital**

### Employee Engagement Survey

At NTT Group, we commenced employee engagement surveys in fiscal 2021. Four indicators for measuring engagement have been established as NTT Group Key Performance Indicators (KPIs).

We have rolled out a Group-wide experience platform, Qualtrics, to approximately 100 Group companies in Japan. This has enabled us to measure engagement scores and pinpoint areas that require improvement. By performing analyses for the purpose of improving engagement, we hope to increase the number of highly engaged employees who

- identify with the company’s and organization’s policies and strategies, as well as feel pride and take initiative in their work.
- Additionally, with the aim of improving employee engagement as a company, we have incorporated it as an indicator for executive compensation and also set it as a criterion for the performance bonuses of all management staff. As a company and as an organization, we are committed to elevating employee engagement.

**Specific Initiatives**

We have conducted correlation analyses with engagement (four KPIs) and have identified the elements that have an impact, and we prioritize our strategies accordingly.

**Areas Needing Improvement Initiatives**

The items with a strong correlation to engagement but lower positive evaluations were "Opportunities for growth (ability to achieve career goals)" and "Strategy penetration (having confidence in the future of the company/change management (receiving support for organizational changes))."

To support growth, in April 2023, we revised the system to allow for salary increases and promotions depending on the acquisition and demonstration of expertise. We have also enhanced the career consulting function, which allows employees across the Group to discuss their career plans. Additionally, we have established the NTT Group Job Board as a framework for supporting those who want to try to transfer jobs through public recruitment. This has made it possible for each employee to take ownership of their careers and act accordingly. Furthermore, we have prepared around 650 training courses both for specialized fields and as common training. Through NTT Group's internal newsletters, we are also actively introducing a variety of role models. For specific measures, please refer to "Supporting Growth (P. 32-34)".

For strategic penetration/change management, we are broadening the scope of management outreach. We are also holding discussions regarding survey results within each company and organization, consistently deliberating over organizational-specific issues. We also implement initiatives that get leaders at each level to commit to their respective actions.

**FY2022 Survey Results**

- The positive response rate for the four KPIs was 57%, a zero point change YoY and 7 points lower than the Japan average.

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**Opportunities**

To address such risks, we at NTT Group not only comply with Labor Standards Act and other related laws, but we have also established safety and health management policies. We continue to take a variety of measures and enhance safety awareness throughout the entire NTT Group to prevent accidents and create a safe working environment in the construction of the telecommunications facilities that support NTT Group’s business, which includes our subcontractors.

Promotion of Health Management

Health management is pursued as a key corporate strategy with the understanding that initiatives for maintaining and improving employee health also enhance motivation and productivity and ultimately lead to higher corporate earnings. We also believe that giving due consideration for the health of our employees as well as their families will motivate and invigorate each of them (improve EQ) and lead to the growth and development of the Group as a whole. Below, we introduce key initiatives being undertaken in NTT Group on various fronts to help employees maintain and improve their health while collecting and analyzing various types of data (HR, work information, etc.).

Promoting health activities and behavioral changes with "d Healthcare" at the core

We are working to implement effective measures through central management and analysis of various information on health promotion measures that have been individually developed. As part of these efforts, we implemented initiatives to make d Healthcare into a portal for an array of healthcare services.

**Promoting Health Activities and Behavioral Changes**

- Viewing the results of periodic health checkups (including physical examinations), etc.
- Promoting health activities and behavioral change
- Stress checks (improving convenience and promoting health activities and behavior change)

**Initiatives Related to Human Capital in the New Medium-Term Management Strategy**

As a way to strengthen and enhance our support programs, including for the families of our employees worldwide, we will enhance our program to partially support the educational expenses of employees' children up to college graduation in the event of an employee's death.
Value Chain Management

Policy and Approach

In recent years, companies find themselves required to monitor the ESG risks and impact on sustainability, including consideration of human rights and mitigation of environmental impacts, of not only their own Group companies, but also throughout the entire value chain, from raw materials and supplies procurement to disposal and recycling. The NTT Group is committed to deepening mutual understanding and building a trustful relationship with all the suppliers that make up our supply chain. By dedicating ourselves to creating and sustaining a safe and reliable supply chain with everyone under high ethical standards, we aspire to proactively and enthusiastically contribute to a sustainable society. To implement this vision, we have established the "NTT Group Basic Procurement Policy". For our suppliers, we have published the NTT Group Supply Chain Sustainability Promotion Guidelines, which contain detailed requirement items in the seven areas of human rights/labor, health/safety, the environment, fair trade/ethics, quality/safety, information security, and business continuity plans. We ask suppliers to comply with these guidelines by including them in contracts and other agreements. In addition, we have also published the NTT Group Green Procurement Standards as a supplement to our environmental guidelines and are advancing efforts to reduce greenhouse gas emissions throughout the supply chain.

Due Diligence

Based on the UN Guiding Principles on Business and Human Rights, we will use the human rights due diligence process to identify, prevent, mitigate, and correct human rights issues globally. And we will strive to improve human rights awareness and human rights management throughout NTT Group. In addition, due diligence will be conducted among the stakeholders in the entire business value chain, and direct dialogue will be the basis of our efforts, especially with major suppliers. The status of these initiatives will be disclosed on our website in an effort to continuously evaluate and improve the process.

Supplier Engagement Initiatives

Building upon the aforementioned NTT Group Supply Chain Sustainability Promotion Guidelines, we are conducting activities aimed at establishing a reliable partnership with our suppliers. While NTT Group previously conducted an NTT-specific Supply Chain Sustainability Survey for the Group’s key suppliers, beginning in fiscal 2022, we initiated new ESG risk assessments carried out by Ecovadis, a third-party evaluation organization. Based on the results of these surveys, we are promoting the enhancement of supplier engagement activities, including direct dialogue with suppliers.

Background of NTT Group Global Human Rights Policy and Approach

NTT is committed to respecting global human rights and believes it is an important corporate social responsibility. NTT Group will strive to correctly understand and recognize each country and region’s laws, cultures, religions, and values. We aim to create a safe, secure, prosperous and sustainable society by fulfilling this responsibility. We included the existing NTT Group Global Human Rights Charter in the NTT Group Global Sustainability Charter and established the new NTT Group Global Human Rights Policy in November 2021. While supporting international covenants and treaties as a company, NTT Group will strive to correctly understand and recognize each country and region’s laws, cultures, religions, and values. NTT Group is committed to deepening mutual understanding and building a trustful relationship with all the suppliers that make up our supply chain. By dedicating ourselves to creating and sustaining a safe and reliable supply chain with everyone under high ethical standards, we aspire to proactively and enthusiastically contribute to a sustainable society. To implement this vision, we have established the “NTT Group Basic Procurement Policy”, the “NTT Group Supply Chain Sustainability Promotion Guidelines”, which contain detailed requirement items in the seven areas of human rights/labor, health/safety, the environment, fair trade/ethics, quality/safety, information security, and business continuity plans. We ask suppliers to comply with these guidelines by including them in contracts and other agreements. In addition, we have also published the NTT Group Green Procurement Standards as a supplement to our environmental guidelines and are advancing efforts to reduce greenhouse gas emissions throughout the supply chain.

Background of NTT Group Global Human Rights Policy

NTT Group is committed to respecting global human rights and believes it is an important corporate social responsibility. NTT Group will strive to correctly understand and recognize each country and region’s laws, cultures, religions, and values. We aim to create a safe, secure, prosperous and sustainable society by fulfilling this responsibility. We included the existing NTT Group Global Human Rights Charter in the NTT Group Global Sustainability Charter and established the new NTT Group Global Human Rights Policy in November 2021. While supporting international covenants and treaties as a company with global operations, NTT Group internally and externally discloses its global human rights policy. This policy applies to all employees and board members of NTT Group, and we ask all of our suppliers and business partners to support this policy and respect human rights.
Initiatives Related to New Value Creation in the New Medium-Term Management Strategy

To strengthen our personal business centered around individual customers, we will boost NTT DOCOMO’s Smart Life business and actively invest more than one trillion yen over the next five years.

For instance, we will focus on expanding and enhancing services in various sectors like finance and healthcare/medical. Through the analysis of diverse data obtained via these services, we aim to deliver highly personalized and optimal services.

We are actively expanding the data center infrastructure of the NTT Group, which currently ranks as the third largest in the world*. Additionally, we plan to further expand this infrastructure and enhance its capabilities through the introduction of IOWN technologies. Toward this goal, we will invest over 1.5 trillion yen in the next five years**, doubling the current data center capacity of 1,100 MW.

For our corporate clients, we will leverage technologies such as AI, robotics, IOWN, digital twins, and security to offer solution and platform services on a global scale, thereby transforming industries that underpin daily life and society.

Over the next five years, we intend to invest more than three trillion yen in this area.

Initiatives Related to New Value Creation in the New Medium-Term Management Strategy

(Establishment of manufacturing company for photonic-electronic convergence devices, Acceleration of IOWN research and development/commercialization)

**Estimations for facilities using third-party power are not included. If a facility transfers its “Reliability” level from Level 4 to Level 5, then the reliability of IOWN and Group 2/Group 3 business services will also improve.

As of Mar 2023, power capacity of third-party facilities is excluded from the total power capacity.
We will also work towards a sustainable society by promoting the reuse of waste across various industries and enabling resource circulation.

With the application of technologies like IOWN, 5G/IoT, and AI/Robotics, we will improve the efficiency and value-added attributes of primary industries, thereby contributing to industrial development and regional revitalization.

Achievement of a circular economy society across various industries, with energy as the starting point

- Renewable Energy
  - Water/wind/solar power, etc.
- Garbage Recycling/Biomass Plants
- Smart Forestry
  - IoT and digitalization of forestry, etc.
- Smart Aquaculture
  - Aquaculture utilizing ICT
  - Utilization of genome-editing technologies, etc.
- Smart Livestock Farming
  - Operation that combines the livestock farming industry and ICT, etc.

Improved efficiency, value-addition and industrial development in primary industries

Food residue
- Garbage
- Recycling
- Compost
- Distribution of crops
- Contracted local farmers

Food-related businesses
- Local food resource recycling solutions

Primary fermentation residuals

Food-related businesses

- Smart Forestry
  - IoT and digitalization of forestry, etc.
- Smart Aquaculture
  - Aquaculture utilizing ICT
  - Utilization of genome-editing technologies, etc.
- Smart Livestock Farming
  - Operation that combines the livestock farming industry and ICT, etc.

We established a new Research and Development Market Strategy Division by integrating and strengthening our research, marketing, and alliance functions as an R&D organization with marketing capabilities. In addition to strengthening product-out R&D, we will collaborate with customers and partners globally to carry out everything from R&D to product delivery, promoting alliances with a variety of partners.

Customers
  - Individuals, businesses, local governments, government organizations, etc.

Customer Experience First
  - With a Market-in Approach, Achieve Both Customer Satisfaction and Business Growth at the Same Time

Set/Implement KPIs that Track the Customer Journey
  - Each NTT Group Company/Partners

Further Improve and Update Services by Being Agile
  - NTT Holdco Market Planning/Analysis Department → Research and Planning Division/Institute
  - Each NTT Group Company/Partners

Each NTT Group Company/Partners

Offer New Experiences and Impressions that Exceed Customer Expectations

Each NTT Group Company/Partners

In addition to strengthening product-out R&D, we will collaborate with customers and partners globally to carry out everything from R&D to product delivery, promoting alliances with a variety of partners.
Resilience

The NTT Group is active around the globe, providing a myriad of services that sustain both social and economic activities as well as safeguarding daily life. These include communications networks, information systems, and other essential life-supporting services such as finance and payment solutions.

There is a risk that the provision of these services could be compromised due to natural disasters like earthquakes, tsunamis, hurricanes, and floods, as well as physical attacks including military invasions and terrorism, delays in development or glitches in vital systems, or the occurrence of significant network malfunctions. Such events have the potential to negatively impact the trustworthiness and corporate image of the NTT Group.

Addressing Risks

To address such risks, the NTT Group has implemented a variety of strategies to ensure that the systems and networks necessary for service delivery operate safely and reliably. These strategies include fortifying the seismic and flood-resistant capabilities of communication buildings, diversifying transmission routes, and enhancing emergency power supplies for communication buildings and base stations during extended power outages. Particularly for large-scale disasters, our concrete measures involve not only swift and accurate service restoration, but also rapid identification of the root causes. We will continue to enact cross-Group initiatives aimed at 1) comprehensive assessments and resumption prevention for apparent risks, and 2) building a more resilient network based on an inventory of cross-Group risks, considering that unforeseen incidents are inevitable.

Opportunities

In terms of seizing opportunities, we believe that improvements in network resilience and faster recovery capabilities will boost the reliability of our communication networks and information systems. This, in turn, will elevate customer satisfaction and enhance our brand image. For customers demanding even higher reliability, we will offer new value by expanding our range of solutions designed to reinforce their Business Continuity Plans.

Indicators and Targets Related to Natural Disasters, Large-Scale Failures and Other Similar Events

<table>
<thead>
<tr>
<th>Indicator</th>
<th>FY2023</th>
<th>Target</th>
<th>FY2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Serious Incidents</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Note: The scope for counting serious incidents is limited to the four designated public telecommunications companies (NTT East, NTT West, NTT Communications, and NTT DOCOMO).

1. A “serious incident” is defined as an event meeting the following conditions: disruption or degradation of the quality of telecommunications services:
   - A service failure lasts more than 24 hours and impacting over 1,000,000 people
   - Voice services that do not handle emergency calls
   - A service failure that lasts more than 24 hours and impacting over 1,000,000 people
   - Other services: lasting more than 24 hours and impacting over 1,000,000 people

2. A significant incident is defined as an event meeting the following conditions: disruption or degradation of the quality of telecommunications services:
   - A service failure lasts more than 24 hours and impacting over 500,000 people
   - Voice services that do not handle emergency calls
   - A service failure that lasts more than 24 hours and impacting over 500,000 people
   - Other services: lasting more than 24 hours and impacting over 500,000 people

Disaster Countermeasure Initiatives

As a designated public organization, the NTT Group is making a daily effort to ensure emergency and critical communication channels. Furthermore, in recent years, there is an escalating risk of physical attacks, such as armed assaults and acts of terrorism, on top of the increasing frequency of large-scale, expansive, and long-lasting natural disasters. Recognizing the potential for natural disasters to have greater impacts on telecommunications facilities and services and for recovery efforts to be prolonged, the NTT Group is increasing the resilience of its facilities and taking steps to expedite recovery efforts.

Improving communication network reliability

Building facilities resistant to disasters such as earthquakes, fires, and wind and flood damage, as well as different transmission routes.

Network monitoring and control 24 hours a day, 365 days a year.

Enhancing emergency power supplies for communication buildings and base stations during extended power outages.

Further Enhancing Our Ability to Respond to Severe Disasters

Further Initiatives Related to Resilience in the New Medium-Term Management Strategy (Further Strengthening of Business Foundations)

From learning experiences and lessons in telecommunications failures, we will create a robust network/system that takes into account the occurrence of major malfunctions and cyber-attacks, thereby strengthening social infrastructure. In addition, we will strengthen measures to cope with natural disasters, which are becoming increasingly severe. Looking toward this goal, we will invest around 160 billion yen*1 by fiscal 2025.

To build a resilient network system, we will proceed based on the assumption that unexpected events will inevitably occur, implementing preventive measures against human errors and malfunctions while minimizing the impact if a failure does occur.

Furthermore, we will enhance disaster preparedness and globally standardized cybersecurity measures, with a view toward safe and secure service delivery.

*1 Including other reliability enhancement measures

- Development of Resilient NW/Systems
  - Prevention of Human Error/Operational Support System
  - Prevention of Malfunctions
  - Prevention of Cyber-Attacks
  - Prevention of Disasters

- Power supply from EVs and on-site PPAs
  - Distribution of supply in case of disaster
  - Strengthening of disaster-specific risk scenarios

- Business Continuity Plans
  - Business Continuity Planning
  - Business Continuity Testing

- Risk Management
  - Risk Assessment
  - Risk Mitigation

- Crisis Management
  - Crisis Communication
  - Crisis Response

- Countermeasures
  - Countermeasures for earthquakes
  - Countermeasures for floods
  - Countermeasures for typhoons

- Development and deployment of crisis management platforms
  - Development and deployment of crisis management platforms
  - Development and deployment of crisis management platforms

- Training and education for personnel engaged in maintenance and operations
  - Training and education for personnel engaged in maintenance and operations
  - Training and education for personnel engaged in maintenance and operations

- Simulation Failure Prediction/Network Failure Prediction
  - Simulation Failure Prediction/Network Failure Prediction
  - Simulation Failure Prediction/Network Failure Prediction

- Countermeasures: 3 Key Themes
  - Countermeasures: 3 Key Themes
  - Countermeasures: 3 Key Themes

- Support Career Growth
  - Support Career Growth
  - Support Career Growth

- Open and Innovative Corporate Culture
  - Open and Innovative Corporate Culture
  - Open and Innovative Corporate Culture
Resilience

Resilience Strategies (2) <Security>

### Risks
Should we experience security incidents such as cyber-terrorism that lead to service outages, degradation in service quality, or the leakage, alteration, or loss of information, there is a risk that the NTT Group’s reputation and corporate image could suffer. This, in turn, could potentially impact our business performance and financial stability.

### Addressing Risks
To mitigate such risks, the NTT Group is actively engaged in risk-based information security initiatives. These are grounded in the belief that cyber incidents are inevitable and that minimizing damage is crucial. Measures include the implementation of a “3 Lines of Defense” principle, performing a fundamental review of Group-wide regulations to achieve a secure remote work environment and transitioning to Zero Trust IT systems, collecting and utilizing global threat information, adopting the latest technologies for early detection and quick response, verifying security measures from an attacker’s perspective, practicing incident response for potential scenarios, and delivering basic operational training to all employees.

### Opportunities
As for capitalizing on opportunities, we are committed to nurturing security specialists endowed with state-of-the-art technology and deep expertise. Furthermore, we are actively offering risk management support services to businesses and communities outside the Group by leveraging the knowledge and insights accumulated through our risk-mitigation efforts.

#### Indicators and Targets Related to Security

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Target</th>
<th>FY2023</th>
<th>FY2022</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suspension of telecommunications services due to external cyberattacks</td>
<td>NTT DOCOMO</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### Organization for Implementation

- **Board of Directors**
  - President (Executive Officers Meeting)

- **NTT Group’s Security Governance Goals**
  - Widespread adoption
  - Secure execution of duties
  - Risk management
  - Verification

- **Group companies**
  - NTT DOCOMO
  - NTT East
  - NTT West
  - NTT DATA Group
  - NTT Urban Solutions
  - NTT Security Holdings

#### NTT-CERT
- Support
- Audit

#### Group CISO Committee
- Committee chairperson: Group CISO
- Members:
  - Vice President, Head of Business Policy, Head of Corporate Affairs, Head of Internal Audit Department, Group CISO
  - Group CIO, Head of Technology Planning, Head of Research and Development Planning, Head of General Affairs, Head of Policy and Strategy Planning, Head of Group CIO Committee

#### Information Security Liaison Meeting
- NTT CERT

#### Hosting company
- Secure execution of duties
- Secure execution of duties

#### Group companies, business divisions
- Secure execution of duties

#### Security-promoting organization (Second Line)
- Widespread adoption
- Secure execution of duties

#### Audit organization (Third Line)
- Verification

### Collection and Utilization of Global Threat Information

NTT has joined the Joint Cyber Defense Collaborative (JCDC), a U.S. government cybersecurity and resilience initiative, as its first Asian member. Established by the U.S. Cybersecurity and Infrastructure Security Agency (CISA) in 2021, the JCDC is spearheading the collaborative development of cyber defense plans, information sharing on cybersecurity, and the dissemination of cyber defense guidance to reduce risks to critical infrastructure and essential national functions. Private sector members include major telecommunication companies, technology giants, and major security companies, such as AT&T, Verizon, Lumen, Microsoft, Google, Cisco, Mandiant, and Palo Alto Networks. Moreover, U.S. government intelligence agencies and cybersecurity-related departments from countries allied with the U.S. are also participating. By leveraging the global intelligence gained from the JCDC, NTT can offer more effective protection of vital information networks and improved responses to cyber incidents. Additionally, sharing information with other JCDC members enables NTT to further advance its own cybersecurity initiatives.

Building on our existing foundation of trust and collaboration with CISA and the U.S. government, we will contribute a unique Asian perspective to the JCDC while sharing NTT’s leadership along with its expansive global experience and specialized expertise in security. In an era of continued global uncertainty surrounding cybersecurity, we firmly believe that a collaborative approach between the public and private sectors in cybersecurity is essential, not just in the United States but also globally, to defend against cyberattacks that threaten the critical social infrastructure upon which our daily lives depend.

#### Enhancing Security 1) Global Collaboration

**Collection and Utilization of Global Threat Information**

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#### Enhancing Security 2) Defense from an Attacker’s Perspective

**Red Team**

- NTT formed a Red Team in 2019. A Red Team conducts simulated cyberattacks from the perspective of external attackers. In the realm of cybersecurity, it is a never-ending game of cat and mouse, with new types of attacks emerging no matter how much one defends. Moreover, while attackers only need to succeed once, defenders must block every single one, creating an imbalance that favors the attackers. To address this challenge, NTT’s Red Team was established to formulate countermeasures from the attacker’s viewpoint. The ultimate goal is to improve defensive capabilities; the activities are not limited to just conducting simulated attacks. The Red Team’s activities also include analyzing and reporting vulnerabilities and organizational challenges in the targeted systems after the simulated attacks and even providing actionable advice for improvement. In some cases, the team may assist with implementing these improvements.

**Bug Bounty Program**

- NTT began a Bug Bounty Program on a trial basis in 2022 and fully launched it in 2023. A bug bounty is a reward given to individuals who discover security loopholes in an information system. NTT has implemented this program with two specific aims:
  1. To identify and rectify vulnerabilities before they can be exploited by malicious third parties, thereby enhancing the overall security posture of the NTT Group.
  2. To offer employees who participate an avenue to refine their security skills from an attacker’s viewpoint, thereby nurturing the development of security talent.
- The trial phase demonstrated that the program not only contributed to enhancing corporate security, but also helped in discovering undiscovered security talent and further honing their skills. Although fully operational only since 2023, the program will be continually refined, and we aim to broaden the understanding that improving security is a collaborative effort involving all employees.

#### Integrated Report 2023

- **TOPIC**
- **Enhancing Security 1) Global Collaboration**
- **Enhancing Security 2) Defense from an Attacker’s Perspective**
- **Red Team**
- **Bug Bounty Program**