# Society

## A better future characterized by innovation and abundant vigor, in which sustainable development is achieved through value creation

As a leading ICT company spearheading DX across society, the NTT Communications Group works to resolve diverse social issues through initiatives, including the realization of a Smart World that connects society and the future, ICT Transformation, and promotion of advanced innovation, with the intention of developing a sustainable future. We will venture beyond our corporate boundaries and continuously take on challenges to co-create and drive the emergence of new value and demonstrate our commitment. Furthermore, as a corporate citizen, we will engage in business activities deeply rooted in the local community to bring about a better future that is resilient, safe, and secure while constantly pursuing opportunities to contribute to society through ICT.

Targeted SDGs

| 1 NO POVERTY | 4 QUALITY EDUCATION | 8 DECENT WORK AND ECONOMIC GROWTH | 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE | 11 SUSTAINABLE CITIES AND COMMUNITIES | 13 CLIMATE ACTION | 17 PARTNERSHIPS FOR THE GOALS |

**Priority Activities**

# NTT Communications Corporation Sustainability Report

# *2023*

**Priority Activities**

# Promotion of DX to Connect Society with the Future

## Our Approach

Our goal is to facilitate DX that will lead customers to create new businesses and bolster their competitiveness and to realize a Smart World through the utilization of ICT. By accumulating a broad array of data and reusing it to improve existing formats and develop and introduce new systems, technologies, and services, we will resolve a number of the issues facing society and create better ICT environments.

We will contribute to addressing social challenges by promoting DX in collaboration among Group companies and with our partners to address the issues faced by clients developing global business, various industries, and society as a whole. The NTT Communications Group will also provide solutions for promoting DX to connect society with the future, such as realizing a world in which every worker can choose an optimal workstyle and demonstrate their talents.

## Main Achievements in Fiscal 2022 and Goals for the Coming Years

In fiscal 2022, we started offering new services that make use of networks, AI, 5G, IoT, and other technologies by leveraging the internal synergies of the NTT DOCOMO Group.

Drawing upon the $CO_2$ emissions forecasting and visualization features of our Smart Data Platform (SDPF) cloud server, we help customers forecast their $CO_2$ emissions based on their resource needs and other factors and review the results in a dashboard that displays their carbon footprint. Alkano, our no-code data analytics platform service, has been designed so that anyone, from beginners to data science experts and programmers, can easily use AI and machine learning. Our other services and solutions include Flexible Internet Gateway, a cloud-based secure web gateway service; COTOHA 1-on-1 Assistant, which supports management staff as they improve their skills for facilitating effective one-on-one meetings with the latest AI technologies; and ThingsCloud®, an IoT platform service. As part of our global business initiatives, we also opened a permanent showroom in Thailand, which allowed many customers to experience our 5G and IoT solutions.

We will continue to promote DX across society, industry, work/lifestyles, and global businesses to promote a Smart World and help realize sustainable local communities.

## Providing Services that Help Advance the Evolution of an ICT Society

### Pursuing Our Mission to Realize a Smart World

The NTT Communications Group intends to facilitate the DX that will lead customers to create new businesses and bolster their competitiveness and to realize a Smart World in which social issues are resolved through the utilization of ICT. Effective use of digital data is one of the key factors for achieving DX. Through our Smart Data Platform, which enables customers to make full use of data, we will encourage our customers to promote DX in order to resolve social issues and achieve sustainable growth, which in turn will lead to generating new value through DX.

### Promoting DX to Create Value through the Use of IoT

NTT Communications is actively promoting value creation and business co-creation through innovation with customers based on the concept of design and use of IoT. In fiscal 2022, to continue to provide customers with valuable IoT solutions combined with our services, we made value proposals for their business operation challenges and expanded the capabilities of our co-creation programs with partner companies.

In November 2022, as a result of our customer co-creation efforts, we started pilot testing to create use cases for next-generation medical care based on advanced technologies such as local 5G and self-driving robots. In February 2023, we started pilot

testing the use of smart road lamps to reduce traffic accidents on icy roads.

In terms of our co-creation programs with partner companies, we increased the number of participating companies in the Things Partner® Program to 50, as of March 2023, through online events and discussions on sector-specific areas for applying IoT during the COVID-19 pandemic. With the reorganization of the DOCOMO Group, approximately 5,500 participating companies in the NTT DOCOMO 5G Open Partner Program, as of March 2023, have also been added to our list, which will further strengthen our co-creation programs.

Following the reorganization of the DOCOMO Group in July 2022, we established a new structure to expand our services, and we now offer comprehensive one-stop services to support all aspects of IoT implementation, from introduction to operation.

In October 2022, we began offering a multiple mobile line redundancy solution for IoT devices, which combines DOCOMO IoT Managed Service and IoT Connect Mobile® Type S to provide multi-carrier redundancy. With this one-stop solution, our customers no longer need to separately purchase and operate each device to enjoy the benefits of a highly reliable network.

We will combine different IoT assets to help customers achieve DX through data utilization, while also strengthening our IoT solutions that contribute to ESG and GX.

### Promotion of DX in Our Global Businesses

Following the reorganization of the global business operations of the NTT Group and NTT DOCOMO Group, NTT Communications is expanding its global reach together with its subsidiaries NTT Com Asia Limited, NTT Communications China, Shanghai NTT Telecommunications Engineering, and Mobile Innovation. To fuel the global expansion of our docomo business brand, Mobile Innovation in Thailand has set up a its Customer Experience Center as a showroom where visitors can try out some of our 5G and IoT solutions currently offered in Japan, including EDGEMATRIX® for the construction industry and AVATOUR® for the video industry. In collaboration with the other NTT Group companies involved, we will continue to contribute to DX in our global businesses by proposing and introducing our docomo business brand to a wide range of customers.

## Promotion of Business Co-Creation for a Better Society

Our docomo business brand uses mobile and IoT technologies and other synergies of the new DOCOMO Group to help revitalize local communities together with our customers and local governments nationwide.

A major challenge facing local communities is a shortage of workers due to an aging and decreasing population, which calls for greater efficiency through DX. We will contribute across a wide range of sectors, including agriculture, fisheries, healthcare, transportation, and education, to addressing the challenges faced by each community and industry with the most effective solutions, thereby contributing to the realization of sustainable local communities.

### Examples of Community Efforts to Promote Business Co-creation for a Better Society

- In January 2023, we started offering our NeWork as a new space for the Friendly Online program of the Kumamoto City Board of Education, which provides a virtual classroom for students who are chronically absent from school. The classroom is intended to enable students to communicate freely with each other and reduce their anxiety about being in group settings.

  **For more details, see:** https://www.ntt.com/about-us/area-info/article/20221216.html (in Japanese only)

- We held the Niigata 2 km Virtual Walk from January 20 to March 31, 2023, in cooperation with a local computer college and other organizations. Visitors enjoyed virtual artworks that emerged against the actual backdrop of the city when they held up and looked with their smartphones at various spots where we had installed the AR artworks around the city.

  **For more details, see:** https://www.ntt.com/about-us/area-info/article/20230113.html (in Japanese only)

- To support small and medium-sized enterprises moving to DX using 5G technology, we opened an exhibition space at the Kanazawa Mirai no Machi Creation Center, where visitors can experience our latest digital technologies for improving productivity and creating new businesses, and we held related seminars in December 2022 and January 2023 in cooperation with Kanazawa City and other organizations.

  **For more details, see:** https://www.ntt.com/about-us/area-info/article/20221201.html (in Japanese only)

- In cooperation with the Kanazawa Marathon Organizing Committee, we provided the nation's first remote cheering system using AI technology at the Kanazawa Marathon 2022 in October 2022, which displayed pre-registered cheering messages when the relevant runners passed by, based on video analysis of their bib numbers.

  **For more details, see:** https://www.ntt.com/about-us/area-info/article/20221021.html (in Japanese only)

- To realize a regional public transportation model to address the declining birthrate and aging population, we supported the operation of YOBERUN, a reservation-based shared-ride cab service launched by Iwakuni City in October 2022 after a pilot operation and discussions with local residents.

  **For more details, see:** https://www.ntt.com/about-us/area-info/article/20221007.html (in Japanese only)

- We served as the secretariat of Digi-PoC TOYAMA, which focuses on resolving local issues through digital solutions and building business models. A debriefing session on the results of seven projects was held in March 2023. The program also started accepting applications in June of this year.

  **For more details, see:** https://www.ntt.com/about-us/area-info/article/20230320.html (in Japanese only)

- From October 2022 to March 2023, we held international exchange classes between Fukuoka Prefecture's Yanagawa High School, which promotes international cross-cultural exchanges, and Thailand, using avatars to recreate classrooms in Japan and Thailand in the metaverse.

  **For more details, see:** https://www.ntt.com/about-us/area-info/article/20221021_2.html (in Japanese only)

# NTT Communications Corporation Sustainability Report
## 2023

## Providing Services that Enable Secure Access to Internal Systems

The "new normal" social environment, where remote and hybrid work has become common, requires an environment that allows flexible access from anywhere to internal business systems, SaaS*1, and websites scattered across on-premises*2 and public clouds*3. However, many companies have been concerned over the cost and lead time required to implement solutions to create an ICT environment that addresses alternative working styles and new security threats.

In April 2021, NTT Communications launched Flexible Remote Access, a remote access service that allows employees to connect to these resources from anywhere, and Flexible Internet Gateway, a cloud-based Internet gateway service that enables users to configure security measures using high-performance, high-bandwidth UTM features. In the third quarter of fiscal 2023, we also plan to launch docomo business RINK™, a new integrated network service that offers a secure ICT environment based on the Zero Trust security model and supports diverse working styles.

The docomo business RINK™ service, providing multiple cloud-based security features and a variety of networks suitable for different work locations in a single package, can be introduced by any company. No specialized knowledge is required for design or configuration, thereby reducing the lead time and total cost of creating an ICT environment. The service also uses software-defined technology, a cutting-edge trend among global telecommunications providers for providing flexible, on-demand adjustment of bandwidth and configurations through a web portal. As a result, a

pleasant and productive working environment can be maintained even during high traffic conditions, such as when many employees are participating in a web conference from their offices.

Going forward, we will continue to create an ICT environment that allows customers to access the necessary resources safely and securely from anywhere and according to their needs.

*1 In-house operation of information systems such as servers
*2 An open form of cloud computing environment that is provided to an unspecified number of companies or individuals
*3 Software as a Service: Software or a software platform that is provided in the cloud and can be used as a service with necessary functions in the required quantities

[ docomo business RINK™ ]



## Providing the Benefits of ICT to All

Now that ICT has become an indispensable social infrastructure, we are working with our Group companies and partners to realize DX across society and industry to resolve the issues facing our world today. This includes bridging the digital divide, allowing people all over the world to enjoy the benefits of ICT without any constraints related to where they live, their age, or economic standards. For example, in IoT we are working to create use cases that contribute to resolving such social issues as watching over children, preventing crime in public areas, and assisting the elderly and physically challenged with mobility issues.

NTT Communications is promoting universal design* to provide products and services easy to use by all customers, regardless of age, gender, or physical abilities. For example, our AI chatbot COTOHA Chat & FAQ®, which uses a unique semantic search engine to read the intent of questions and provide highly accurate answers, was made compatible with universal design. The ability of the service to provide multilingual customer support with only Japanese FAQs and Japanese-speaking operators has been well received.

*Products and services, including functional enhancements, that can be used by the elderly, children, people with disabilities, and foreign visitors to Japan who experience language barriers.

For more information on COTOHA Chat & FAQ®, see:
https://www.ntt.com/cotoha-cf.html (in Japanese only)

# NTT Communications Corporation Sustainability Report *2023*

**Priority Activities**

## Promotion of Innovations that Break through Limits

### Our Approach

Under our mission of "Creating communications methods that open up new possibilities for people and our world," we aspire to connect the world by providing advanced technologies and services that generate new social value.

We will pursue innovations unshackled by conventional wisdom. To generate creative innovations, we will apply new ideas to establish businesses and engage in new business development such as Smart X and business co-creation with our customers. We will also develop a new framework for generating innovations within the Group through internal reforms and the Open Innovation Program.

### Main Achievements in Fiscal 2022 and Goals for the Coming Years

As in the previous fiscal year, we continued to promote the development and demonstration of new businesses in fiscal 2022. In April 2022, we started offering OsecT, which visualizes security risks in control systems, for commercial use under the OsecT wide-angle professional service. We are currently running a pilot demonstration for expanding the service for B2B2X. We are also generating value and demonstrating new businesses with medium- to long-term prospects, such as FinTech (Home Currency Anywhere), remote-controlled robotics, and space-related businesses.

In addition, we actively promoted innovation management in collaboration with internal and external parties. In fiscal 2022, we expanded the scope of DigiCom content, a new business creation content launched in 2016 for generating new businesses originating from employees, to include the DOCOMO Group, and held a ZERO ONE DRIVE contest. Starting in fiscal 2023, the contest will be held under the docomo STARTUP brand as a joint effort by the DOCOMO Group. We will continue to promote the development of new businesses, such as B2B2X model ventures based on data, and with our efforts to create new added value to bring about change.
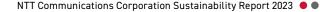
### Driving Creative Innovation

#### Promoting Creative and Innovative Smart X

• Innovation Center
The Innovation Center was established in 2020 to promote the creation of businesses with a medium- to long-term perspective for realizing a Smart World and contributing to the DX of our customers. The center is comprised of four divisions: the Technology Strategy Division, which works to gain technological superiority; the Design Division, which promotes customer-oriented management; the Technology Division, which drives the entire company with cutting-edge technologies; and the Produce Division, which leads the development of new businesses.

• Creating New Businesses
The Innovation Center has been creating a number of new businesses. OsecT, which visualizes and detects security risks in control systems for production lines, passed verification testing and was launched as a commercial service in April 2022. To expand the scope of its application, we are now confirming its technical and business feasibility with multiple companies. We have also developed and demonstrated Droppin, an instant search and reservation service for workspaces that best suit the needs of users, in partnership with various coworking spaces and private work booths to support flexible workstyles, as well as Home Currency Anywhere, a foreign currency exchange platform with guaranteed rates that dramatically accelerates

and improves cross-border business. Some of our next business projects under discussion from a mid- to long-term perspective are remote-controlled robotics and space-related businesses. We will continue to create new added value to bring about change and drive creative innovation and new businesses for realizing a Smart World.

## Promotion of Innovation Management

### Promoting Creative Innovation through Internal and External Collaboration

**• Internal and External Collaboration**

We believe that promoting internal innovation and co-creation and collaboration with external parties are essential for generating innovation and new businesses to resolve social issues. With this in mind, we are developing mechanisms for encouraging innovation.

In fiscal 2022, we expanded the scope of the DigiCom contest, which was originally started to encourage employees to innovate and to develop human resources and a corporate culture conducive for driving innovation, and it was relaunched under a new name, Zero One Drive, to unite the efforts of the entire DOCOMO Group. Moreover, as one way to encourage healthy competition with other companies, we hold the ExTorch open innovation program for co-creation of new value by drawing upon NTT Communications' extensive resources, including services, technologies, infrastructure, and data. ExTorch connects startup companies with our various internal departments to co-create new businesses.

**• Creating Data-Centered Businesses**

We are also co-creating with other companies to develop businesses that use data based on the B2B2X model. Node-AI, an AI development assistance tool and a mechanism for optimizing AI that was developed by the Innovation Center, led to the provision of the AI Plant Operation Assistance Solution, developed through collaboration with the Yokogawa Solution Service Corporation.

## NTT Communications Corporation Sustainability Report

# *2023*

**Priority Activities**

# ICT Transformation

## Our Approach

As the IoT society evolves, economic and social damage caused by emergency telecommunication breakdowns is becoming incalculably severe. As we are entrusted with managing networks and vital data associated with the globalization of many companies, we are absolutely required to fulfill our responsibility to maintain network connections at all times.

As a corporate group that provides global telecommunications services by utilizing the network technologies and maintenance systems that underpin advanced ICT societies, we focus on the Three Disaster Policy Fundamentals to put into place a communication environment that allows for the confident use of networks even in the event of a disaster or other emergencies. Through the consistent strengthening of ICT infrastructure equipment to prevent telecommunication breakdowns in the event of emergency, we will maintain the network as vital infrastructure, resolve customer security issues as a security advisor for the "new normal" era, and provide advanced services that integrate Group technologies such as local 5G and edge computing to realize flexible and optimal network environments for our customers.

As an ICT services provider, we are responsible for ensuring the confidentiality, secure retention, and management of information we receive from customers. We believe that fulfilling this responsibility is essential for realizing advanced, safe, secure, and sustainable living environments and economic and social activities.

Furthermore, we are working to provide advanced and robust information and cyber security. We have established a set of security regulations necessary for the NTT Communications Group as a whole to meet public expectations, and we apply them to the ongoing monitoring and operation of the ICT systems and networks entrusted to us by customers to ensure they are robust while enhancing their vulnerability response to unknown threats.

### Disaster Policy Fundamentals

**1. Improving Network Reliability**
We are working to improve reliability so that partial damage to telecommunications systems does not have a great effect on others.

**2. Ensuring Crucial Communications**
We have secured means of communication to allow important communications in a disaster situation.

**3. Quickly Restoring Communications Services**
We will restore to service damaged telecommunications equipment as soon as possible.

For more information on the Disaster Policy Fundamentals, see:
http://www.ntt.com/about-us/cs/saitai.html
(in Japanese only)

## Main Achievements in Fiscal 2022 and Goals for the Coming Years

In preparation for the arrival in Japan of diplomats from various countries for a government-sponsored event in fiscal 2022, we took every precaution to ensure that our telecommunications facilities were properly protected and that we were ready to act quickly and effectively in the event of any incidents. These special security and maintenance efforts contributed to a successful, problem-free event.

In addition, we have clarified the required roles, competencies, and skills of employees in charge of disaster response and established a new certification system. Under the system, we will develop highly specialized human resources by indicating the direction and roadmap for improving their training and skills.

We also strengthened our security services to combat increasingly sophisticated cyber-attacks, such as emerging threats from the spread of remote work caused by the COVID-19 pandemic as well as persistent, malicious ransomware attacks. In addition, we started offering a new security service that is affordable and easy to introduce, considering the growing number of cyber-attacks affecting not only large but also small and medium-sized enterprises.

We specifically focused on offering services that meet the expectations of our customers for security. These included support for our highly secure and scalable Internet gateway service, Distributed Secure Internet GateWay (DSIGW)*1, expansion of products for EDR log analysis*2, risk scoring to visualize corporate security risks for SMEs, and security education and email training that combines security education and phishing email training.

In fiscal 2023, we will continue to strengthen our network security by promoting advanced and robust information and cyber security services, and we will expand our service lineup to meet the security needs of all customers, in light of the increasing prevalence of security incidents in IT as well as OT environments, regardless of enterprise scale.

*1 A service that provides UTM security and proxy functions (an intermediary system for accessing the Internet) necessary for secure Internet connections outside the company. It allows the resource size (specifications) to be adjusted on demand based on the customer situation and needs.

*2 Obtaining log information from endpoints (PCs, servers, and other devices) connected to the organization's network and analyzing them for any suspicious activities or traces of them.

## Development of Disaster-Resilient Networks

### Keeping Networks Reliable Following Disasters

NTT Communications works under the three basic guidelines for disaster prevention measures to maintain mission-critical communications and swiftly restore disrupted communication services.

The torrential rain that started on August 3, 2022, caused extensive damage in the Tohoku and Hokuriku regions of Japan. The heavy downpour collapsed a road, consequently damaging several backbone relay cables between Yamagata and Fukushima on August 3 and between Fukui and Shiga on August 5. To restore the cables, we built new relay cable lines that bypassed the collapsed areas between those regions on August 8 and 10, respectively, and all within five days of the disaster.

[ Damaged road between Yamagata and Fukushima ]



[ Damaged road between Fukui and Shiga ]

We work daily to raise awareness about disasters among our employees and those of partner companies so they can rapidly respond to disasters. Specifically, we conduct training that makes use of the Biz Safety Confirmation and Notification service, offered by NTT Communications, and also regular training exercises that simulate large-scale natural disasters.

🔗 For more information on disaster response, see:
**https://www.ntt.com/about-us/cs/saitai.html** (in Japanese only)

### Providing Services that Underpin Corporate Business Continuity

Offering a range of services to respond to such crises as major earthquakes and pandemics, NTT Communications supports the continuity of its customers' businesses. For example, earthquake early-warning information is provided through a service and includes details about seismic intensity and arrival time before the tremors are felt. As the service enables initial damage prevention and ensures personal safety, it is considered effective for formulating a business continuity plan (BCP), since business restoration can be expected soon after an earthquake. A service that simultaneously reports personal safety confirmations both verifies and gathers information on the safety of employees during a pandemic or natural disaster. Available on a routine basis via communications networks, it is also effective in confirming the safety of school contact networks and elderly persons as well as for simultaneously contacting employees dispatched to client companies.

In addition to these services to protect the personal safety of customers, we offer highly reliable ICT infrastructure services that will keep customer businesses and operations running uninterrupted even in times of disaster. For example, Nexcenter, a data center service with excellent disaster resistance, and SDPF Cloud/Server service (formerly the Enterprise Cloud service), a cloud service for companies that leverage outstanding technological capabilities as telecommunications carriers, are both connected via high-quality, high-volume networks between bases and therefore provide BCP capabilities that ensure the timely backup of data at remote locations.

Furthermore, DOCOMO IoT Managed Service began offering a one-stop solution for multi-carrier redundancy in December 2022 to enable companies that use IoT in their business development to construct robust networks.

### Subsea Cable-Laying Ship Kizuna with Cutting-Edge Features

Receiving favorable evaluations for the effectiveness of ships used in restoring telecom equipment during disasters, we are examining various ways of using ships not only for NTT Communications but also throughout the NTT Group.
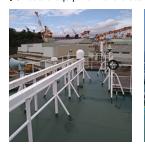
The subsea cable-laying ship Kizuna carries disaster recovery equipment, six 20-foot containers, aerial work platforms, and a mobile base station, which enables the NTT Group to transport emergency supplies and vehicles used for disaster reconstruction. Kizuna supported the rapid restoration of the telecommunications network during recovery work following the Hokkaido Eastern Iburi Earthquake and Typhoon No. 24 by transporting supplies and vehicles to the nearest ports.

Kizuna also has an onboard emergency mobile base station with dynamic positioning functions. This allows it to set up temporary regional telephone services disabled during a disaster. The ship's upper bridge has enough space for numerous parabolic antennas that keep satellite communications from being impeded. This design allows for the installation of more telecom equipment during a disaster. In addition, the ship features unique living quarters that can be equipped with lodging and support equipment (including meal provision) for disaster relief workers. It is also equipped with switchboards and water intake ports that enable ship-to-shore energy and water supply.

In fiscal 2021, high-speed maritime broadband service JSATMarine provided by SKY Perfect JSAT was introduced to the Kizuna to make it possible to use the same business and communication tools on land and at sea. Thanks to the significant increase in communication capacity, we can now exchange large files with our clients when conducting cable work and other projects, allowing us to better manage business operations. In addition, program updates for special construction equipment manufactured overseas can now be performed remotely, so technicians from overseas are not required in person.

[ Onboard equipment and disaster recovery support on Kizuna ]

## Provision of Advanced and Robust Information and Cyber Security

### Monitoring Enterprise Network Security

While DX presents business opportunities for companies, it also signifies the start of an era of zero trust in an ICT environment where business expansion leads to assimilation into the Internet, thereby increasing cyber risks. Under these circumstances, safeguarding business continuity in the face of both foreseeable and unforeseeable risks, as well as risks associated with external attacks or internal foul play, has become a major management concern. We have been addressing cyber threats for about 20 years and have expanded our services by providing security operation services for enterprises through our Security Operation Center (SOC) and globally through the comprehensive security risk management service WideAngle for ten years. Over the course of these periods, experts from all fields of security have protected customer ICT environments from increasingly sophisticated cyber-attacks.

   As remote work became increasingly widespread due to the COVID-19 pandemic in fiscal 2021, we realized we had truly entered the era of zero trust. One major change we observed was the increased business use of smart devices. This led us to develop and provide Anshin Mobile Security for Business, an MTD[1] that offers the same level of protection against cyber-attacks as for conventional PCs. To counter new threats arising from the shift to the cloud, we started offering Managed CSPM[2] to provide enhanced cloud security for customers by visualizing the

status of IaaS[3] misconfigurations and compliance. In response to the increasing frequency and sophistication of cyber-attacks and the persistent shortage of security personnel, we have also launched Managed SOAR[4] for automated incident response from the detection to handling of cyber-attacks. We will continue to contribute to customer DX by providing solutions for safely using data and generating new value.

[1] Mobile Threat Defense: A solution that blocks the download of malicious apps, malware infection, and phishing sites that steal personal information.

[2] Cloud Security Posture Management: A solution that automatically assesses and monitors various settings in a cloud environment to ensure compliance with security policies.

[3] Infrastructure as a Service: A business model that delivers IT infrastructure such as computing, storage, and network resources via the Internet.

[4] Security Orchestration, Automation and Response: A solution to streamline and automate security operations by consolidating and analyzing data from various products, platforms, and external sources, and by taking action through pre-defined processes.

### Countering Malware, a Growing Social Problem

In February 2016, NTT Communications became the first Internet service provider in Japan to provide free of charge the Malware Unauthorized Communication Blocking Service, which blocks communications to unauthorized access destinations (C&C servers*). Since then, the list of unauthorized access destinations has been constantly updated to provide a safe and secure network.

*Servers managed by a malicious third party that issues remote commands to infected terminals

**Priority Activities** — **Promotion of Corporate Citizenship**

## Our Approach

Guided by our Social Action Principles, the NTT Communications Group promotes activities for realizing a prosperous society by designating six pillars of social contribution: Preservation of the Natural Environment, Social Welfare, Promotion of Education and Culture, Regional Development and Exchange, International Exchange, and Promotion of Sports. Companies are increasingly expected to play a role through their social contribution activities to support the development of diverse communities grouped by region, generation, and so forth. In addition to community development, we intend to actively participate as a corporate citizen by also developing community engagement activities with an understanding of the SDGs as well as ways to achieve their targets. These efforts will have a significant effect on expanding a sustainability mindset throughout the Group and encourage each company to contribute to the creation of a sustainable society as a member of the NTT Communications Group.

[ Social Action Principles ]

| | |
|---|---|
| Sustainability | We conduct lean but sustainable activities over the long term |
| Efficiency | We engage in cost-effective activities to ensure continuity. |
| Due Diligence | We carefully assess the relative benefit to society of prospective donations. |
| Global Perspective | We contribute to Japan and the international community. |
| Skills | We utilize services developed for information distribution markets as well as employee abilities gained in those markets for the benefit of society. |

## Main Achievements in Fiscal 2022 and Goals for the Coming Years

We conduct social contribution activities that support a sustainable future. Ten community engagement projects carried out in fiscal 2022 included the $CO_2$ Emissions Reduction Challenge as a Groupwide environmental protection initiative as well as pro bono activities. We will continue to provide an environment that encourages more employees to take part in social contribution and volunteer activities, and expand these opportunities.

## Serving Local Communities

The NTT Communications Group promotes activities to serve local communities by designating six pillars of social contribution: Preservation of the Natural Environment, Social Welfare, Promotion of Education and Culture, Regional Development and Exchange, International Exchange, and Promotion of Sports. In fiscal 2022, 4,134 employees participated in 115 social contribution activities, some of which were canceled or reduced to contain the spread of COVID-19.

[ Social Contribution Activities in Fiscal 2022 ]

| | Number of Projects | Number of Participants | Activity Expenditure (Yen) |
|---|---|---|---|
| Preservation of the Natural Environment | 26 | 3,348 | 14,860,321 |
| Social Welfare | 43 | 529 | 2,292,767 |
| Promotion of Education and Culture | 14 | 81 | 3,551,750 |
| Regional Development and Exchange | 25 | 176 | 20,163,212 |
| International Exchange | 1 | — | 247,000 |
| Others | 6 | — | 5,370,000 |
| Total | 115 | 4,134 | 46,485,050 |

## Environmental Protection Efforts

When we launched the Green Program for Employee app, which visualizes the amount of $CO_2$ emitted from daily life and promotes eco-action by employees, we first introduced it to the NTT Communications Group in November 2022, and we held the $CO_2$ Emission Reduction Challenge to promote its use Groupwide. The event drew about 2,300 employees, who used various app features, such as Eco-Efficiency Assessment, Dietary Record, Eco Action Registration, and Eco Quiz, to raise environmental awareness and encourage changes in daily behaviors to reduce $CO_2$ emissions.

In addition, NTT Communications has participated in cleanup campaigns in Tokyo's Chiyoda Ward since 2008. These events were suspended to prevent the spread of COVID-19 and then resumed in November 2021. Employees and partner employees working at our headquarters building also pick up empty cans and cigarette butts dumped around the building each morning on their way to work to keep the area clean. We will continue these cleanup activities.

## Pro Bono Activities

The NTT Communications Group promotes pro bono activities that apply the expertise of its employees.

As a member of the new DOCOMO Group, the NTT Communications Group participated in a pro bono project sponsored by NTT DOCOMO. Nine employees from the NTT Communications Group participated in helping three organizations resolve some of their issues over about four months starting in October 2022. They conducted surveys, proposed necessary actions, and created promotional tools for each organization. Project members commented that although managing both work and the project was a challenge, participation in the project helped improve skills, and that having the opportunity to communicate with a wide variety of people from the supported organizations and members of the pro bono project was very valuable and inspiring.

In June 2022, NTT Com Engineering Corporation gave a special lecture, Diversity Management Initiatives in the Information and Communication Technology Industry, for Chuo University's Diversity Management Course. The company monitors and maintains international submarine cables 24 hours a day, 365 days a year at its Cable Network Operation Center (Cable NOC). The speaker discussed the importance of submarine cables as communication infrastructure and explained how the Cable NOC team, consisting of diverse members from more than ten countries, approaches and manages diversity in their work. Cable NOC members participated online to help students better understand the realities of the workplace. After the lecture, many students asked questions about diversity and inclusion in organizational and team management, displaying a different level of enthusiasm and inquisitiveness compared to those in internships and the like.

We believe that engaging in pro bono activities as a way to contribute to society creates a virtuous cycle in which employees can develop their careers and achieve personal growth while also generating new value through business and addressing social issues. NTT Communications will continue to actively engage in pro bono activities.

[ Special lecture given at Chuo University ]

## Social Contribution Activities at Group Companies

For some time, we have been encouraging Group companies to develop their own social contribution activities and, as a result, each has been actively doing so. These include environmental conservation activities, donations, and contributions. As a corporate citizen, we will continue to promote low-profile yet meaningful activities that help communities.

[ Major Social Contribution Activities at Group Companies in Fiscal 2022 ]

| Company Name | Activity |
|---|---|
| NTT BizLink | Live streaming of graduation ceremonies by deploying the company's video streaming technology for those unable to attend, including parents, other relatives, and current students, during the COVID-19 pandemic, and live streaming for parents who could not go to Sports Day because admission had been limited due to the pandemic |
| NTT Com Engineering | Free lecture entitled "Diversity Management Initiatives in the Information and Communication Technology Industry" at Chuo University |
| NTTCom Online Marketing Solutions | Selling used books collected from employees and donating the proceeds to support education for girls in developing countries |
| N.F. Laboratories | Providing free lectures on security to academic institutions such as technical colleges and universities |
| NTT Com DD | Sending Christmas cards and gifts to children via World Vision's Child Sponsorship Program |
| NTT Com Asia | Organizing the local cleanup Green Action Caravan as a contribution to global environmental preservation |
| DOCOMO Business Solutions | Participation in activities of the paddy future support team to plant rice |
| NTT Communications Group | Organizing group events for the $CO_2$ emissions reduction challenge |
| | Participation in the Shirai Woodland Preservation Project |
| | Cleanup campaigns in Tokyo's Chiyoda Ward |
| | Conducting the dementia supporter training courses |
| | Holding a sale of sweets made where people with disabilities are on the staff |

[ A graduation ceremony streamed using NTT BizLink's video streaming technology ]



[ Local cleanup Green Action Caravan, organized by NTT Com Asia ]