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.
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.

In fiscal 2021, we further expanded the Things Partner® Program, which promotes the spread of IoT, and the number of participating companies consequently increased to 43. We will contribute to realizing a Smart World by creating new areas for applying IoT through this program, which offers one-stop support for everything from consideration of IoT introduction to design, maintenance, and operations. In addition, we enhanced the Smart Data Platform*, which provides a one-stop service for data collection, storage, analysis, and return, to include functions supporting companies that adopt new ways of working in the wake of the COVID-19 pandemic, such as a system that allows remote access to Flexible InterConnect.

Moreover, with the spread of remote and hybrid working arrangements, we will continue supporting measures in response to changes in network usage, such as adding new service options to cope with traffic fluctuations and functions to improve communications quality for online meetings, while also promoting the provision of services that utilize innovative technologies to help address social issues through our business.

We also promoted various DX projects, with our education platform Manabi Pocket achieving over 3 million customer IDs (in March 2022). Furthermore, we have expanded our service menu with a total of 11 items, including the release of Smart Data Platform for Healthcare applications and standard components in January and March 2022, respectively, to support the utilization of personal data in the healthcare field, and the renewal of the menu system for the Smart Data Platform, which accelerates the realization of DX.

* A one-stop service that integrates and organizes corporate data dispersed in the cloud or on premises into a secure environment on a single platform and provides all the functions required for customers’ data-based businesses.

For more information on the Smart Data Platform, see: https://www.ntt.com/business/sdpf/ (in Japanese only)
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 2021, to continue to provide customers with valuable IoT solutions combined with Smart Data Platform services, we made value proposals for their business operation challenges and expanded the capabilities of the Things Partner® Program. As a result of our customer co-creation efforts, in August 2021 we started operating the IoT Solution for Warehouse Condition Monitoring to promote the DX of logistics facilities using IoT. The number of participating companies in the Things Partner® Program increased to 43 as of March 2022 through events and discussions on sector-specific areas for applying IoT online during the coronavirus pandemic.

We have expanded Things Cloud® with streaming functions that can execute real-time, high-performance processing as well as functions that enable closed network connectivity to address IoT security risks. In fiscal 2021, we launched a new 5G/IoT Task Force to deepen collaboration with networks such as IoT Connect Mobile® and local 5G.

With the release of the IoT Connect Gateway service, combining a closed connectivity feature and a function that reduces the burden of setting up IoT devices for encrypted communications, we have expanded the functionality of IoT Connect Mobile® Type S to support a variety of connectivity options, from mobile networks to a multi-cloud environment, including Things Cloud®. In January 2022, we launched SDPF Edge, a new managed edge computing service, to respond to the growing number of use cases that require immediate processing and decision-making of huge volumes of data generated by the spread of 5G and IoT. We will accelerate our efforts to help customers promote DX through data utilization.
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.

In-house operation of information systems such as servers.

An open form of cloud computing environment that is provided to an unspecified number of companies or individuals.

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.

Remote Access and Security Infrastructure

The “new normal” social environment, where remote and hybrid work has become common, requires an environment that allows secure access from anywhere to internal business systems and SaaS*1 scattered across on-premises*2 and public clouds*3. In April 2021, NTT Communications launched Flexible Remote Access, a remote access service that allows employees to connect to these resources from anywhere. The service has since been updated on a quarterly basis with new features, including a broadband menu to handle increased traffic, BCP, and mobile device access. 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 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.
2 In-house operation of information systems such as servers.
3 An open form of cloud computing environment that is provided to an unspecified number of companies or individuals.

Providing Services that Enable Secure Access to Internal Systems

NTT Communications is promoting universal design*4 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. For more information on COTOHA Chat & FAQ®, see: https://www.ntt.com/business/services/application/ai/cotoha-cf.html (in Japanese only)

Providing the Benefits of ICT to All

As ICT gains importance as social infrastructure, the bridging of the digital divide, which will allow people all over the world to benefit from its use free of any constraints in the areas in which they live, their age, and economic standards, is being looked at closely as a challenge confronting the entire human race. While collaborating with Group and partner companies and deploying high-quality communications networks across the globe, we continue to build systems that provide highly convenient services at reasonable prices and contribute to the elimination of the digital divide.

For example, in IoT we are working to create use cases that contribute to resolving various social issues such 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*4 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. For more information on COTOHA Chat & FAQ®, see: https://www.ntt.com/business/services/application/ai/cotoha-cf.html (in Japanese only)
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.

In fiscal 2021, we promoted the development and demonstration of additional businesses based on new customer experiences, which led to the provision of several commercial services, including OsecT, which visualizes security risks in control systems, and an AI plant operation support solution developed in collaboration with a plant operator (both launched commercially in April 2022). We also expanded the scale of business for services launched by the Innovation Center, including Fintech-related services and “droppin.”

In addition, we actively promoted innovation management in collaboration with internal and external parties. The ExTorch Open Innovation Program had 54 applicants from outside the Company for five themes, of which seven were selected. We also received the Encouragement Award at the 3rd IP BASE AWARD hosted by the Japan Patent Office for our support of IP strategies for startups. We will continue our efforts to create new added value to bring about change.

For more information on the AI plant, see page 011.
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.

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**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.

Main Achievements in Fiscal 2021 and Goals for the Coming Years

In preparation for the opening of a major international sporting event in fiscal 2021, we repeatedly conducted exercises simulating the occurrence of incidents during the large-scale event to confirm the effectiveness of countermeasures and improvements (KAIZEN) we had implemented up until then. These exercises enabled us to support the successful operation of the event problem-free.

In addition, in preparation for a large-scale event in the midst of the COVID-19 pandemic, we improved the information coordination flow and environment to decentralize and coordinate the functions of the headquarters to support event management in remote environments. This helped us to minimize the risk of spreading the pandemic and contribute to the event’s smooth operation.

Having achieved all of our initial targets, we will continue to set new targets and take action to achieve them in fiscal 2022.

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 2022, we will continue to strengthen our network security through the promotion of 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 not only in IT environments but also in OT environments, regardless of the size of the enterprise.

*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.

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 of August 2021 caused extensive damage in western Japan as well as in other parts of the country, from Kyushu to the Kanto region. The rain damaged the pipelines attached to a bridge, which consequently damaged the backbone relay cable between Nagano and Gifu. Since a portion of the cable was still usable, we temporarily restored it by the next day and built a new relay cable line that largely bypassed the affected pipelines within seven days of the outset of the disaster.

[ Before the disaster (Ninomatazawa Bridge) ]

[ After the disaster (Ninomatazawa Bridge) ]
We work daily to raise awareness about disasters among our employees and those of partner companies so they can readily 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.

**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 and gathers information on the safety of employees during a pandemic or natural disaster.

**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 overseas are not required in person.
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. Fiscal 2021 was truly a “zero-trust era,” as remote work became increasingly widespread due to the COVID-19 pandemic. To counter new threats arising from the shift to the cloud, we have expanded our lineup to include the Distributed Secure Internet GateWay (DSIGW), which provides secure Internet access from both office and remote environments, as well as additional products that support EDR analysis. In addition, as cyber-attacks are increasingly targeting small and medium-sized companies, we have launched new services for a wider market, such as risk scoring to easily visualize corporate security risks at low cost and security education and email training that combines security education and phishing email training. We will continue to contribute to our customers’ DX by providing solutions that enable them to safely use data and create new value.

* A security approach based on the premise of not trusting anyone or anything

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
Our Approach

Main Achievements in Fiscal 2021 and Goals for the Coming Years

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.

We promote social contribution activities that support a sustainable future. In fiscal 2021, we participated in ten community social contribution activities, a significant increase from two in fiscal 2020. Specifically, we participated in a co-creation project involving ICT, sports, and local communities using OriHime and donated 296 tablet computers to the Philippine Department of Education to help start online classes at nine schools. Going forward, we will continue to engage in a wide range of social contribution activities involving more employees, such as biodiversity preservation.

<table>
<thead>
<tr>
<th>Social Action Principles</th>
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</thead>
<tbody>
<tr>
<td>Sustainability</td>
</tr>
<tr>
<td>Efficiency</td>
</tr>
<tr>
<td>Due Diligence</td>
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<tr>
<td>Global Perspective</td>
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<tr>
<td>Skills</td>
</tr>
</tbody>
</table>

Serving Local Communities


In fiscal 2021, 2,172 employees participated in 67 social contribution activities, some of which were canceled or reduced due to concerns about limiting the spread of COVID-19.

<table>
<thead>
<tr>
<th>Social Contribution Activities in Fiscal 2021</th>
<th>Number of Projects</th>
<th>Number of Participants</th>
<th>Activity Expenditure (Yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preservation of the Natural Environment</td>
<td>21</td>
<td>586</td>
<td>2,011,550</td>
</tr>
<tr>
<td>Social Welfare</td>
<td>30</td>
<td>357</td>
<td>27,049,094</td>
</tr>
<tr>
<td>Promotion of Education and Culture</td>
<td>11</td>
<td>1,141</td>
<td>10,283,574</td>
</tr>
<tr>
<td>Regional Development and Exchange</td>
<td>5</td>
<td>88</td>
<td>432,200</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>2,172</td>
<td>39,776,418</td>
</tr>
</tbody>
</table>

Cleanup Activities

NTT Communications has participated in cleanup campaigns in Tokyo’s Chiyoda Ward since 2008. These were canceled to prevent the spread of COVID-19 but then resumed in November 2021. We will continue our cleanup activities. Moreover, players from the Shining Arcs corporate
rugby team have been leading cleanup activities mainly in Urayasu City, Chiba Prefecture, where they are headquartered. Since fiscal 2020, the team has been involved in a variety of activities by joining in the Leads to the Ocean project, a joint initiative between the NPO Umisakura and Nippon Foundation for addressing environmental issues related to the ocean.

In fiscal 2021, we conducted nine activities with the people of Urayasu City. We will continue to work with them to expand these activities.

### Providing Nationwide Opportunities to Work from Home

NTT Com CHEO engages in businesses centered on technical support, including that for users of the OCN ISP service; contact centers offering support via telephone, email, chat, and PC remote control; on-site support for setting up ICT devices such as PCs and routers and providing operating instructions; and the operational management of corporate ICT equipment. These businesses actively provide opportunities for people in different regions of Japan to work from home.

Our contact centers and on-site support visits across Japan are staffed by those working from home, from Hokkaido in the north to Okinawa in the south. As part of this drive, we are also pursuing initiatives for developing women’s careers, revitalizing regional communities, and offering new employment opportunities. Since we had already built and operated a platform that enables home-based staff across the country to work and operate remotely during normal times, we were able to continue our business while maintaining operational efficiency and service quality even during the COVID-19 pandemic. In addition, we have been participating in Japan’s Telework Days campaign since 2017. This initiative implements and promotes telework as part of the workstyle reforms being pursued through a collaborative effort by the national government, Tokyo Metropolitan Government, and relevant organizations. In fiscal 2021, we also worked as a supporting organization to provide telework know-how and solutions.

Over the years, we have received numerous awards in and outside of Japan that recognize our contributions to developing women’s careers, rebuilding local communities, and supporting employment. These include the Gold Award in the Best Home/Remote Agent Program category of the Contact Center World Awards 2019.

Going forward, NTT Com CHEO will continue to promote telework that enables different workstyles for diverse human resources by fully applying our accumulated know-how and will also provide solutions to help companies effectively manage staff working from home.

### 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 company 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. In terms of our overseas activities, we are working with local education bureaus and NPOs to provide learning opportunities through the power of ICT to children in the Philippines who have been unable to attend school for various reasons. In fiscal 2021, when schools were closed due to the pandemic, we reallocated 296 tablet computers, which were no longer being used in our offices, to nine schools as tools necessary for online classes.

<table>
<thead>
<tr>
<th>Major Social Contribution Activities at Group Companies in Fiscal 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Company Name</strong></td>
</tr>
<tr>
<td>NTT BizLink, Inc.</td>
</tr>
<tr>
<td>NTT Com Engineering</td>
</tr>
<tr>
<td>NTT Com Marketing</td>
</tr>
<tr>
<td>NTT Communications Group</td>
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</table>
Activities of the Corporate Rugby Team

In July 2022, NTT Sports X, Inc. was launched as a new venture company funded by NTT Communications. The NTT Communications Rugby Club, the Shining Arcs, was subsequently reorganized into the Urayasu D-Rocks. The new venture company will also engage in social contribution activities rooted in the community through rugby to create value from multiple perspectives and to be a presence that gives dreams and aspirations to people.

The team was renamed from Shining Arcs to Urayasu D-Rocks in July 2022. Under the new name, the team will continue and expand its social contribution activities.

In July 2022, NTT Sports X, Inc. was launched as a new venture company funded by NTT Communications. The NTT Communications Rugby Club, the Shining Arcs, was subsequently reorganized into the Urayasu D-Rocks. The new venture company will also engage in social contribution activities rooted in the community through rugby to create value from multiple perspectives and to be a presence that gives dreams and aspirations to people.

Youth Development

NTT Communication’s rugby team, the Shining Arcs*, is actively promoting the sound development of youth and engaging with local communities through sports. The team relocated its headquarters to Urayasu City, Chiba Prefecture in April 2018 and has been organizing rugby classes in elementary schools and engaging in other community-oriented initiatives aimed at boosting the health of city residents under a mutual cooperation and support agreement.

As part of these initiatives, we formulated the Urayasu D-Rocks Youth Development Plan to envision the future, develop the youths, and provide a new way of engaging in sports. This plan targets elementary and junior high school students and addresses such issues as visualization of performance using ICT, provision of programs to develop not only athletic expertise but also diverse abilities, support for the performance of female athletes, and provision and maintenance of a playing environment for junior high school students, which has been a concern in the rugby world. Since there are few rugby competitions with rankings for elementary school students, we host the Shining Arcs Cup to boost the level of competitiveness.

Going forward, we will continue our contribution to educate the public on rugby as a sport with cultural value as well as the sound development of the next generation of youth.

*The team was renamed from Shining Arcs to Urayasu D-Rocks in July 2022. Under the new name, the team will continue and expand its social contribution activities.

For ALL, ALL for One,” our rugby team will continue to work together with the community to reduce trash from the city and rivers and protect the precious ocean for the future.

In fiscal 2021, we continued to conduct the deleteC and 1TRY × 1TOY activities that provide preschool children with a toy for each try. We also worked on new sustainability activities, such as a local co-creation project using the alter-ego robot OriHime and support for children with disabilities.