

# Vision & Action Book



# NTT Group's Origins

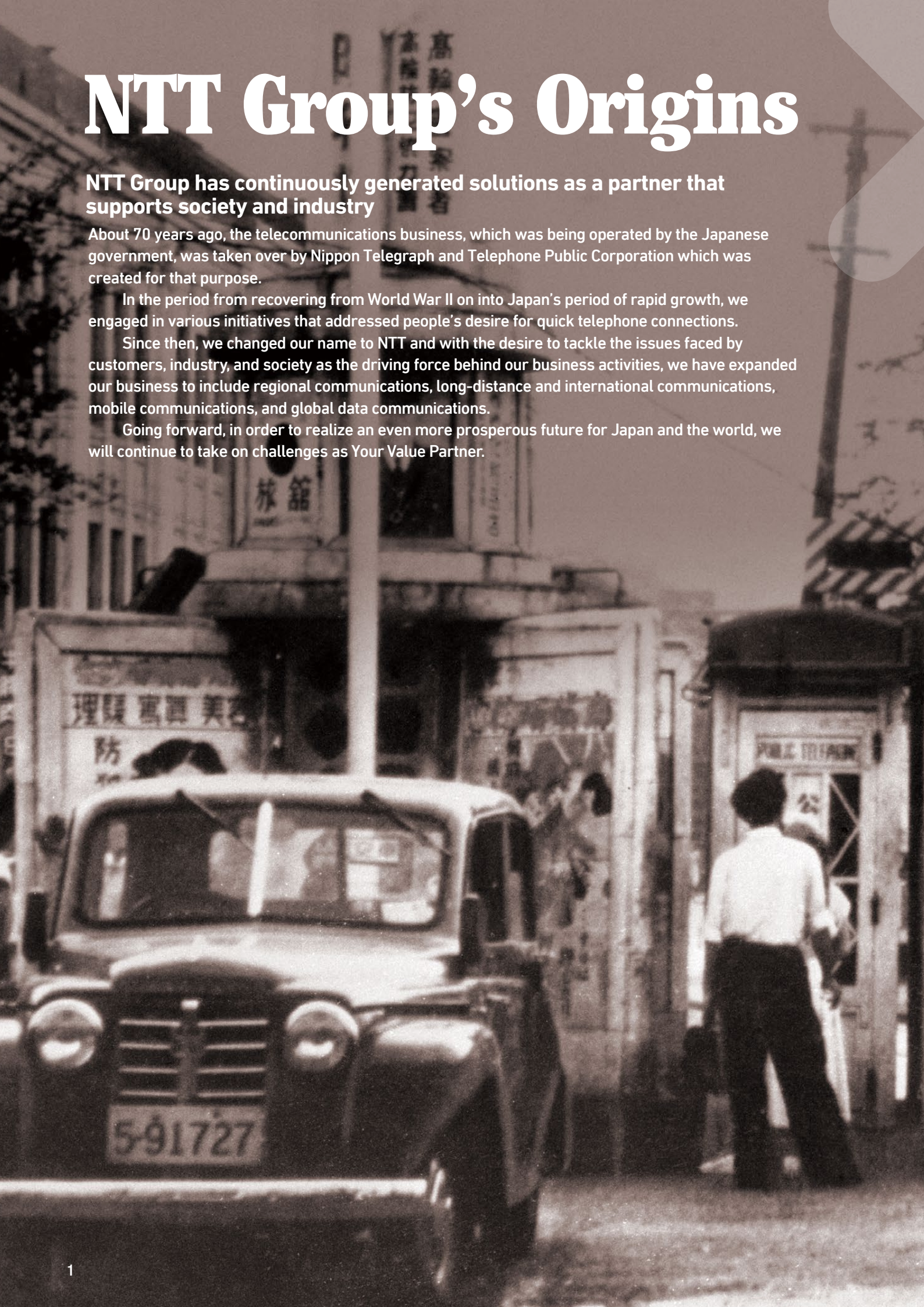
**NTT Group has continuously generated solutions as a partner that supports society and industry**

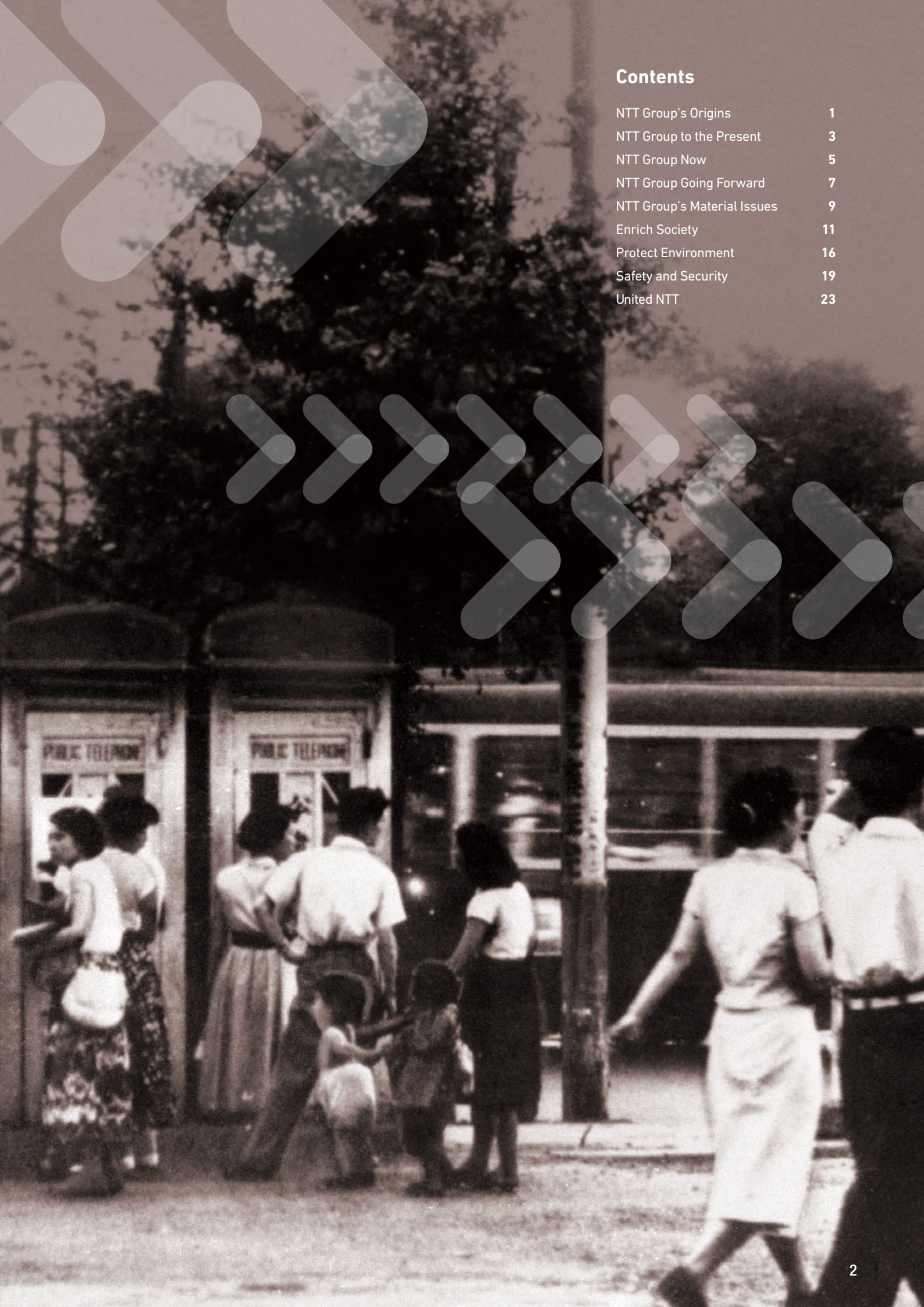
About 70 years ago, the telecommunications business, which was being operated by the Japanese government, was taken over by Nippon Telegraph and Telephone Public Corporation which was created for that purpose.

In the period from recovering from World War II on into Japan's period of rapid growth, we engaged in various initiatives that addressed people's desire for quick telephone connections.

Since then, we changed our name to NTT and with the desire to tackle the issues faced by customers, industry, and society as the driving force behind our business activities, we have expanded our business to include regional communications, long-distance and international communications, mobile communications, and global data communications.

Going forward, in order to realize an even more prosperous future for Japan and the world, we will continue to take on challenges as Your Value Partner.





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NTT Group to the Present

# Continuously Supporting People's Lifestyles through Our Business Activities

Since the establishment of Nippon Telegraph and Telephone Public Corporation in 1952, NTT Group has created various technologies and services and continued to provide infrastructure that would previously have been unimaginable, such as mobile phones, the Internet, and cloud computing. This development is rooted in our desire to be a partner that supports society and industry.



## Deregulation of Telecommunications Services Leads to the Launch of NTT Group

In 1985, with the deregulation of telecommunications services, Nippon Telegraph and Telephone Public Corporation was privatized to form Nippon Telegraph and Telephone Corporation (NTT).

# 1980's



# 1990's

# 1952

## Establishment of Nippon Telegraph and Telephone Public Corporation

In 1952, the telegraph and telephone business, which was being operated by the Japanese government, was taken over by Nippon Telegraph and Telephone Public Corporation. It engaged in various initiatives for addressing people's desire for quick telephone connections.



## Expansion of Telephony Services with the Aim of Realizing an Advanced Communication Society

Various discount phone services launched in order to meet customers' usage needs. Provision of Open Computer Network (OCN), an Internet service provider, began in preparation for the spread of the Internet.

**1991**

Establishment of NTT DOCOMO

**1996**

Start of provision of OCN

**1998**

Start of provision of *i-mode*, an internet service for mobile phones.

**1999**

NTT Group transitions to a holding company structure

**1987**

Start of provision of mobile phone service

**1988**

Establishment of NTT Data  
Launch of World's First Commercial ISDN Service

## Full-Scale Deployment of Broadband and Ubiquitous Services

Rollout of high-speed, large-capacity telecommunications services became fully-fledged with the commencement of provision of the *FLET'S ISDN* full-time connectivity service and launch of the *B FLET'S* optical fiber service.

# 2000's

## 2000

Start of provision of Fixed-Rate ISDN Communication Service

## 2001

Launch of Household Optical Fiber Services



## 2004

Announcement of *Osaifu-Keitai* (e-wallet), a mobile phone that could be used for making payments.  
Start of provision of *Hikari Denwa* optical fiber telephone service

## 2007

Start of provision of *Hikari* TV Service, a video distribution service for *FLET'S* Hikari-compatible TVs.

## 2008

Commencement of Cloud Services

## 2009

Start of provision of Android™ OS smartphones



## 2010

Acquisition of Dimension Data  
Start of provision of LTE (*Xi*) service  
Acquisition of Keane (currently NTT DATA Services)

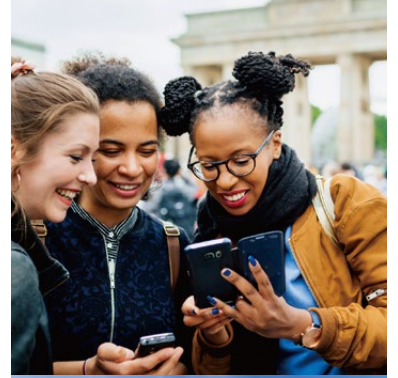
## 2013

Start of provision of the iPhone\*

# 2010's

## Establishment of a Global ICT Service Framework

With operations previously centered on Asia, Europe, and the United States, NTT acquired Dimension Data and Keane, establishing a framework for providing comprehensive ICT services globally, including Australia, South America, Africa, and the Middle East.



## 2014

Start of provision of the billing plan *Kake-hodai & Pake-aeru* (All-you-can-call & Share Packet)  
Start of provision of the *Hikari Collaboration Model*  
Start of provision of *docomo Hikari*

## 2016

Acquisition of Dell's services division (currently NTT DATA Services)

## 2018

Formulation of "Your Value Partner 2025" Medium-Term Management Strategy

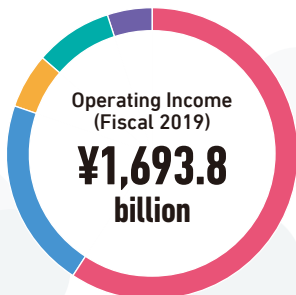
\* TM and © 2014 Apple Inc. All rights reserved. iPhone is a trademark of Apple Inc. The iPhone trademark is used under license from AiPhone Co., Ltd.



NTT Group Now

# Using NTT Group's Accumulated Experience and Cutting-Edge Technologies to Solve Social Issues

## **NTT Group**



### Mobile Communications Business

In addition to providing LTE services and "docomo Hikari," we are promoting collaboration with a variety of vendors to provide new added value.



### Regional Communications Business

We provide fixed line communications services centered around "FLET'S Hikari" and work to revitalize regional communities and economies by deploying the "Hikari Collaboration Model."



### Long Distance and International Communications Business

For corporate clients, we provide global ICT services to support the expansion of business, while for individual customers, we provide very convenient applications and rich content.



### Data Communications Business

Leveraging our advanced technologies and our customer relationships both inside and outside Japan, we expand our businesses such as network system services and system integration.



### Other Businesses

We provide services related mainly to real estate, finance, construction/electric power and system development.



Composition of Operating Revenues* (Fiscal 2019)	Composition of Operating Profit* (Fiscal 2019)	Distribution of Employees (As of March 31, 2019)
<b>35.4%</b> (¥4,840.8 billion)	<b>59.4%</b> (¥1,013.6 billion)	<b>8.8%</b> (26,629 employees)
<b>23.1%</b> (¥3,152.3 billion)	<b>21.1%</b> (¥360.7 billion)	<b>26.2%</b> (79,534 employees)
<b>16.7%</b> (¥2,278.7 billion)	<b>5.9%</b> (¥100.1 billion)	<b>15.8%</b> (48,020 employees)
<b>15.8%</b> (¥2,163.6 billion)	<b>8.6%</b> (¥147.7 billion)	<b>40.8%</b> (123,884 employees)
<b>9.1%</b> (¥1,240.3 billion)	<b>5.0%</b> (¥85.6 billion)	<b>8.3%</b> (25,284 employees)

\* Percentage of simple sum of all segments (including intersegment transactions)

### Population and Number of People of a Productive Age

Although the global population continues to rise, the population of Japan is gradually declining and the number of people of a productive age is falling rapidly.



### Global/Local

Both developed and developing countries are experiencing multi-polar growth and the issues related to this are becoming increasingly complex.



### Environment and Resources

Environmental issues are becoming increasingly serious, starting with global warming and including food shortages accompanying population growth.



### Disasters, Terrorism, and Infrastructure

While natural disasters are getting bigger and threats such as cyber attacks are growing rapidly, infrastructure is aging and deteriorating.



## Social and Economic Change

### Society and Economy

The growth of the digital market is generating enormous platforms, and the world is flattening.



### Technology

The artificial intelligence (AI) and robotics markets continue to develop while 2020 will see the roll-out of commercial 5G services.



### Consumption Trends

Consumption is becoming increasingly personalized while cashless payment and the sharing economy are spreading.



### Urbanization

The advancement of urbanization is creating demand for the development of distinctive and compact cities and smart mobility.

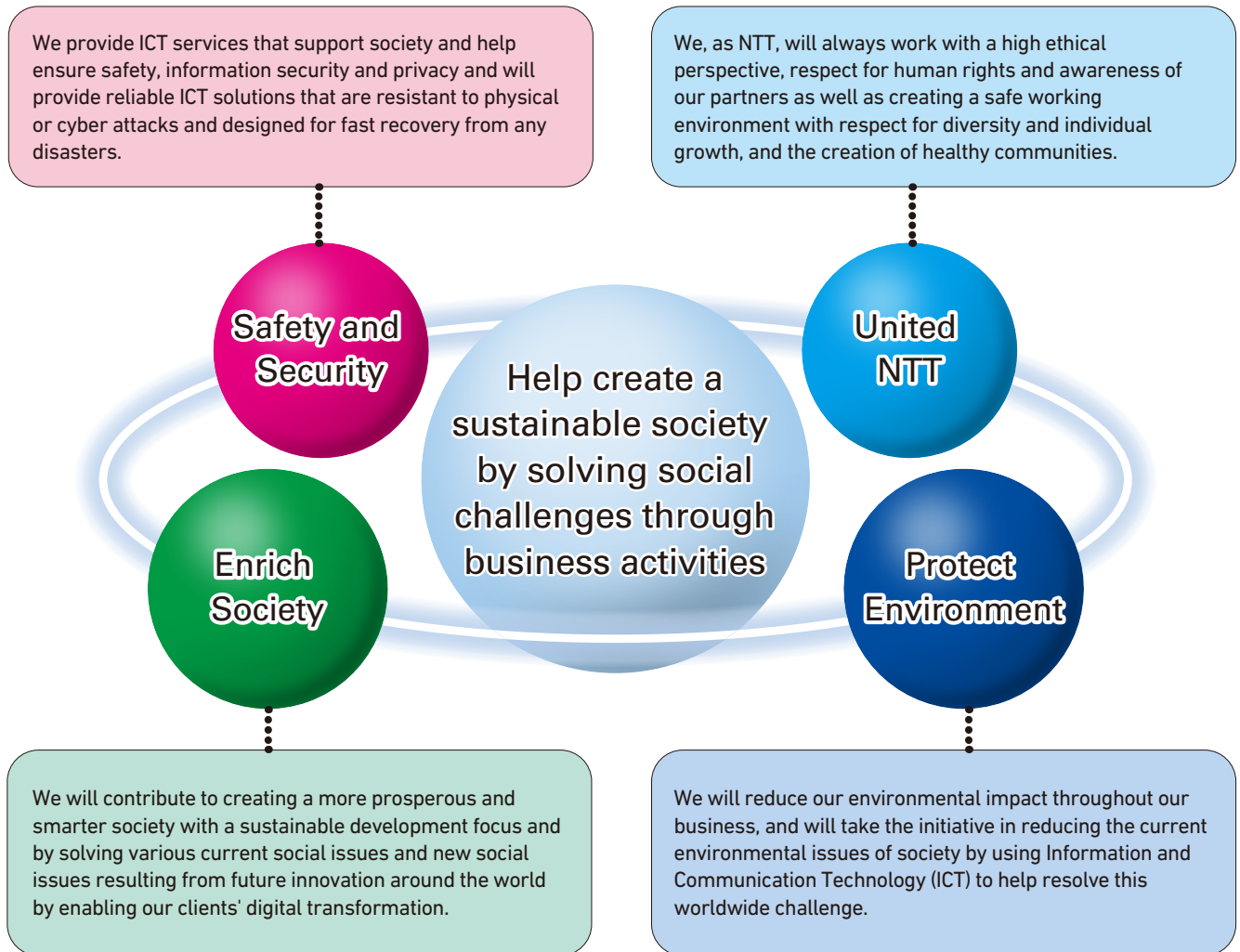




# As in the Past, We Will Continue Solving Social Issues Through Our Business Activities

## CSR Message

We as the NTT Group will take initiatives in solving social issues through our business activities, as “Your Valued Partner,” and will contribute to creating a safe, secure and sustainable society.



NTT Group CSR Charter

[https://www.ntt.co.jp/csr\\_e/groupcsr/csr\\_policy.html](https://www.ntt.co.jp/csr_e/groupcsr/csr_policy.html)

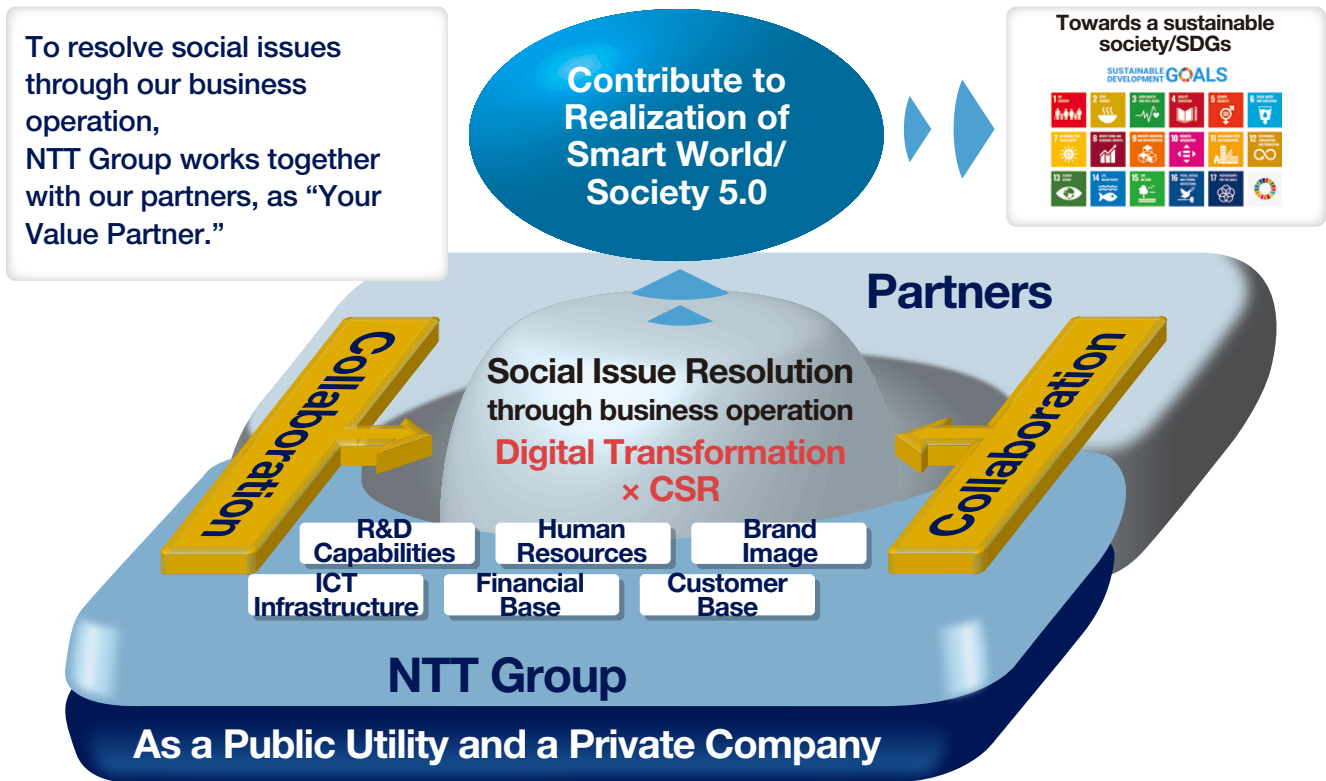
NTT Group has been working to achieve sustained growth through the resolution of social issues by referring to the NTT Group CSR Charter for its basic principles.

In recent years in particular, there has been rising global interest in ESG (Economic, Social, Governance) as evidenced by things like adoption of the UN Sustainable Development Goals (SDGs) and COP21 (the Paris Agreement). Furthermore, stakeholders, particularly

shareholders and investors, want to see alignment between management strategy and CSR Strategy.

Amid these kinds of demands, NTT has announced an NTT Group Medium-Term Management Strategy that has CSR at its base and we have revised the NTT Group CSR Charter to make it clear that we will contribute to achieving the SDGs by focusing on solving social issues through our business activities.

# Contributing to the Realization of a Sustainable Society Through the Advancement of NTT Group's Vision



Excerpted from the NTT Group Medium-Term Management Strategy  
[https://www.ntt.co.jp/ir/mgt\\_e/managementstrategy/index.html](https://www.ntt.co.jp/ir/mgt_e/managementstrategy/index.html)

We have entered an era in which the world is facing a range of social issues, such as population increase, resource and water scarcity, and for Japan, low birthrates and an aging population. This is producing a need for great transformation in all societies and economies. To solve these issues, the advancement of digital transformation through ICT (information and communications technology) and data usage is needed in every field, as proposed in the Society 5.0\* concept.

In 2018 NTT Group announced the NTT Group Vision through which we will collaborate with all partners using the B2B2X business model and advance digital transformation. NTT Group is accelerating its own transformation based on the shared values of Connect, Trust, and Integrity, and we will contribute to all partners as Your Value Partner.



\* Society 5.0: A human-centric society that seeks to address both economic development and solving social issues through advanced systems that integrate cyberspace and physical space, as proposed in the Japanese Government's 5th Science and Technology Basic Plan.

# NTT Group's Material Issues













In order to solve all social issues, NTT Group aligns our material issues to SDGs, sets KPI in order to realize ideal results, and works to achieve these targets.

For details regarding individual initiatives, please visit our website.

[https://www.ntt.co.jp/csr\\_e/index.html](https://www.ntt.co.jp/csr_e/index.html)

	CSR Priority Activities	Medium-term Targets	CSR Quantitative Indicators
Enrich Society	▶ Contribute to society through ICT and data usage	Evolve into a B2B2X business model which uses digital services and data management	Number of B2B2X projects
		Leverage the characteristics of 5G to create new value with a broad range of partners	5G service-related indicators <sup>*1</sup>
		Promote personalization to support changing lifestyles	Number of places where payments can be made and points can be used <sup>*1</sup>
		Provide ICT services available for a broad range of customers, including the elderly and persons with disabilities	Number of UD-capable products and services provided
	▶ Pursue customer satisfaction	Provide high value-added products and services and fine-tuned support	Reductions in waiting and customer service times at DOCOMO shops <sup>*1</sup>
			Number of improvements made based on suggestions from customers
			Response rates at our call centers
▶ Reinforce and globalize research and development	Globalize and expand the competitiveness of research and development to generate world bests, world firsts, and amazing results	Number of patent applications	
		Number of academic papers published outside the company	
		Number of successful practical applications <sup>*1</sup>	
Protect Environment	▶ Use ICT to contribute to the environment	While reducing CO <sub>2</sub> emissions of the Company, contribute to the reduction of CO <sub>2</sub> emissions of all society, including value chains, through the utilization of ICT	Amount of contribution to the reduction of CO <sub>2</sub> emissions of all society
		▶ Reduce the environmental impact of business operations	Improve power efficiency to reduce the environmental impact of business operations
	▶ Effectively use resources	Control the final disposal ratio of waste and work toward the effective use of resources	Final disposal ratio of waste
Safety and Security	▶ Reinforce information security	Train security experts	Number of security experts
	▶ Personal information protection	Prevent leaks of personal information	Number of incidents of personal information leaks
	▶ Ensure stability and reliability of communications services	Provide stable communications services free of major communications problems	Stable service provision rate Number of major accidents
United NTT	▶ Promote diversity	Aggressively promote the active participation of women	Ratio of female managers
		Expand employment of people with disabilities	Employment rate of people with disabilities <sup>*2</sup>
	▶ Respect for human rights	Conduct business activities with respect for human rights at all business locations by introducing the United Nations Guiding Principles on Business and Human Rights (Ruggie Framework) and other international principles	Number of confirmed human rights violations
			Percentage of participation in training concerning human rights <sup>*4</sup>
	▶ Reinforce value chain management	Appropriate management of environmental and social risks, including value chains	Number of confirmed high-risk suppliers
	▶ Ensure employee safety	Enhance safety measures and the safety mindset of employees in order to prevent accidents causing injury or death and industrial accidents	Number of industrial accidents
			Number of accidents causing injury or death during construction work <sup>*5</sup>
	▶ Promote health management	Create an environment that raises each individual employee's motivation and dynamism while enabling them to continue to work healthily and energetically	Implementation rate of specified health guidance
Ratio of non-smokers <sup>*1</sup>			
▶ Create attractive workplaces	Provide workplaces where employees can work with good spirits	Employee satisfaction	
▶ Promote a united Group effort on social contribution activities	Employees actively participate in volunteer activities	Number of times employees participated in social contribution activities Number of times employees participated in activities through the Group's internal volunteer site <sup>*1</sup> (Number of people registered)	

<sup>\*1</sup> Newly established in fiscal 2020. <sup>\*2</sup> Results as of June 1 of the following year. <sup>\*3</sup> 45.5 or more employees. <sup>\*4</sup> Includes e-learning and other similar types of training. <sup>\*5</sup> Construction by partner companies and directly managed construction.

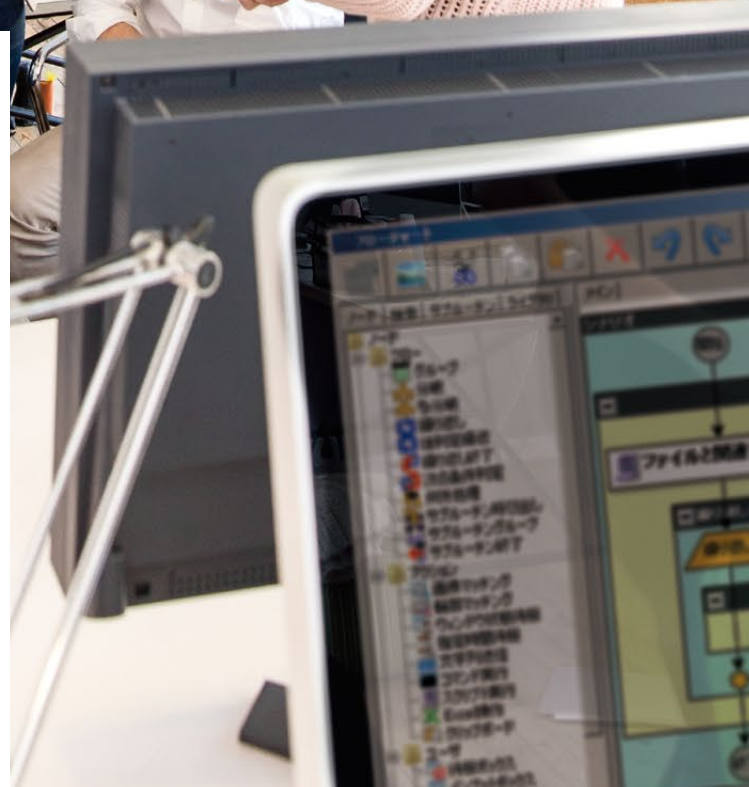
	KPI	Target Achievement FY	Result (FY)			Relevant SDGs
			2017	2018	2019	
	100 projects	2022	—	—	39	
	To be set at the commercialization stage					
	Two million places	2022	—	840,000 places	1.05 million places	
	Expand	—	11	14	12	
	Decrease by half compared to FY2018	—	—	—	—	
	More than in the previous fiscal year	—	446	496	399	
	Better than in the previous fiscal year	—	Response rate: approx. 80.9%	Response rate: approx. 88.6%	Response rate: approx. 86.5%	
	More than in the previous fiscal year	—	1.02 applications/person	1.01 applications/person	1.06 applications/person	
	More than in the previous fiscal year	—	0.74 publications/person	0.76 publications/person	0.76 publications/person	
	More than in the previous fiscal year	—	0.059 publications/person	0.064 publications/person	0.070 publications/person	
	At least 10 times the Company's emissions	2031	8.9 times	10.1 times	10.8 times	
	At least 10 times higher than in FY2014	2031	2.7 times	3.6 times	4.5 times	
	At least two times higher than in FY2018 <sup>1</sup>	2026	—	—	1.2 times	
	100% 50%	2031 2026	—	—	0.4%	
	under 1%	2031	1.03%	1.18%	0.91%	
	—	—	31,000	39,000	44,000	
	0	—	4	2	1	
	99.99%	—	99.99%	100%	100%	
	0	—	2	0	0	
	6.0%	2021	4.6%	5.1%	5.7%	
	2.2% <sup>3</sup>	—	NTT: 2.4%	NTT: 2.6%	NTT: 2.7%	
Major NTT Group Companies in Japan: 2.3%			Major NTT Group Companies in Japan: 2.5%	Major NTT Group Companies in Japan: 2.6%		
All Group companies in Japan: 2.1%			All Group companies in Japan: 2.3%	All Group companies in Japan: 2.4%		
	0	—	17	27	24	
	More than in the previous fiscal year	—	97.0%	98.0%	96.6%	
	0	—	0	0	0	
	0	—	18	9	8	
	0	—	4	3	3	
	31%	—	19.1%	22.9%	33.3%	
	79%	—	74.1%	75.0%	75.8%	
	Better than in the previous fiscal year	—	3.83 (Out of 5)	3.79 (Out of 5)	3.80 (Out of 5)	
	More than in the previous fiscal year	—	114,256	117,491	123,734	
	2,000/year (10,000)	— (2021)	—	1,340/year (5,523)	1,814/year (9,288)	



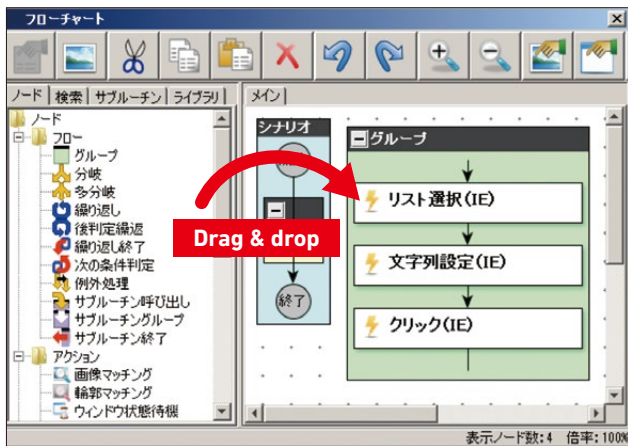
CASE 1 WinActor® and WinDirector®

# A “White-Collar Revolution” Vastly Reducing Time Taken, Cost, and Mistakes in Regard to Regular Daily Tasks

NTT DATA



Leave data processing to WinActor and concentrate on your core work

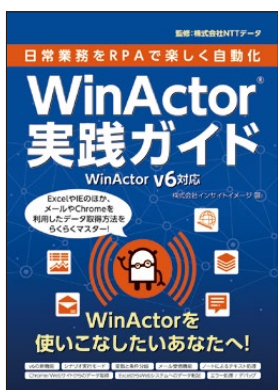


Drag & drop makes creating workflows (scenarios) simple

### The Workstyle Reform-Supporting Robotic Process Automation (RPA) Tool with the Top Market Share

The aging population and declining birth rate in Japan have resulted in a shortage of labor and long working hours, which have become social issues. Within this environment, RPA, which takes over work previously done by people, is gathering significant attention. NTT DATA provides the RPA tools WinActor® and WinDirector®, which are Japanese-produced software type robots created from NTT Group's R&D and expertise, and they have claimed the top share of the Japanese market.

The tools learn and automate work processes that can be implemented using any Windows application, as workflows (scenarios). Its most distinctive characteristic is that it makes creating scenarios simple, even for user divisions that do not have programming knowledge, such as accounting, finance, and personnel, and it reveals the standardized tasks that are performed by personnel at a workplace, makes them visible, and automates them.



The WinActor® user guide (created by \*insight-image under guidance from NTT DATA)



Expert certification gained through the RPA Technician Examination



Permanent WinActor training centers have been opened at 10 locations across Japan

### Transforming White Collar Consciousness through Training and Testing

NTT DATA has deployed over 150 technical support staff and it is providing onsite support in all 47 prefectures with 350 WinActor distributors. Additionally, its WinActor user training is extremely popular and it has expanded its permanent training facilities to 10 across Japan. Tens of thousands of people have already taken the training. Skill acquisition results can be objectively assessed through the RPA Technician Examination (WinActor), Japan's only RPA qualification, and this is generating a flow in which users in operational divisions can use IT to advance their careers.

There is growing demand among customers who have built a basic automation platform using WinActor to automate more advanced tasks, and NTT DATA is providing these customers with products such as AI-OCR, AI speakers, and task diagnosis tools. By connecting all solutions, WinActor will become a platform that encourages the use of tools that solve social issues, thereby contributing to increasing productivity, reducing costs, and reforming workstyles, and leading to the realization of an unprecedentedly smart society.

\* WinActor® is a registered trademark of NTT Advanced Technology Corporation

CASE 2 Image Recognition AI Deeptector®

# Complementing Visual Inspection and Testing Workforces with AI

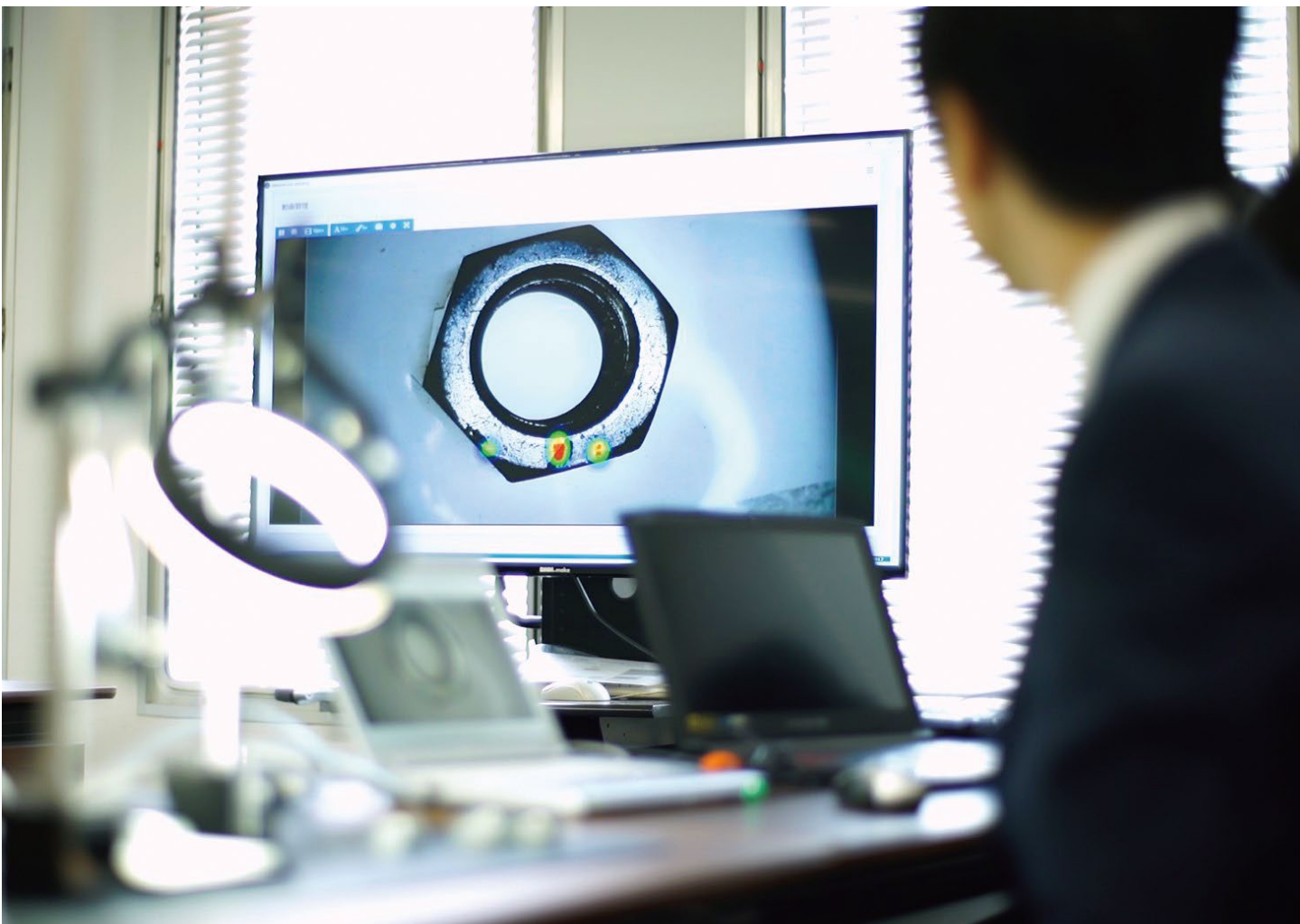


[https://www.ntt.co.jp/csr\\_e/sustainability\\_action/movie.html](https://www.ntt.co.jp/csr_e/sustainability_action/movie.html)

Human vision plays an important role in tasks such as inspections and testing, which protect a safe, secure, and prosperous life. However, visual judgement by humans can result in varied results in terms of production quality. Also, in Japan, the effects of an aging population, a declining birth rate, and a shortage of labor have made the difficulty of securing workers and passing on skills into social issues.

NTT Comware's Deeptector® is image recognition AI that uses deep learning with the aim of solving these social issues by replacing human vision in inspections and testing with AI.

The opportunities for using image recognition AI Deeptector® are growing, such as using it in product inspection work at manufacturing sites that are having issues securing and training inspection staff, and using it to inspect infrastructure so that humans can avoid working in hazardous environments.



### CASE 3 Supporting Countermeasures to Damage from Birds and Animals

## Using IoT to Coexist with Wildlife



Factors such as the declining number and aging of hunters has resulted in an increase in wild animal populations, causing increasingly severe damage to crops. NTT West is



tackling this social issue by having installed an ICT-based bird and animal damage countermeasure system in Goto, Nagasaki Prefecture.

This system coordinates IoT sensors and a geographic information system (GIS) to map locations where wildlife appears, enabling the visualization of locations that are seeing large numbers of appearances. Also, if a sensor detects an animal appearance or the trapping of an animal, it automatically takes a photo and sends it to trappers or relevant local governmental officials, contributing to enhancing hunting efficiency.

### CASE 4 B2B2X

## Providing Las Vegas with Public Safety Solutions



In recent years, urban areas have been experiencing an increase in crime and disasters, and ensuring the safety of citizens has become a major issue for the relevant authorities: local governments, police, and fire departments. Within this environment, NTT, NTT DATA, NTT Communications, and Dimension Data are working to realize public safety solutions in Las Vegas.

These companies are contributing to the creation of a society befitting the era of digital societies through public safety solutions realized with swift incident/accident response, forecast response, and the deployment of ICT resources.



### CASE 5 Transparent Batteries

## Development of a Transparent Battery That Blends into Its Surroundings



IoT, in which everything is turned into a device and connected to a network, is spreading and NTT is developing a transparent, bendable battery that has a reduced presence and blends in with its surroundings. This has made it possible to expand battery usage into areas that would previously have been difficult.



CASE 6 Establishment of NTT AgriTechnology Corporation

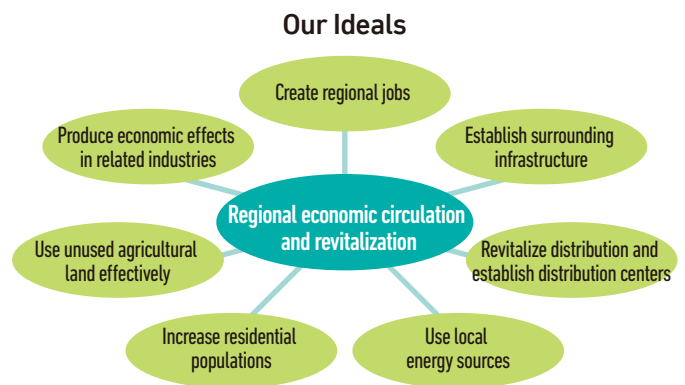
# Aiming to Utilize Advanced Technology to Revitalize Regional Economies and Develop Urban Areas



[https://www.ntt.co.jp/csr\\_e/sustainability\\_action/movie.html](https://www.ntt.co.jp/csr_e/sustainability_action/movie.html)

Starting with verification testing with Yamanashi city, JA Fruits Yamanashi, and others from 2017, NTT East has been working with local governments, JA agricultural cooperatives, and producers nationwide to advance smart agriculture that saves on manpower and improves productivity. Among these efforts, local governments,

farmers, and farming corporations have been hoping to see the introduction of next-generation facilities that can create jobs. Based on this, in 2019 we established NTT AgriTechnology Corporation, which aims to contribute to revitalizing regional communities and economies through next-generation enclosed agriculture facilities. This corporation engages in growing its own agricultural produce while also providing customers with comprehensive solutions. It will use agriculture as a starting point to integrate various peripheral industries as it strives to realize urban development in the form of agricultural eco-cities that bring together various NTT Group assets.





CASE 1 Farmbot Network

# Solving Environmental and Food Supply Issues by Making Urban Farming a Reality



[https://www.ntt.co.jp/csr\\_e/sustainability\\_action/movie.html](https://www.ntt.co.jp/csr_e/sustainability_action/movie.html)

As the overall global population increases, it is predicted that the majority of people will be concentrated in urban areas, meaning food production will need to be increased by 70%.

itelligence's Farmbot Network is a system that shares data from "Farmbot" agricultural robots through a cloud-based network, enabling the exchange of farming-related information, the buying and selling of vegetables, and the collection of other data. Furthermore, by making urban farming possible, it reduces transport costs and minimizes impact on the environment.

In this way, Farmbot Network has potential above and beyond solving the world's food supply problems.

In addition, we are also developing a cloud-based IOT platform, which connects Farmbot and other digital farming solutions. We will provide safe, highly transparent digital farming platforms as a world-wide integrator of agriculture businesses of the future.



Digital Twin of the plants on the field



Providing Safe, Transparent and Sustainable Digital Supply Chain Solutions

CASE 2 Fukushima Sunflower Foster Parent Project

# Supporting the Recovery of Disaster-Damaged Fukushima through Sunflowers



Since 2014, NTT East Group has been supporting the Fukushima Sunflower Foster Parent Project, a collaborative project with NPO Team Fukushima that is being developed as a way of aiding the recovery of Fukushima, which was damaged during the Great East Japan Earthquake.

This project involves participants all over Japan acting as “foster parents” and growing sunflowers. The seeds harvested from these flowers are then used to grow sunflowers in Fukushima as a symbol of the area’s recovery. Over five years from the start of the project to 2018, a total of 6,790 people have grown sunflowers.

This has resulted in 400kg of harvested sunflower seeds in total, which have been sent to elementary, junior high, and high schools, towns and villages, sightseeing facilities, companies, and organizations in Fukushima Prefecture and have helped to expand the area covered by sunflower fields. Furthermore, the seeds harvested from sunflowers grown in Fukushima are being used in bioenergy fuel for buses, as well as other purposes.



### CASE 3 Participation in EP100 and EV100

## Improving Electric Power Efficiency and Advancing the Shift to E-Mobility



NTT Group is participating in EP100<sup>\*1</sup> and EV100<sup>\*2</sup>, international initiatives which set specific numerical targets



for energy efficiency, with the aim of promoting energy efficiency and shifting the Group's fleet of vehicles to e-mobility models.

An example of these efforts is the introduction of eco-cars into NTT West's fleet, including electric vehicles and hydrogen fueled zero-emission vehicles that do not emit CO<sub>2</sub>.

\*1 EP100: An international initiative where participating companies aim to double the energy efficiency of their businesses (50% improvement in energy savings, etc.)

\*2 EV100: An international initiative that aims to encourage companies to use electric vehicles and promote the establishment of an environment for their use.

### CASE 4 Tokyo 2020 Medal Project: Towards an Innovative Future for All

## Contributing to Tokyo 2020 through Effective Resource Usage



NTT DOCOMO has been collecting and recycling used mobile phones from customers since 1998. From April 2017, it participated in the Tokyo 2020 Medal Project: Towards an Innovative Future for All by extracting metal resources

from used mobile phones and donating them to the Tokyo Organising Committee of the Olympic and Paralympic Games. These extracted metal resources are being used to make medals for the Tokyo 2020 Olympic and Paralympic Games and will shine on the athlete's chests.

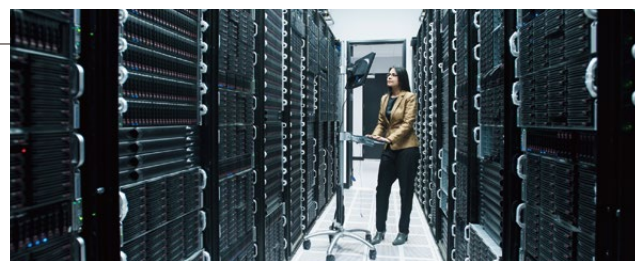


### CASE 5 Energy Saving at Data Center

## Building Data Centers That Incorporate Leading Low-Carbon Technology



NTT Group has built up a long track record of data center business and we are using this experience to construct highly efficient and reliable data centers in over 20 countries and regions around the world. We are also ensuring these

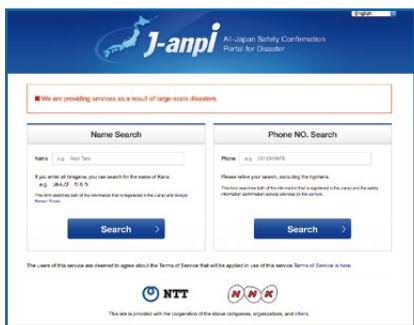


have business continuity management that will protect systems from disasters and external threats, keeping them operation reliably, and realizing highly efficient, power saving facilities, and green IT that help prevent global warming. In addition to this, by reducing the initial investment and operation costs, we are providing data centers that are also economically considerate, making them the best fit for every need.

CASE 1 Disaster Control Solutions

**Making Disaster-Prone Japan the Safest Country in the World**





J-anpi safety status information aggregate search engine



goo disaster prevention app – a comprehensive disaster prevention portal app

information that is more useful for local citizens. We are also participating in various related local government events and disaster preparation drills to help them prepare for disasters and raise awareness of disaster preparedness among the general public.

We also provide corporate management solutions for disaster countermeasures that enable employees to report on matters such as their personal safety and damage to equipment at stores or business locations on a customized emergency information app that they download to their smartphones.

Going forward, we plan to improve the convenience of J-anpi, such as expanding services for Japanese travelling overseas and foreigners visiting Japan. Our goal is to have these solutions used to make disaster-prone Japan the safest country in the world.

### Disaster Preparedness Initiatives Inspired by 3/11

The Great East Japan Earthquake struck on March 11, 2011. When people at NTT Resonant Inc. saw the extent of the damage, they wondered if there was anything they could do to help and that very same day, they leveraged their expertise operating goo services to use the goo news site as an aggregated disaster information site and provide victims with information about where they could evacuate to.

Furthermore, the company established a site for transmitting messages from evacuation sites to help people who were still unsure of a loved one's safety and whereabouts. This site not only sent out collections of messages from evacuation sites but was also able to function as a search engine for searching the safety status of victims using information gained from NHK, NTT DOCOMO and Japan Post Holdings.

This function was continued and used to create J-anpi in 2012, which enables users to search aggregated safety status information collected from local governments and the disaster message board systems of each telecommunications carrier.

### Developing Management Solutions for Disaster Countermeasures

Leveraging the expertise gained through J-anpi, since 2014 we have been providing the goo disaster prevention app, a comprehensive disaster prevention portal app. With the support of several local governments, the app is being used to provide original disaster prevention apps customized for each local government, enabling them to provide information tailored to their specific region and



Participating in a local government event to raise awareness of disaster preparedness



Supporting not only confirmation of safety, but also corporate business continuity

## CASE 2 Security Services

# A Center of Excellence in Cybersecurity



As a center of excellence (COE) in cybersecurity, NTT Ltd. (which now includes NTT Security) collaborates with Group companies to support the security aspect of customers' digital transformations.

For example, it aggregates information gained from daily security operations, such as information collected from decoy systems known as "honey pots," into a proprietary threat information database and then utilizes this information. Also, it offers a sophisticated 24-hour, 365-day cybersecurity threat detection and response service through a unique, advanced analysis engine (SIEM) that incorporates technology from research labs, and its highly skilled security analysts. It has established Security Operations Centers (SOC) staffed by security analysts all over the world through which it provides flexible services tailored to conditions in each country.



### CASE 3 Smartphone/Mobile Phone Safety Class

## Protecting Children from Internet Danger

NTT  
**docomo**

Currently, smartphone and mobile phone usage is spreading from adults down to children and while this can be convenient, incidents of internet-related trouble are increasing, and it is becoming a social problem. Within this environment, NTT DOCOMO is carrying out



Smartphone/Mobile Phone Safety Classes that teach how to use smartphones and mobile phones safely and securely.

Since the classes started in 2004, they have been taken by a total of around 12.11 million people. The classes target primarily students from elementary, junior high, high, and special needs schools, guardians, and teachers, with each type of participant receiving differing original safety instruction.

### CASE 4 NTT Dream Kids Net Town

## Summer Vacation ICT Experiences for Kids!

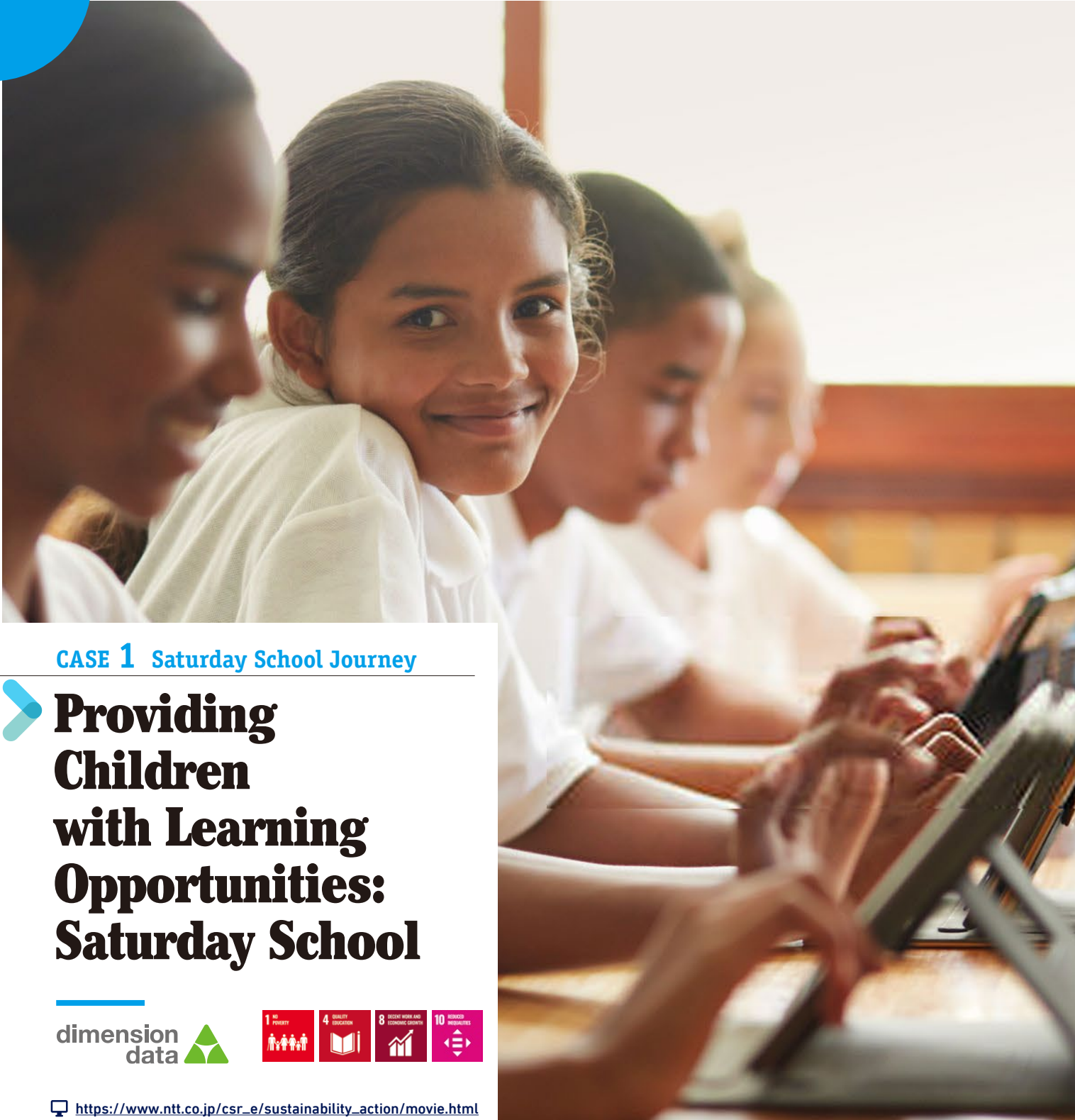
 **NTT Group**



Each year during the school summer vacation, NTT Group holds NTT Dream Kids Net Town in major cities across Japan. These are experience-based learning events for elementary school students in grades three through six.

Children can enjoy learning about information communications systems and services, as well as related rules and manners, using the latest information and communications technologies, such as AI, IoT, and 5G, and through the services provided by the participating companies.





CASE 1 Saturday School Journey

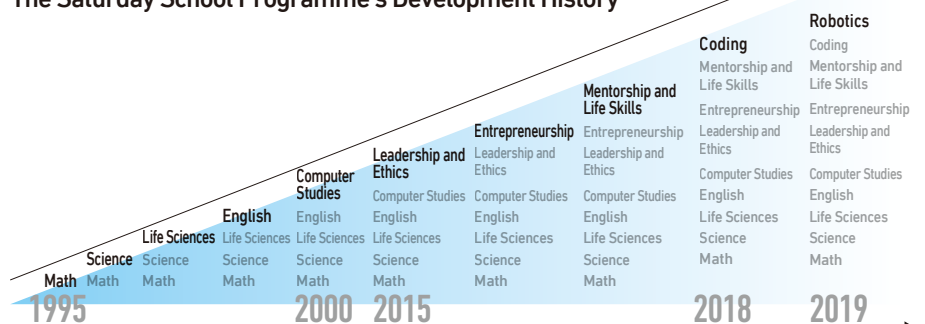
# Providing Children with Learning Opportunities: Saturday School

dimension data 



[https://www.ntt.co.jp/csr\\_e/sustainability\\_action/movie.html](https://www.ntt.co.jp/csr_e/sustainability_action/movie.html)

The Saturday School Programme's Development History





**Launching an Educational Program to Eliminate Inequality in South Africa**

Even today South Africa is suffering from the bitter legacy of the apartheid system in the form of inequality that affects all of society. A particularly big problem is educational inequality among children. For example, children at private schools learn to access information using a tablet, while most children at public schools will not experience using a computer until they reach college due to a lack of funding. Other factors, such as a lack of textbooks and classes of 60 students or more being crowded into small classrooms, create a negative learning environment, and the public school pass rate has yet to rise over 80%.

As a member of the local community, Dimension Data is engaged in the Saturday School Programme, which provides children with learning opportunities. Over 20 years have passed since 1995 when this activity was started by Dimension Data's only black engineer at the time, and it has grown to become an official program for the entire company. Currently the programs are open to all students who are willing learners at 21 local partner schools. Each year 100 of these students are selected and can participate each Saturday over the two years before they graduate from high school in one of the 48 programs being implemented.

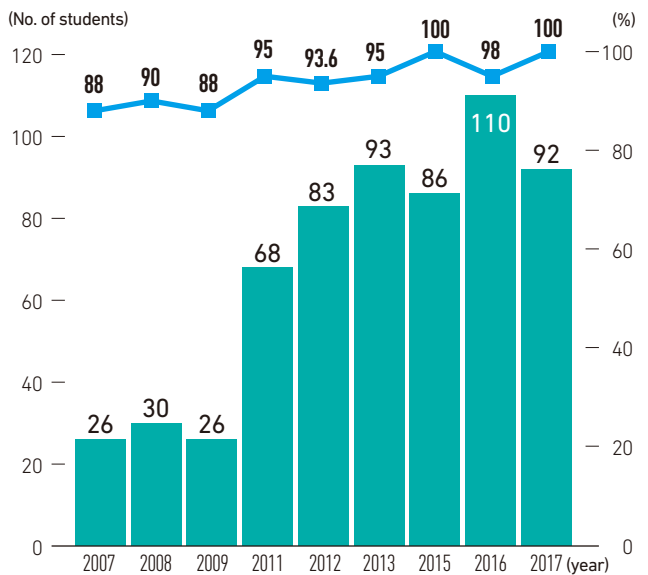
**Providing Quality Education to the Extent That the University Acceptance Rate is 100%**

Every week the Dimension Data office is opened for Saturday school and volunteers from among employees donate their time and skill to contribute to the program by



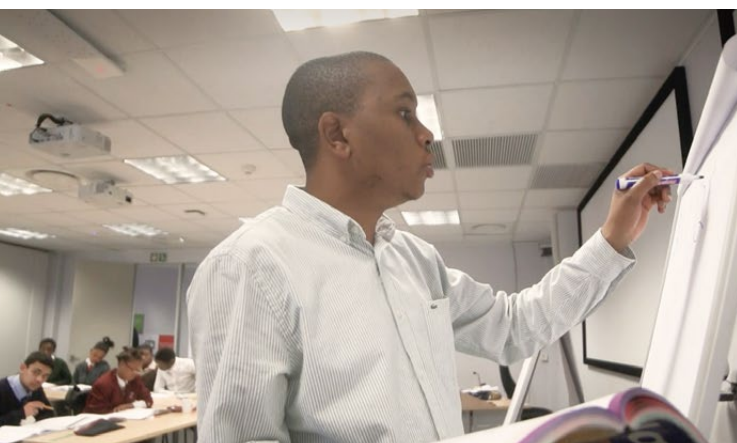
Learning computer skills

**Success Rate of Saturday School Programme Students**



teaching computer skills and the like. Of the students who have been enrolled in the program, over 88% have been accepted by universities and in recent years, the figure has sometimes been 100%.

Also, after graduating from university, some of these students have gone on to work at first class companies, including major IT and consulting firms, so it would not be an exaggeration to say that by providing high quality education, the program is contributing to eliminating inequality. Some of these graduates also look to give back to the program by volunteering as Saturday School Programme instructors.





CASE 2 Supporting the Activities of the Volunteer Group Voice of SAP

# Supporting the Employment of People with Disabilities through a Mobile App



According to the World Health Organization (WHO), there are currently over 1 billion people with disabilities globally. Many of these individuals do not have social acceptance or cooperative frameworks for support. As a result, employment opportunities are often lacking, and accessibility provisions are missing. That's where Voice of SAP (Specially Abled People) steps in. This NGO is working to eliminate social inequalities and protect the rights of disabled people. The group received Special Consultative Status from the United Nations Economic and Social Council in August of 2019. Currently, the group comprises approximately 8,000 registered volunteers.

NTT DATA Services supports the activities of this NGO, and over 100 employees are VOSAP volunteers who took a volunteering pledge on the organization's mobile app – VOSAP -- which also provides accessibility maps among other services.



CASE 3 Simple Flick Operational Aid App

# Enabling Smooth Smartphone Use for People with Special Needs in Their Upper Limbs



After receiving feedback from customers with disabilities in their upper limbs that "it is difficult to tap smartphone icons with precision," we provide the Simple Flick operational aid app free of charge.

The app lets the user pre-register frequently used contacts and items in telephone, email, app, and bookmark functions so that they can easily access them through two flicks anywhere on the screen. It also offers a readout

function making smartphone use more convenient for people with visual impairments as well.



## CASE 4 Operation of the Enzan Factory

### Charming Novelty Items Made by People with Intellectual Disabilities

NTT CLARUTY



NTT Claruty's Enzan Factory, located in Koshu, Yamanashi Prefecture, is a manufacturing workplace for people with intellectual disabilities.

The workers recycle paper cartons into hand-made paper and use this to create items such as desktop calendars, novelty goods, and memo cards. They also use sewing machines to develop new products such as pencil cases, business card cases, and decorative note pads and small pouches made from hand-made paper.

## CASE 5 Volunteer Portal Site

### Carrying Out Various Social Contribution Activities as Volunteers

NTT Group



to various volunteer activities and supports these activities.

An example of these activities is the marine pollution-related project we carried out in collaboration with NPO Umisakura. Under the slogan "Aiming to be the most enjoyable garbage pickup experience in Japan!," Umisakura continuously carries out garbage pickup activities with the goal of making the sea around Enoshima, Kanagawa Prefecture clean enough that the sea horses that once lived there will return. NTT Group takes part in these activities so that we can leave clean seas for children in the future.

## CASE 6 Partnership with the Prince's Trust

### Partnering with the Prince's Trust Which is Supporting Young People in the UK

NTT DATA UK



for getting into college, or the cost of acquiring skills.

NTT DATA UK formed a partnership with the Prince's Trust in 2013 and since then, in addition to carrying out activities that have raised a cumulative total of about 250,000 pounds for the Trust, it has been using its London and Birmingham offices to implement programs that provide workplace experience for young people, as well as other initiatives.

So far it has supported over 250 young people making a difference to their lives.

The Prince's Trust was established in 1976 by Prince Charles of the UK, and it runs free programs that help people aged 11 to 30 who are unemployed or struggling to get into education by providing them with assistance, such as funds



## External Recognition

MEMBER OF  
**Dow Jones  
Sustainability Indices**

In collaboration with  a RobecoSAM brand



FTSE4Good



FTSE Blossom  
Japan



MSCI Japan ESG  
Select Leaders Index



2018 Award for Excellence  
in Corporate Disclosure  
—Institution—  
S&P The Securities Analysts  
Association of Japan



2018-19  
**DERWENT  
TOP 100  
GLOBAL  
INNOVATOR**  
Clarivate  
Analytics

## Introducing our CSR Activities

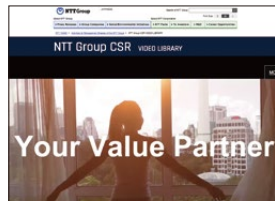
Please take a look at the various efforts made and solutions offered by NTT Group as we take on the issues facing society.



### NTT Group CSR

[https://www.ntt.co.jp/csr\\_e/index.html](https://www.ntt.co.jp/csr_e/index.html)

A variety of information concerning NTT Group's efforts to solve social issues.



### NTT Group CSR Video Library

<https://www.ntt.co.jp/activity/csrvideo/en/>

Easy-to-understand video guides to NTT Group's CSR initiatives.



### Inquiries

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