NTT DATA
Trusted Global Innovator

30th ANNIVERSARY

NTT DATA GROUP

Sustainability Report 2018

The NTT DATA Group—30 Years of Progress

In 2018, the NTT DATA Group celebrated the 30th anniversary of its foundation. Since then, we have created new value by using leading-edge IT to address customers' issues. Working with customers, we will continue taking on new challenges with a view to realizing business innovation and addressing societal issues.

1960–2004

Phase of Transformation and Bold Initiatives

1967
Establishment of a data communication headquarters by NIPPON TELEGRAPH AND TELEPHONE PUBLIC CORPORATION

1988
Establishment of NTT DATA Communications Systems Corporation
Net sales of ¥228.8 billion and 6,412 employees

1992
Relocation of Head Office to Toyosu in Koto-ku, Tokyo

1993
Winning of a Deming Application Prize
Becomes first company in the information services industry to receive a Deming Application Prize for augmenting business results through quality control

1995
Listing on the Second Section of the Tokyo Stock Exchange

1996
Listing on the First Section of the Tokyo Stock Exchange

Head Office of NTT DATA Communications Systems Corporation

1998
Change of name to NTT DATA Corporation
Net sales of ¥710.1 billion and 10,334 employees

1999
Launch of ANSER Internet-based money transfer service
Reduces system costs of financial institutions and enables users to conduct financial transactions through a variety of terminals

2003
Completion of the construction of the CiRCUS i-mode Gateway System for NTT DoCoMo
Provides a high-quality, high-performance platform that offers e-mail and Internet services for mobile phones

2005–

Phase of Global Strategies

2005
Launch of Global One Team
Forms a team spanning Group companies in Japan and overseas to provide high-standard, common services globally

2007
Achievement of consolidated net sales of ¥1,000 billion

2009
Introduction of an internal company system
Net sales of ¥1,139.0 billion and 31,739 employees

2011
Establishment of the Global Business Segment

Commencement of supply of the PANADES flight procedure design system to Thailand
Overseas rollouts of social infrastructure from Japan, including stepped-up rollouts of PANADES in other Asian countries, provision of the NACCS customs system in Vietnam and Myanmar, and provision of the BRIMOS bridge monitoring system in Vietnam

A PANADES flight simulation screen image

2012
Global unification of the NTT DATA brand
Overseas sales surpass ¥200 billion

2013
Establishment of Values with a view to realizing One NTT DATA
Announces new 10-year Group Vision and the key Values for realizing this vision

2014
Participation in project to digitally archive historical handwritten manuscripts of the Vatican Apostolic Library

2015
Adoption of NTT DATA as a global IT partner by Germany's world-renowned automotive manufacturer
Advances collaboration between NTT DATA Group companies and the client and expands businesses catering to the automotive industry

2016
Conversion of Dell Systems Corporation into a subsidiary and assumption of IT services-related operations

The Vatican Apostolic Library

2017
Launch of a new framework for global businesses with the aim of advancing toward the Global 3rd Stage
Sets becoming a trusted brand worldwide as a goal and strengthens global management capabilities to increase overseas presence, develop important customers, and ensure rapid, accurate understanding of operational status Groupwide

2018
Achievement of consolidated net sales of ¥2,100 billion
Has bases in 214 cities in 53 countries and regions and more than 118,000 employees

2018
Group Vision
Trusted Global Innovator

1988
Establishment of NTT DATA Communications Systems Corporation

1988–2001
Company concept:
Value Creator

2002–2007
Brand message:
Shaping the Future with IT

2005–2018 Group Vision **Global IT Innovator**

2008–2012
Company concept:
Working Together to Realize Transformation

2013
For realization of the Group Vision
Values

1980–
Liberalization of telecommunications
The liberalization of telecommunications in Japan and overseas gathers momentum with the breakup of AT&T in the United States and the privatization of NIPPON TELEGRAPH AND TELEPHONE PUBLIC CORPORATION in Japan. New participation in the telecommunications sector becomes possible, resulting in competition among telecom providers.

1995–
Advent of the Internet era
The commercial use of the Internet based on certification, the popularization of ADSL, the emergence of fiber-optic line services for homes, and the sale of PCs for individuals drive the spread of the Internet.

2000–
Beginning of the widespread use of mobile phones
Mobile phones become widespread and evolve to incorporate multiple functions, including the e-mailing of photographs, the use of electronic money, and the viewing of television through one-segment tuners.

2005–
Arrival of the smartphone era
Companies introduce smartphones that can be readily held in the hand but which incorporate functions on a par with those of cumbersome laptop computers. As a variety of apps emerges, the use of smartphones becomes prevalent in a wide range of situations. Also, users' communication styles change with the coming of social networking services (SNS) and apps such as LINE.

2010–
Realization of a "super smart society" through technological innovation
Increasing optimism that connecting a host of items through the Internet of Things (IoT), the analysis of Big Data, and advances in artificial intelligence (AI) can help address societal and economic issues as well as create a society that delivers products and services exactly when people need them

1992
Establishment of Social Contribution Promotion Office

1998
Launch of Environmental Protection Promotion Office

1999
Acquisition of ISO 14001 certification
Establishment of the NTT DATA Group's Environmental Policies

Our environmental protection promotion symbol

2001
Acquisition of first certification in Japan under the international information security standard BS 7799

2003
Introduction of an in-house certification system for project managers, which develops into a pillar of NTT DATA's personnel development as the Professional Career Development Program

2005
Beginning of NEXT Activities based on bottom-up measures implemented by employees
With a view to a "third founding," promotes numerous bottom-up measures to encourage a change in the mind-sets of employees, which leads to the in-house establishment of the "Nexti" SNS in 2006 and the Egg Garden day-care facility in 2011.

The Egg Garden

2007
Launch of the Work–Life Balance Working Group to create workplaces that energize employees and the trial implementation of teleworking

2008
Establishment of NTT DATA DAICHI Corporation to encourage the employment of disabled people

Commencement of services based on environment-friendly Green Data Centers

Introduction of teleworking in earnest

2009
Winning by the Company's Green Data Centers of the Minister of Economy, Trade and Industry Award at the Green IT Promotion Council's Green IT Awards 2009

2012
Implementation of support activities for restoration of areas affected by the Great East Japan Earthquake
Establishes in-house Recovery Support Headquarters and supports restoration through the use of IT, the activities of volunteers, and the collection of donations

2016
Receiving of the Good Career Company Awards 2016 Grand Prize from the Minister of Health, Labour and Welfare
Earns favorable evaluation for support of employees' autonomous career development through the long-term monitoring of career development based on respective personnel categories

2017
Inclusion in the Dow Jones Sustainability Indices (DJSI) World Index

2018
Completion of leading-edge data center Mitaka Data Center EAST

The opening ceremony of NTT DATA Tohoku Office Center (part of support for the restoration of areas affected by the Great East Japan Earthquake)

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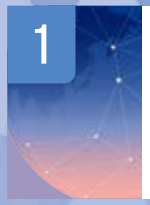

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Bring the transformational driving force to society by helping clients grow their business and contributing to addressing societal issues around the world

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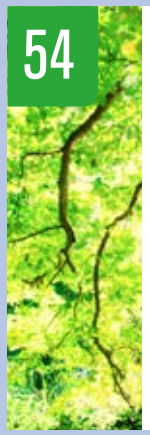

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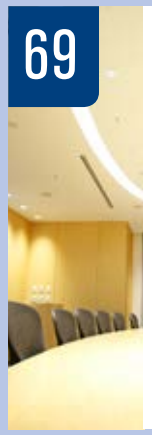

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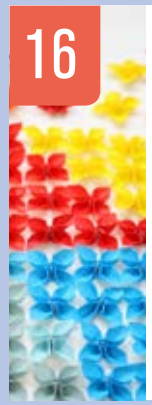

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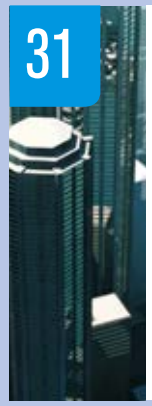

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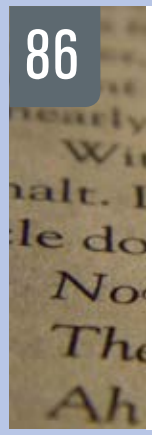

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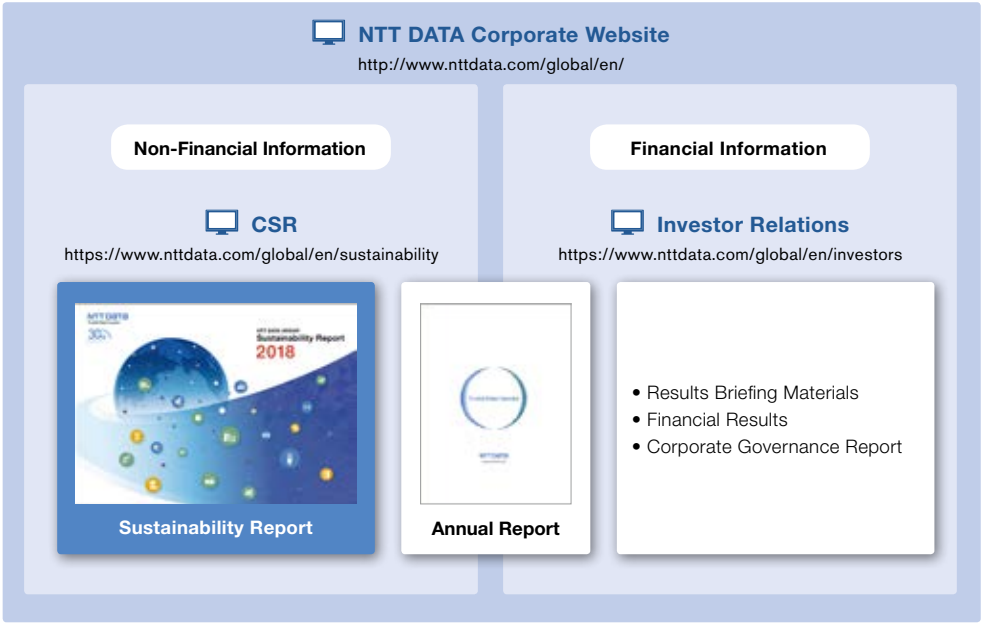
Editorial Policy

NTT DATA has reliably published information on its approach to corporate social responsibility (CSR) as a Group and the various related activities it undertakes as part of disclosing this information, and as a way to communicate with stakeholders.

In response to the increasing trend toward medium- to long-term investors and other stakeholder emphasis on enhanced information disclosure, we issue the Sustainability Report comprising initiatives aimed at long-term value creation in accordance with environmental, social, and governance (ESG) criteria.

In *Sustainability Report 2018*, we show how the NTT DATA Group's ESG management incorporates the United Nations Sustainable Development Goals (SDGs) into business activities. More specifically, the report provides examples of how our business activities help address societal challenges and fulfill our CSR. Further, we have enhanced disclosure with a view to furthering understanding of the societal issues that we are focusing on in each business field as well as the main initiatives that we are advancing to help address them. Please refer to our Annual Report for information regarding NTT DATA Group management strategies and the impact of non-financial activities on business activities.



Organizations Covered

This report centers mainly on the activities of the NTT DATA Group in Japan while including details of certain activities conducted by Group companies outside Japan.

Group Overview

https://www.nttdata.com/global/en/about-us/location-map

Period of Coverage

This report mainly covers initiatives undertaken in fiscal 2017 (April 1, 2017 to March 31, 2018). Details of certain activities that were conducted prior to fiscal 2018 or are planned for the future are also included in this report.

Guidelines Referenced in this Report

- Global Reporting Initiative (GRI) Sustainability Reporting Standards
- Japan's Ministry of the Environment Environmental Reporting Guidelines (2012)

Publication Date

October 2018 (*Sustainability Report 2017* was published in October 2017; *Sustainability Report 2019* is scheduled for publication in October 2019)

Disclaimer and Notes

- This report not only contains historical or current facts relating to NTT DATA Corporation and Group companies but also judgments, plans, and predictions based on information available at the time of publication. NTT DATA therefore cautions readers that forecasts of the results of business activities and events may differ materially from actual results and events.
- The names of products and services referred to in this report are trademarks or registered trademarks of NTT DATA and other Group companies or other companies.

Contact

ESG Promotion Department, NTT DATA Corporation
Toyosu Center Bldg., 3-3, Toyosu 3-chome, Koto-ku, Tokyo 135-6033, Japan
Telephone: +81-50-5546-8135 Fax: +81-3-5546-8133
http://www.nttdata.com/global/en/

Bring the transformational driving force to society by helping clients grow their business and contributing to addressing societal issues around the world

I would like to take this opportunity to introduce myself as NTT DATA's new President and Chief Executive Officer appointed in June 2018. I realize that the mission entrusted to me is to take powerful and speedy steps toward the Global 3rd Stage. I am determined to devote every effort to further enhance NTT DATA's corporate value.

Looking Back on Fiscal 2017 and Our Progress with the Medium-Term Management Plan

Since fiscal 2016, we have continued to advance toward the Global 2nd Stage. Under the current Medium-Term Management Plan, enhancing our value as a global brand by increasing our local presence forms the basis for our strategy. Specifically, we are promoting initiatives based on our key strategies of taking a "Game-Changing Approach" and leveraging "Breakthrough Technology." We have made efforts to increase business opportunities to serve multinational corporations and various clients throughout the world with the aim of gaining a 2% or higher market share and ranking in around the top 10 in net sales in each key country.

In fiscal 2017, the second year of the current Medium-Term Management Plan, new orders received, net sales, and operating income outperformed results of the previous fiscal year, helped along by robust business in Japan and business growth abroad. Net sales exceeded two trillion yen and we successfully achieved our sales target, one of the objectives of the current Medium-Term Management Plan, one year early.

Yo Honma

Representative Director,
President and Chief Executive Officer

We launched our new Group Vision of "Trusted Global Innovator" in May 2018, as we celebrated our 30th anniversary. We are continuously promoting ESG-oriented business activities to accelerate the pace and achieve medium- to long-term sustainable growth and increase our enterprise value.

In terms of our "Game-Changing Approach," we have built long-term relationships with clients by leveraging "Japan Quality," while cementing trusted relationships with numerous clients by pursuing our Clients First approach in an effort to establish a stable foundation to manage business.

In regard to "Breakthrough Technology," we have been promoting initiatives to comprehensively support clients' digital journey by providing, for instance, consulting services as well as technologies using existing IT assets for digital responses.

Launched New Group Vision of "Trusted Global Innovator"

Since 2005, when we instituted our Group Vision to become a "Global IT Innovator," we have been building a foundation to drive global business. As we celebrated our 30th anniversary in May 2018, we launched our new Group Vision of "Trusted Global Innovator." We have set out "Material CSR Challenges" comprised of three aspects and promoted our activities based on "Our Way," guiding principles for individuals which constitute our mission statement portraying NTT DATA's mission and reasons for existence defined in May 2013 as well as our Group Vision. At the same time, we have made efforts in laying out infrastructures including corporate governance to support these initiatives and meet the expectations of global communities.

We support the SDGs as an NTT Group company and have promoted initiatives to contribute to addressing global societal issues through our business activities. Under the new Group Vision, we will continually drive business activities with a focus on ESG aspects as we continue on our journey to grow sustainably and enhance our corporate value.

With regard to the environment (E), we have continually worked on activities to help mitigate environmental burden to overall society through the provision of environmentally friendly systems and services for approximately 20 years, since July 1999, when we formulated the Environmental Policies of the NTT DATA Group. We will set our environmental goal at a level which is up to global standards to meet expectations from stakeholders in countries and regions worldwide. By improving clients' operational efficiency through the use of IT, we aim to help achieve greener clients and society (reducing CO_2 emissions) and achieve the objectives of our three-year Medium-Term Management Plan.

As for social (S), we are focusing on diversity and inclusion, with "respecting diversity" and "workstyle innovations" as key dual pillars. Currently, NTT DATA has a diverse talent pool of approximately 120,000 employees across 53 countries and regions worldwide who have various backgrounds in terms of nationality, religion, gender, age, etc. We believe that we can bring innovation to our clients beyond national borders through IT technologies by encouraging every employee to recognize each other's different values, respect diversity, and demonstrate one's strength.

NTT DATA has remained ahead of its peers in the IT industry with regard to workstyle reforms, including the reduction of working hours. Our persistent efforts led to reducing total hours worked per employee by 165 hours, down to 1,901 hours between fiscal 2007 and fiscal 2017, which is far below the average for Japanese companies in the IT industry as well as across industries overall. We will continue to promote diversity and inclusion initiatives going forward and strive to remain an attractive company to both internal and external stakeholders that provides a better place for diverse employees to work.

Finally, in regard to governance (G) we have pushed forward to reinforce global governance to help create more global synergies. At the Ordinary General Meeting of Shareholders held in June 2018, the first non-Japanese director was appointed at NTT DATA Corporation, which marked one step

forward from a standpoint of diversity of our corporate governance. Furthermore, nomination and compensation committees and audit committees were set up within certain operating companies in each region, and we are taking steps to build a governance structure that enables the unified management of the Group while at the same time delegating to local leaderships to operate their businesses. We will continuously make efforts to move forward as a Trusted Global Innovator by sharing our mission statement, Group Vision, and Values to bring all employees across NTT DATA together as one NTT DATA.

Helping to Realize a Sustainable and Affluent Society by Creating Innovation and Value

The shift to digital is increasingly required today, and "digital" in a broader sense opens up possibilities for addressing societal issues limitlessly. As Japan is facing a variety of societal challenges including labor shortages, a declining population, an aging population, and regional problems (depopulation), public–private partnerships (PPPs) are under way to realize "Society 5.0," a new society leveraging cutting-edge technologies. Turning to the world, it is hoped that various challenges are resolved that threaten the sustainability of global society, including food and water problems caused by growing populations and urbanization, social infrastructure issues such as transportation, education, healthcare, and disaster prevention as well as measures for energy conservation and global warming.

NTT DATA has contributed to addressing global societal issues so far by leveraging IT. We are now at a point where we must make further contributions as a global company going forward as well as lead these initiatives.

In fiscal 2017, we promoted initiatives to resolve societal issues by leveraging state-of-the-art technologies such as development of an automation AI solution called "NTT DATA Robotic Context Processor" for achieving better efficiency in contract management operations as well as an active control technology, the industry's first technology as a disaster prevention measure to control vibrations of super high-rise buildings using AI. We also introduced WinActor®/WinDirector®, a robotic process automation (RPA) tool which automates and improves efficiency of office operations and also jointly developed with a client an end-to-end system for the first time in the banking segment by directly connecting banks and an insurance company to complete a transaction from proposal

NTT DATA has contributed to addressing global societal issues so far by leveraging IT. We are now at a point where we must make further contributions as a global company going forward but also to lead these initiatives.

to contracting phases, including confirmation of a prospect's intention with tablet devices. This has enabled us to not only save resources but also to increase productivity, which is one of the challenges faced by an aging society with a declining birth rate. Mitaka Data Center EAST commenced operations in April 2018 and employs an outside-air cooling system using natural energy (outside air during spring, autumn, and winter) to reduce operating hours of its air-conditioning facility, thereby achieving top-notch energy-efficiency performance nationwide.

We believe that expectations and expected societal roles have become even greater for NTT DATA, which continues to pursue the realization of its mission statement to "use information technology to create new paradigms and values, which help contribute to a more affluent and harmonious society."

As a Trusted Global Innovator, we will endeavor to help society be more sustainable and affluent by co-creating new innovation with various stakeholders and use IT to contribute to clients' business growth and by addressing global societal issues, while aspiring to bring the transformational driving force to society through value creation.

Company Data

Basic Data (As of March 31, 2018)

- **Company Name (Trade Name):** NTT DATA Corporation (NTT DATA)
- **Head Office:** Toyosu Center Bldg., 3-3, Toyosu 3-chome, Koto-ku, Tokyo 135-6033, Japan
- **Telephone:** +81-3-5546-8202 (Main switchboard)
- **Date of Establishment:** May 23, 1988
- **Common Stock:** ¥142,520 million
- **Fiscal Year:** April 1 to March 31 of the following year
- **Independent Auditors:** KPMG AZSA LLC

NTT Group–One of the World's Largest ICT Companies

NTT

B to B IT Service

NTT DATA

NTT Group

Total Assets	Operating Revenues
¥21,675.8 billion	¥11,799.6 billion
Number of Employees	**Consolidated Subsidiaries**
282,533 (Consolidated)	922

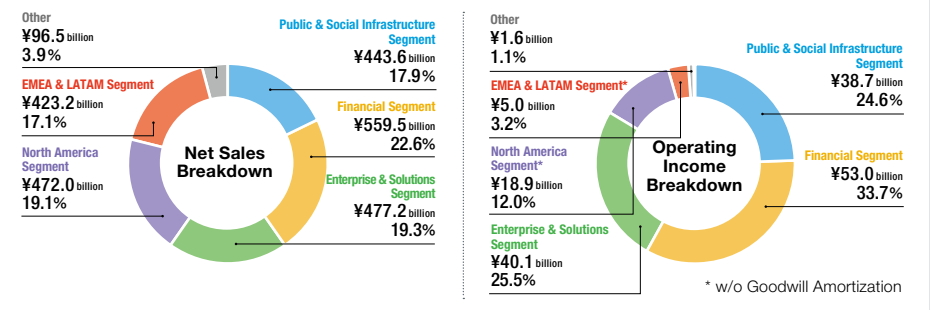
NTT DATA Group

Total Assets	Net Sales
¥2,234.2 billion	¥2,117.1 billion
Number of Employees	**Consolidated Subsidiaries**
118,006 people (Consolidated)	303 companies

Business Domain

As a leading specialist provider of IT services, the NTT DATA Group offers high-value-added IT services in a wide range of business fields.

Business Portfolio (Fiscal 2017)



Segments	Main Business Fields	Net Sales Breakdown	Operating Income Breakdown
Public & Social Infrastructure Segment	Mainly in Japan, this business provides high-value-added IT services that play important roles in social infrastructure, such as government, medical, communication, and utility systems as well as in regional development.	¥443.6 billion	¥38.7 billion
Financial Segment	This business provides quality IT infrastructure systems that support a broad range of operational activities at financial institutions and provides high-value-added IT services that link these systems.	¥559.5 billion	¥53.0 billion
Enterprise & Solutions Segment	This business provides high-value-added IT services that support manufacturers, distributors, and service providers as well as payment services and platform solutions services linked with IT services.	¥477.2 billion	¥40.1 billion
North America Segment	This business provides high-value-added IT services primarily in North America.	¥472.0 billion	¥18.9 billion (w/o Goodwill Amortization)
EMEA & LATAM Segment	This business provides high-value-added IT services primarily in Europe, the Middle East, Africa, and Latin America.	¥423.2 billion	¥5.0 billion (w/o Goodwill Amortization)

A Growing Range of Business Fields

We are expanding our fields of business on a foundation of customer relations and technological capabilities.

Public Segment
Big Data and cloud computing to support local communities

Healthcare and Life Sciences
Activating databases for improved healthcare services

Banking and Financial Services
Client trust founded on reliable, advanced systems

Insurance
Expertise and creativity for leading insurance management systems

Telecommunications
Developing new opportunities and relationships with clients through telecommunications

Media and Entertainment
IT solutions for new media business creation

Education
Technology for new learning environments

Energy and Utilities
Generating dynamic environments while maintaining competitive advantage

Natural Resources
Supply chain expertise to conquer new challenges

Manufacturing
Greater efficiency for manufacturing process systems

Automotive
Advancing the automotive industry through technologies and systems

Electronics and High Tech
Helping to optimize development, manufacturing, and management

Transportation and Logistics
Supporting improvements in organizations and processes to take transportation and logistics forward

Wholesale and Distribution
Enabling the evolution of wholesale businesses through services that closely reflect business conditions

Retail
Supporting improvements in efficiency as well as growth in online sales

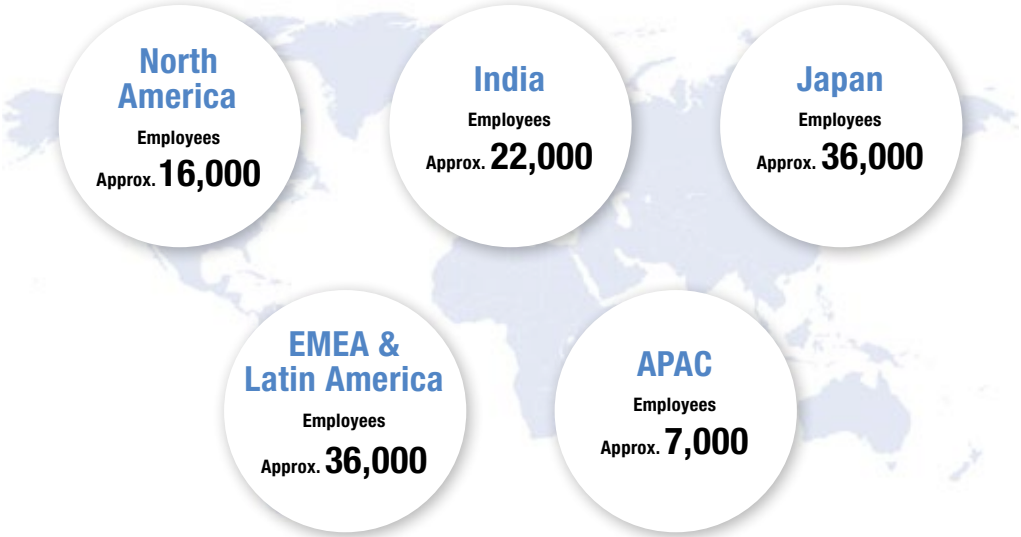
Service Providers
Helping clients capture opportunities in the rapidly changing service industry

Fundamental Technologies
Offering cloud computing that transforms data into a powerful business resource

Consumer Products
Providing online and mobile-based innovations for product development

Increasing Geographic Coverage (As of March 31, 2018)

The NTT DATA Group, comprising an organization that encompasses 214 cities in 53 countries and regions and more than 118,000 employees, is reinforcing its ability to provide support for global companies.



53 countries and regions

214 cities

118,000+ professionals

Our Medium-Term Management Plan

Overview and Progress on "NTT DATA: ASCEND"

NTT DATA : ASCEND
Rise and grow our global brand
Fiscal 2016–2018

NTT DATA
Fiscal 2018 Financial Objectives

Net Sales
Over ¥2 trillion

Adjusted Operating Income
+50%*

* Compared to fiscal 2015 (Adjusted for incremental investments in new fields)

- Viewing changes in the business environment and technological innovations in the global market as opportunities, we will accelerate the creation of new markets and expand our market share in each region. We will also engage in global cooperation to expand our provision of solutions and services while promoting improved global project support capabilities to move into areas where we could not operate in the past.

Game-Changing Approach

Outside Japan
Scale Expansion and Quality Improvement
- Inorganic growth (North America, EMEA, and others)
- Implement game-changing approaches and improve profitability by increasing our share and scope of services

Global Synergy
- Innovate production technology / Spark new ideas and technologies
- Global Accounts / Global Delivery / Global Offering / Global Talents

Japan
Stable Growth
- Implement game-changing approaches to regrow our business
- Take thorough control of unprofitable projects
- Secure profits required for growth investment by sharpening competitive edges

Sound Financial Ground
(Managing ROI and D/E ratio, stable payout of dividends)

- Quickly and flexibly provide services and systems comprising the core of client competitiveness through production technology innovations
- Create new mechanisms and businesses with clients leveraging cutting-edge technologies by enhancing technological capabilities in the digital domain and engaging in business alliances with other companies that possess strong technological capabilities

Breakthrough Technology

Game-Changing Approach

Through game-changing initiatives, we worked to further expand the market. By changing initiatives targeting client digitization and leveraging our strengths in existing markets, we augmented business in banking and outsourcing, among others.

As for new markets, in light of the accelerating trend toward digital businesses in recent years, efforts toward new business creation utilizing our cutting-edge technologies and alliance strategies through collaborations with partner companies resulted in business expansion in new markets.

We have accelerated our growth both with existing clients and in new markets such as "Digital business."

Increase Market Share with Existing Clients
Broaden and deepen existing businesses by taking advantage of changes in client needs and our strengths

Banking
Number of banks using our mission critical systems for financial institutions increased

Outsourcing
Won long and large outsourcing contracts

+

Win in New Markets
Capture IT technological trends and create new business with growth strategy according to characteristics in each country

IoT Related
Entered a new business that provides high added value with use of IoT-related technologies

Healthcare
Increased our market share in services for health insurance / healthcare providers

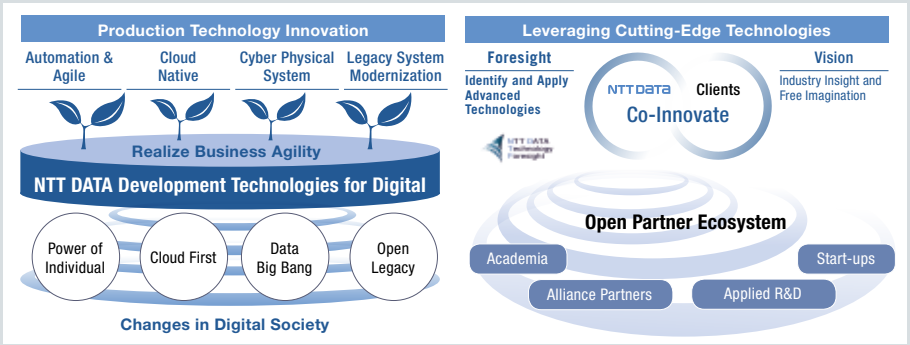
Breakthrough Technology

Innovate technologies to provide systems and services that are the core of clients' competitiveness with agility and flexibility

Leverage global cutting-edge technologies for co-innovation of unprecedented paradigm and business with clients

In order to promptly and flexibly provide the services and solutions that are crucial to the competitiveness of our customers, who are facing tough changes in the business environments in which they operate, we will push ahead with further innovation in production technology, combining the production technologies that we have developed to date with new production technologies that respond to the needs of the digital society.

In addition, NTT DATA will strengthen our technological capabilities in the digital field to respond to our clients' growing needs for a strategic use of IT, by placing the right resources for research and development—including our expertise, personnel, and bases—in the right place globally. We will also continue to adopt cutting-edge technologies by closely cooperating with other companies that have advanced technological capabilities. Through these initiatives, NTT DATA is determined to create new paradigms and value that did not exist before, by enabling the application of the cutting-edge technologies to business operations through co-innovation with our clients.



Status of Efforts and Achievements

Production Technology Innovation

Ongoing Efforts to Increase Business Agility through Proactive Deployment of NTT DATA Integrated Development Cloud in Japan and Overseas and to Reduce Costs

Expanding Applications in Development Environments in Japan and Overseas

- Promoting and accelerating efforts aimed at expanding applications in development environments in Japan and overseas
- Start applying in China offshore development environments and European Group company development environments

Rolling Out to Client Commercial Environments

- Launching services as an SoE platform for OpenCanvas cloud service for financial institutions, among others
- Launching the provision for commercial use in Europe

Leveraging Cutting-Edge Technologies

Implement Co-Innovative Efforts Globally with Multiple Client and Partner Companies Continue Efforts toward New Value Creation

AI | Blockchain

AI

What Is It?

Artificial intelligence (AI) is one of the technologies currently attracting a great deal of attention. In specific fields, AI is already realizing remarkable capabilities that are far superior to those of humans. For example, in the medical field AI has been developed that advises doctors on appropriate medical treatment methods. In the financial segment, meanwhile, ultra-high-speed, ultra-high-frequency algorithmic trading accounts for more than half of all market transactions.

The NTT DATA Group's AI

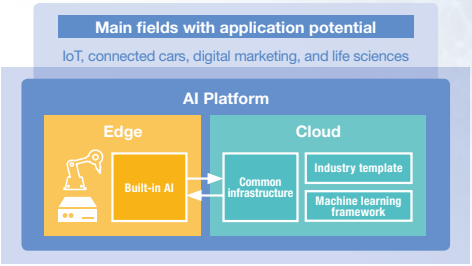
NTT DATA offers AI systems in three priority areas: customer touchpoints, operational process advancement, and advanced composite analysis (social infrastructure field).

In the customer touchpoints area, we enhance the accuracy of customer services and customer satisfaction levels.

As for the operational process advancement area, we enable customers to reduce costs rigorously, and create added value for customers that differentiates them from competitors. We achieve this through the use of AI to automate information collection as well as to increase efficiency and assessment uniformity in specialized processes. Moreover, we combine RPA and AI to automate office work.

In the area of advanced composite analysis (social infrastructure field), we provide total integration that incorporates AI and IoT. We realize prediction, predictor detection, automation, and other advanced processing by enabling real-time analysis and control through the synchronization of on-site computers (leading-edge computers) and cloud computing.

An Example of Comprehensive Integration



Main Initiatives

- Verification of the feasibility of realizing an "AI reporter," which automatically drafts news articles
- Smart intensive care units that detect deterioration predictors in critically ill patients
- Use of simulations to forecast and help alleviate traffic congestion

Related Websites

Services Section of NTT DATA's Website
http://www.nttdata.com/jp/ja/services/sp/ai/index.html
(In Japanese only)

Professional service for AI utilization
http://nttdata-aistudio.com/aistudio/
(In Japanese only)

Blockchain

What Is It?

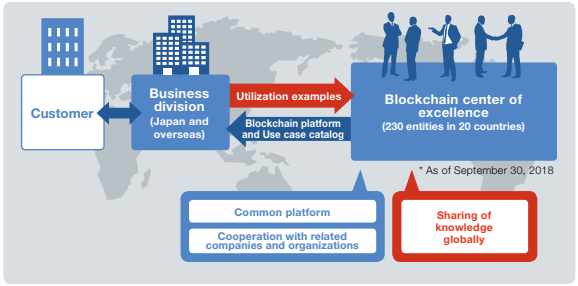
One of the latest trends in information and communications technology (ICT) and in the financial industry, FinTech innovations are set to transform the financial business. In relation to these innovations, Blockchain has become a focus of interest as a promising technology that realizes open financial services. Blockchain technology is the main distributed ledger technology. This type of technology enables highly reliable financial transactions and exchanges of important data over open networks such as the Internet.

The NTT DATA Group's Blockchain Technology

In response to the changing needs of businesses as they become more global and borderless, we have formed a center of excellence for Blockchain technology along with more than 230 entities in 20 countries. This center has given us capabilities for catering rapidly to customers who want to incorporate Blockchain technology.

Further, to ensure that our support for the introduction of Blockchain technology matches customers' needs, we offer an education program, a blockchain workshop, a proof of concept (pilot) scheme, and business partnerships. Based on expertise garnered through our blockchain technology activities worldwide, we provide a one-stop service that covers strategy analysis through to practical application.

The NTT DATA Group's Blockchain CoE



Main Initiatives

- International Trade Data Sharing Platform that enables safe, rapid, and efficient sharing of information internationally among trading-related companies (Japan)
- Development of an international money transfer app that expedites money transfers (United Kingdom)
- Linkage of food traceability and supply chain-related specifications with Blockchain technology (Italy)

Related Website

Blockchain Section of NTT DATA's Website
http://www.nttdata.com/jp/ja/services/sp/blockchain
(In Japanese only)

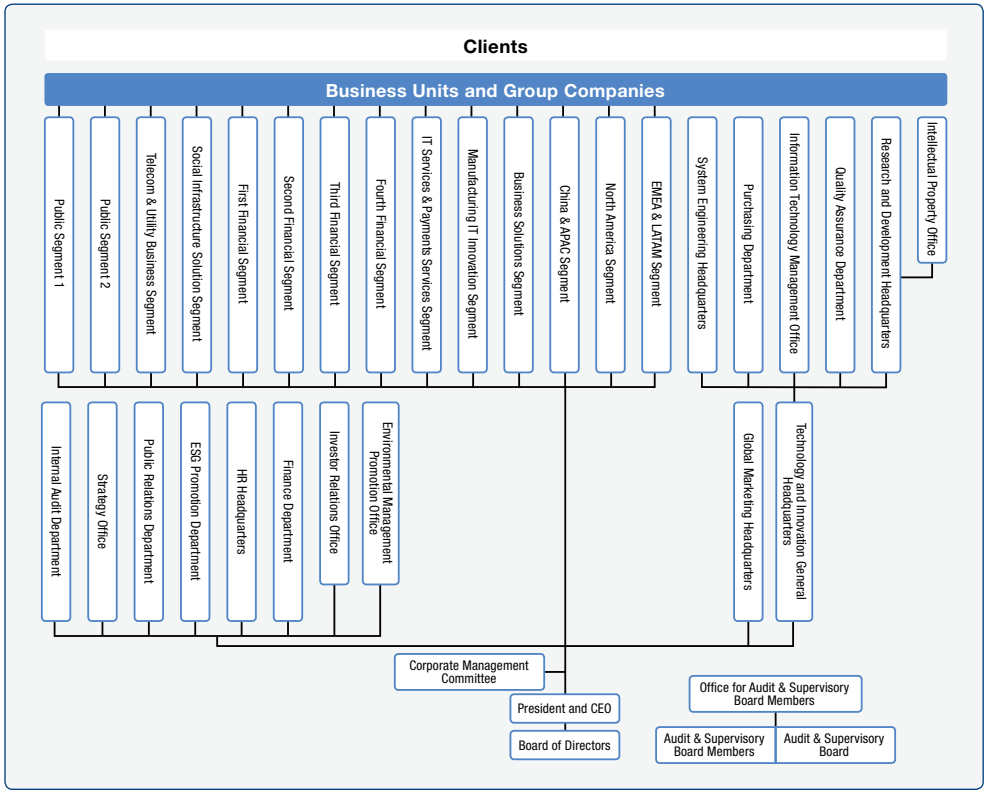
Organizational Structure

Having established the Global 3rd Stage with "Trusted Global Innovator" as the new objective of global management, we are expanding our local presence, deepening relationships with important customers, and quickly and accurately ascertaining Groupwide business conditions with the aim of promoting global business and strengthening our management structure.

Specifically, on July 1, 2017, we transferred global cross-functionality to the newly established Global Marketing Headquarters as a Head Office organization. This transition to a Head Office organization creates an entity able to provide smooth global cross-functionality in Japan and for the entire NTT DATA Group, while strengthening our structure. We will further promote regional alliances at the global level.

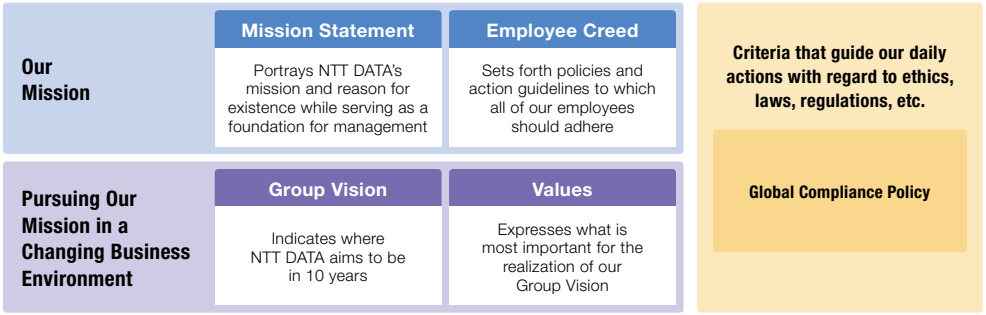
We also established the China & APAC Segment Division to operate an organization with four domains by linking the three existing domestic domains (Public & Social Infrastructure, Financial, and Enterprise & Solutions) to the newly added China & APAC region business.

Organizational Structure (As of July 1, 2018)



Our Way

Today's business world is evolving faster than ever in Japan and across the globe. As a company and as individuals, we think through what we do, act differently, and transform our business to drive a better future for NTT DATA. To guide us in our efforts, the NTT DATA Group has integrated the mission statement, which serves as the cornerstone of management and our shared values, into Our Way and is striving to achieve the Group Vision in a united effort.



Mission Statement

NTT DATA uses information technology to create new paradigms and values, which help contribute to a more affluent and harmonious society.

Employee Creed

1. We will do our utmost to serve our customers.
2. We will meet the challenges of our work with an active and positive spirit.
3. We will create a vital and vibrant company.

Group Vision

NTT DATA set out its "Global IT Innovator" Group Vision in 2005. Since then, we have been advancing our operations in markets around the world with IT at the core of our business.

As a result, the scale of our operations has increased. In 2018, our operations spanned 53 countries and regions and employed more than 118,000 people. Achievement of our targets for the Global 2nd Stage—consolidated net sales of more than ¥2 trillion and an overseas sales ratio of 50%—has come within our grasp. Therefore, we are advancing toward our next stage.

The current era is unpredictable due to remarkable innovations in IT and rapidly accelerating business model transformation. Under these conditions, we must develop partnerships with customers based on long-term trust. To this end, rather than pursuing profit solely for ourselves, we will work closely with customers to realize their many different ideas while demonstrating our strengths. In this way we will create leading-edge technologies with global reach. At the same time, we will achieve business innovation and address societal issues.

In May 2018, the NTT DATA Group set out becoming a Trusted Global Innovator as a new Group Vision to mark the 30th anniversary of the Group's foundation.

Trusted Global Innovator: by becoming the trusted business partner of customers worldwide, NTT DATA will build a significant presence in the global market.

Trusted Global Innovator

We realize the dreams of our clients around the world through long-term relationships.

We develop evolving ecosystems with our clients through leading-edge technologies.

We enhance our creativity by respecting diversity.

Values

An important step in working together and achieving the corporate transformation set out in our Group Vision is stating the values we esteem and seek to share. These values are as follows.

Clients First

First, and above all else, we place the needs of our clients.

We work continuously to understand your business and we strive to resolve every concern to your satisfaction. We feel responsibility to ensure your success and we let this obligation set the direction of our work and guide our actions.

Foresight

We never settle for the status quo. Instead, with speed and foresight, we anticipate challenges that lay ahead.

We consider the future of IT as well as the future of your business, work to enhance our ability to picture the future, and with our ecosystems, adapt to the changing business environment. In this way, we help you to meet your goals and create a brighter future for society.

Teamwork

We put great importance on enabling our employees to achieve their best through their work with each other.

We believe that when a diverse group of individuals brings their unique world views together, shares their wisdom, and works toward a common goal, the results are extraordinary and far beyond what can be achieved by any one person.

Global Compliance Policy

Our Global Compliance Policy, shared throughout the NTT DATA Group, sets criteria that guide our daily actions with regard to ethics, laws, regulations, and overall business operations.

Preamble

To be a trusted company, trust by customers, shareholders, suppliers, and society is indispensable for a company to sustainably grow. A company can be trusted upon by being aware of its social responsibility (“CSR”) and by fulfilling the expectation of, and enhancing the satisfaction of, customers and other stakeholders through good dialogues.

We also believe that it is fundamental to gain trust not only by complying with laws, regulations, and agreements but also by respecting various international norms, including human rights, acting with good morals and integrity, and performing fair and transparent business activities.

Furthermore, our mission is to create new “mechanisms” and “values” with IT and to help realize a more affluent and harmonious society, and we aim to help resolve the issues that the earth and society is facing.

With these in mind, everyone at NTT DATA will act in accordance with the Global Compliance Policy, and we will all do our utmost to be a trusted company.

Application

All directors, officers, and employees shall fully understand the Global Compliance Policy, and act as follows to achieve its purposes. Directors and officers shall take the initiative and strive to cultivate high morals in employees.

Principles

We will:

- Comply with all relevant laws and regulations of the jurisdictions where we do business, including international laws, and act in accordance with good integrity.
- Be aware of our CSR, and perform fair and transparent business activities.

For Customers

We will:

- Execute appropriate agreements with our customers, and provide systems and services pursuant to the agreement.
- Thoroughly manage customer information in accordance with the agreements, relevant laws, and regulations related to the protection of personal data.

For Shareholders

We will:

- Undertake sound corporate management and strive to increase the interests of our shareholders.
- Timely and appropriately disclose management information in order to perform transparent management.

To Competitors

We will:

- Restrict ourselves from performing any acts that would impede market competition, including defamation, dumping, cartels, and other unfair / anti-competitive conduct, and perform fair and free competition.
- Protect our own intellectual properties and respect the same of others.

To Suppliers

We will:

- Act with integrity without abusing a superior position.
- Comply with relevant laws and regulations applicable to transactions with suppliers, and observe agreements with suppliers.

To Governments

We will:

- Not provide any gift or hospitality against our policy or applicable laws, nor conduct any act that would be suspected of corruption.
- Not be involved in any bribery with government officials in any manner and in any jurisdiction.

To Society

We will:

- Actively undertake social contribution, such as volunteering or other community activities, to fulfill our responsibility as a good corporate citizen.
- Respect the diversity of cultures and values, and contribute to the development of societies where we do business.
- Refuse to do any business with anti-social forces.

To the Environment

We will:

- Propose IT systems and solutions to contribute to the reduction of the environmental load.
- Strive to reduce the environmental load caused by our business operations.
- Increase our awareness of biodiversity, and undertake activities to protect the natural environment.
- Observe laws and regulations related to the environment.

To Employees & Co-Workers

We will:

- Respect the individuality and personality of our people.
- Respect human rights and will not discriminate based on gender, nationality, belief, or religion.
- Not commit any harassment.
- Maintain fair and equal treatment of employees and provide employment opportunities on the basis of individual merit, in a working environment safe, secure, and free of violence, drugs, or child labor.

As Employees

Each employee will:

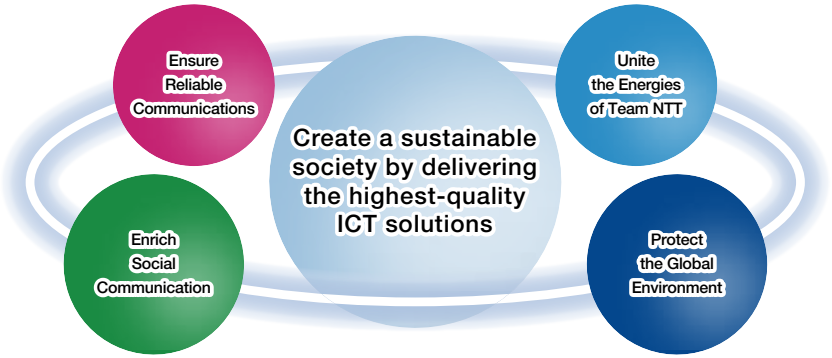
- Ensure that information security be maintained and not conduct any privacy infringement, unauthorized access, and other unlawful acts.
- Observe the Company policies and not engage in any act that conflicts with the interests of the Company or that provides personal gain to the detriment of the Company.
- Not engage in insider trading in any manner.
- Not provide or receive any gifts or hospitality against our policy from/to customers, suppliers, or business partners.
- Not post to any social media any confidential or proprietary information or any message that harms the trust or rights of any parties.
- Promptly report any breach or suspected breach of this policy or other unlawful act to his or her manager, local compliance officer, or whistleblowing line where appropriate. The Company will not make any retaliation to those who made good faith reporting through the whistleblowing line.

CSR in the NTT Group

The NTT Group CSR Charter

In recent years, attention to ESG concerns has increased across the globe, as evidenced by the adoption of the SDGs by the United Nations General Assembly and the COP21 Paris Agreement, along with growing expectations by shareholders, investors, and other stakeholders for companies to align management strategy with CSR strategy. Therefore, the NTT Group revised the charter in May 2016 to reflect the global scope of its business activities, including its value chain.

Guided by the revised NTT Group CSR Charter, the NTT DATA Group continues to engage in CSR activities that are commensurate with the nature of its business operations.

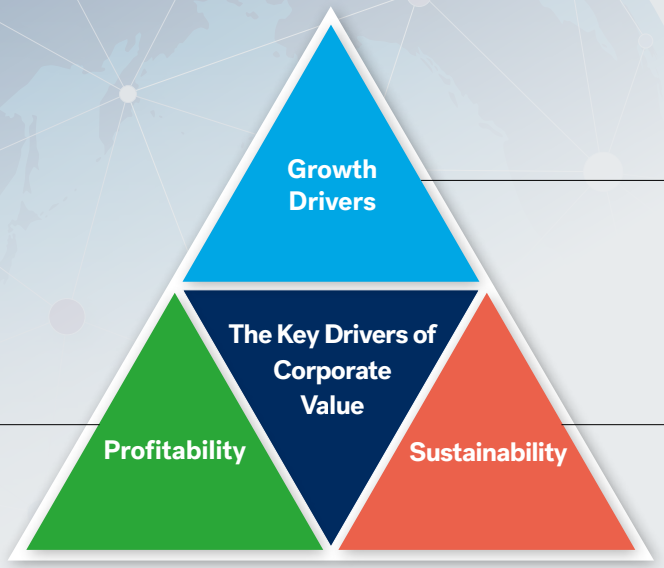


CSR Committee

In fiscal 2015, the NTT Group established the Group CSR Committee, chaired by the chairperson of NTT's CSR Committee (representative director and senior executive vice president) and comprising chief CSR officers (senior executive vice presidents and the executive vice president) of the eight major NTT Group companies. By participating in this committee, the NTT DATA Group contributed to advancing CSR management for the NTT Group as a whole. The NTT DATA Group also takes part in Group CSR Liaison Meetings led by the NTT Group on a regular basis to share common challenges and successful examples from each Group company and to monitor progress on the implementation of our newly formulated CSR Priority Activities with respect to plan–do–check–act (PDCA) cycles and further promote a sense of unity across the Group.

Toward the Sustainable Enhancement of Corporate Value

The NTT DATA Group targets the sustainable enhancement of corporate value from three standpoints: Growth Drivers, Profitability, and Sustainability.



Growth Drivers

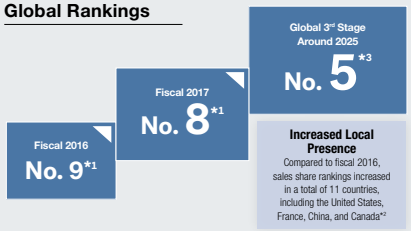
Overseas Sales Expansion

Since around 2005, NTT DATA has been engaged in full-fledged global expansion. In fiscal 2017, overseas sales grew to over ¥900.0 billion among consolidated net sales of approximately ¥2.1 trillion.

Going forward, we believe the expansion of overseas sales will be a major driver of corporate growth.

We aim to expand overseas sales by organic growth leveraging global synergies as well as M&As and increase our local presence.

Global Rankings



*1: Gartner "Market Share: IT Services, 2017" 11 June 2018,
Based on vendor revenue
The Gartner Report(s) described herein (the "Gartner Report(s)") represent(s) research opinion or viewpoints published, as part of a syndicated subscription service, by Gartner, Inc. ("Gartner"), and are not representations of fact. Each Gartner Report speaks as of its original publication date (and not as of the date of this Prospectus) and the opinions expressed in the Gartner Report(s) are subject to change without notice.
*2: Gartner "Market Share: IT Services, 2017" 11 June 2018,
Based on vendor revenue, 11 countries = United States, France, China, Canada, Germany, Australia, Italy, Brazil, Netherlands, India, and Singapore.
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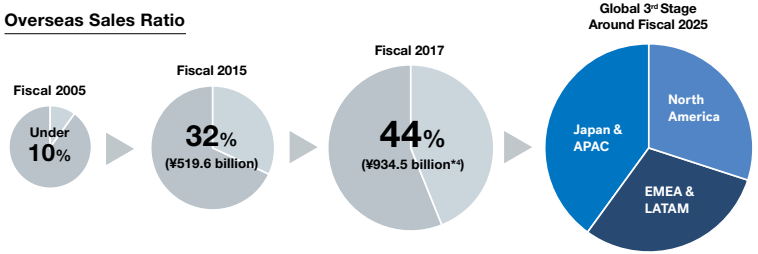
*3: NTT DATA's aim

Overseas Sales Ratio



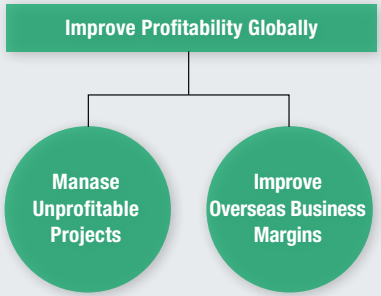
*4: The total of the North America segment and EMEA and Latin America segment, and China and APAC regions

Profitability

Manage Unprofitable Projects, and Increase Overseas Business Margins

To enhance corporate value as a Trusted Global Innovator, NTT DATA believes it is important to not only increase sales but also to work toward improved profitability.

To this end, we will sort out issues on a global basis and make efforts toward improved profitability.



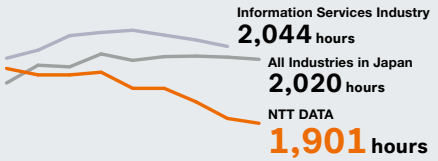
Sustainability

Growth through Resolving Societal Issues

In addition to reducing ESG risks related to human resource management and environmental management, the Company utilizes IT to create new paradigms that contribute to resolving societal issues. Through these efforts, the Company is working to expand corporate value sustainability.

Number of Female Managers

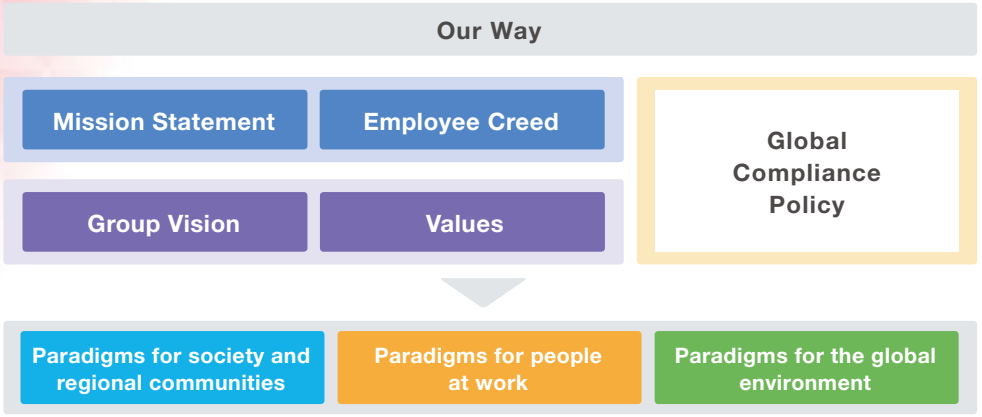
Trends in Annual Hours Worked per Employee



Sustainability in the NTT DATA Group

CSR Policy

We practice Our Way, the guiding principles of our CSR activities, by pursuing our Material CSR Challenges of developing paradigms for society and regional communities, people at work, and the global environment.



CSR Management

System for Promoting CSR

NTT DATA manages its CSR activities under the leadership of representative director and senior executive vice presidents and executive officers. The ESG Promotion Department handles related operations such as compiling information, training employees, and engaging with outside entities, and each workplace carries out CSR activities to contribute to resolving societal issues.

Material CSR Issues

Identifying Material CSR Issues

The NTT DATA Group pursues activities in line with its Material CSR Challenges by upholding Our Way while at the same time striving to establish the infrastructure for our CSR management, such as corporate governance, to meet the expectations of the global community. To make our measures for promoting Group activities more effective, we identified the material issues requiring a focused effort by following the materiality analysis process outlined in the GRI's Sustainability Reporting Standards.

Material CSR Issues of the NTT DATA Group

Material CSR Challenges			CSR infrastructure
Society and regional communities	People at work	Global environment	
● Develop IT human resources ● Contribute to the realization of a fair society	● Realize diversity in hiring and promotion ● Eliminate illegal labor practices (child labor, forced labor, extended work hours)	● Respond to climate change	● Disseminate safe and secure IT infrastructure ● Innovate advanced IT technologies ● Ensure information security ● Ensure compliance ● Respond to disaster risks

Process of Identifying Material CSR Issues

We used the following process to identify our Material CSR Issues.

① In view of the Group's business environment, we considered the internal and external situation from the perspective of ESG to extract the issues that the NTT DATA Group should address.

② We prioritized these issues from the perspective of "materiality for society (stakeholders)" and "materiality for the NTT DATA Group" to identify our material issues.

③ The ESG Promotion Department, which is in charge of CSR, verified the validity of the material issues we identified in order to ensure that the material issues of the NTT DATA Group have been adequately covered and that the expectations of our stakeholders have been appropriately reflected. The identification of issues was confirmed after gaining final approval from directors.

④ We annually publish a report on our material issues and related initiatives. Also, we gather feedback from our stakeholders through surveys, external reviews, and other means to improve our activities in the upcoming fiscal year.

Materiality Analysis

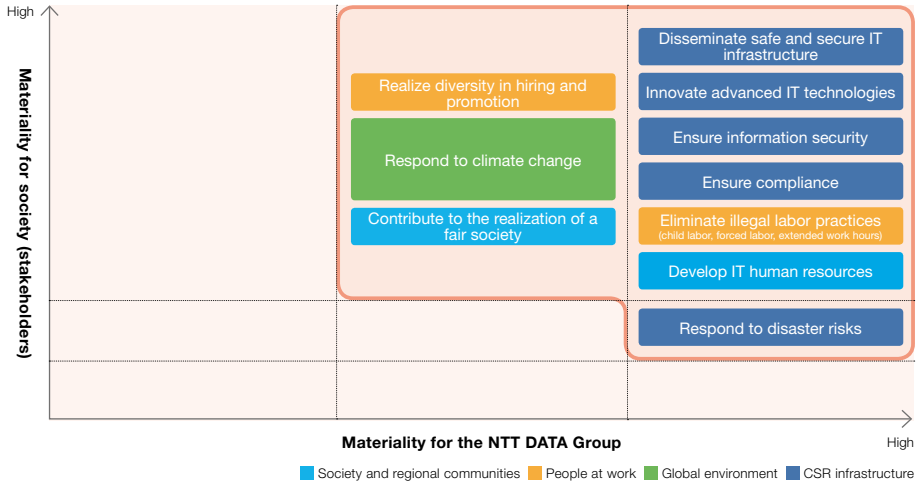
Identifying materiality for society (stakeholders)

- Sort out and analyze the results of evaluation by research and rating agencies
- Identify the categories adopted by the GRI Guidelines, ISO 26000, etc.
- Interview outside experts

Identifying materiality for the NTT DATA Group

- Conduct an employee survey on the Sustainability Report
- Conduct the Employee Satisfaction Survey, Customer Satisfaction Survey, etc.

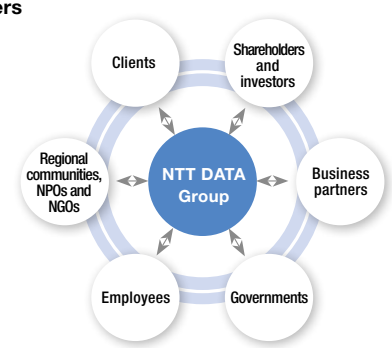
We also referenced the NTT Group CSR Charter to identify materiality.



Stakeholder Engagement

In business, there are always opportunities to engage with stakeholders in dialogue and make improvements based on these conversations. We value the conversations we have on a daily basis and instill within the Group our commitment to our stakeholders while at the same time considering what society at large expects of us as we strive to address societal issues.

Key Stakeholders



Overview of Stakeholder Engagement

	Stakeholders	Related Material CSR Issues	Main Approach
Clients	● All our clients, including corporations, that use services provided by the NTT DATA Group	● Disseminate safe and secure IT infrastructure ● Innovate advanced IT technologies ● Ensure information security ● Respond to climate change	● Regular sales and proposal activities ● Client satisfaction surveys (questionnaires, interviews)
Shareholders and Investors	● Shareholders of the NTT DATA Group and other individual and institutional investors	● Respond to disaster risks ● Ensure compliance ● Respond to climate change	● Annual General Meeting of Shareholders ● Annual reports ● Investor relations (IR) website ● Financial results briefings ● Shareholder newsletters
Governments	● Central and local governments overseeing policies on the IT service industry, employment, the economy, and the environment	● Disseminate safe and secure IT infrastructure ● Innovate advanced IT technologies ● Ensure information security ● Ensure compliance ● Realize diversity in hiring and promotion	● Various applications and reports ● Consultative meetings, committee meetings, and research committees held by government agencies ● Committee meetings and investigative meetings, held by industry groups and organizations
Regional communities, NPOs and NGOs	● Local communities and NPOs involved with NTT DATA Group companies through our core businesses	● Contribute to the realization of a fair society ● Develop IT human resources ● Disseminate safe and secure IT infrastructure ● Ensure information security	● Participation in community events ● Collaboration with / sponsoring of social contribution activities ● Feedback via our website ● Advisory boards
Business partners	● Business partners that cooperate in providing NTT DATA Group services	● Ensure compliance	● Regular business activities ● Business Partner (BP) Presidents' Meetings ● Discussion meetings ● Technological briefing sessions
Employees	● Employees of the NTT DATA Group and their families	● Eliminate illegal labor practices (child labor, forced labor, extended work hours) ● Realize diversity in hiring and promotion ● Respond to disaster risks	● Employee satisfaction surveys ● Management / employee town halls ● Proposal Patio (bottom-up suggestion system) ● "Nexti" (NTT DATA Group internal SNS) ● Helpline ● Counseling

Advisory Board Established to Incorporate Opinions and Proposals into Business Activities

In August 2016, the NTT DATA Group set up its third advisory board as a forum for seeking objective opinions and proposals of outside experts on NTT DATA's management. The members exchange views on aspects of our management and on societal issues, and we incorporate their opinions and proposals into business activities.

Fiscal 2017 Discussion Points

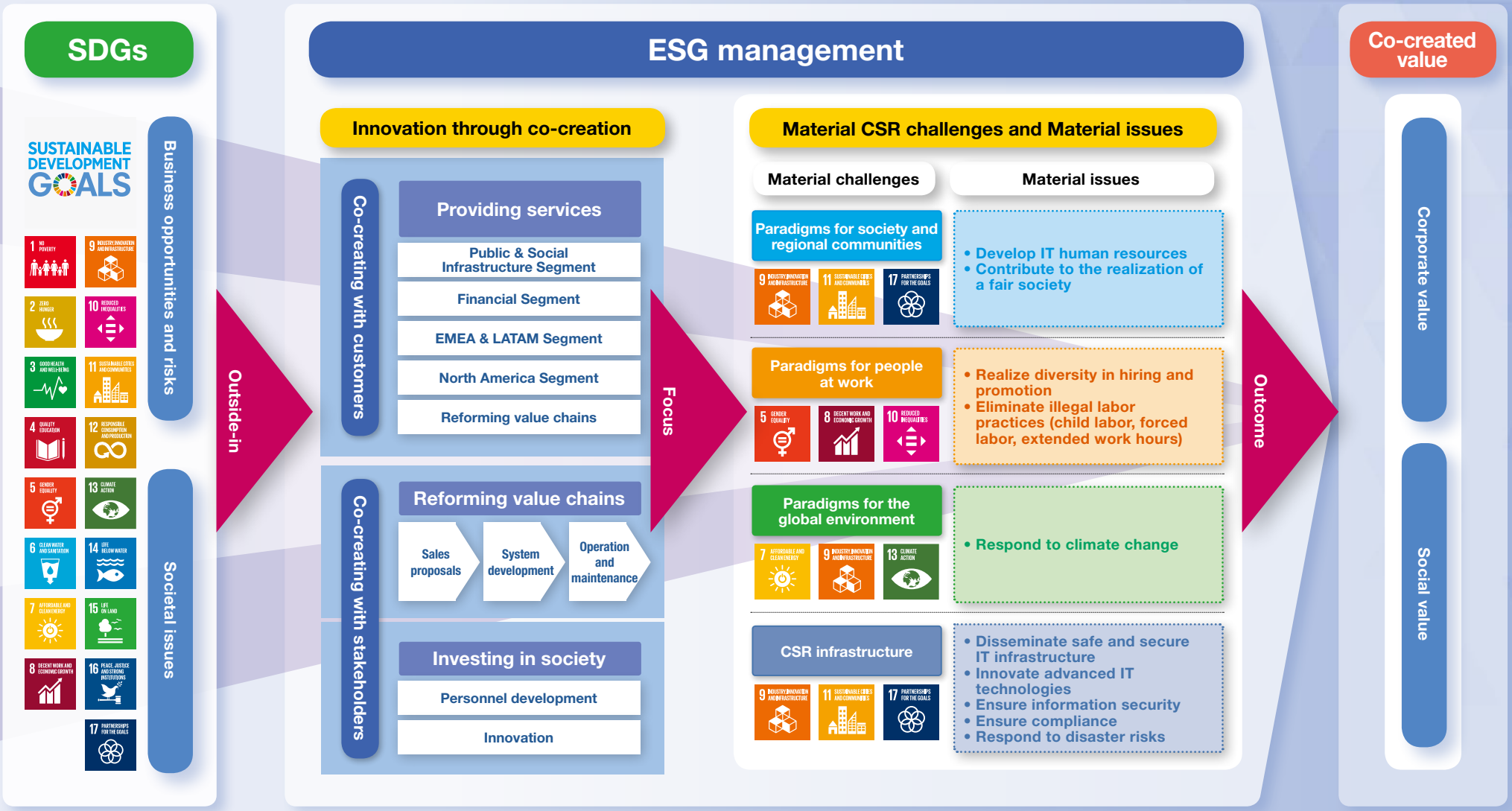
- Global strategies
- Initiatives in digital businesses
- Initiatives aimed at acquiring competitive advantages for the Company in light of social changes

(Honorific titles omitted, in alphabetical order)

● **Term**	From October 2017 to September 2018
● **Frequency of Meetings**	Twice a year
● **Advisory Board Members** (as of September 2018)	• Noriko Arai, Professor, National Institute of Informatics / Director, Research Center for Community Knowledge • Yoshinori Ando, President, Ando Yoshinori Office • Fumihiko Ike, Former Chairman, Honda Motor Co., Ltd. • Shuzo Kaihori, Director and Advisor, Yokogawa Electric Corporation • Hirohide Yamaguchi, Chairman of the Advisory Board, Nikko Research Institute, Inc.

The NTT DATA Group and the SDGs

The mission statement of the NTT DATA Group calls on it to “use information technology to create new paradigms and values, which help contribute to a more affluent and harmonious society.” In accordance with this mission statement and in light of the SDGs, we will conduct business management with an emphasis on ESG factors (ESG management). Thus, while co-creating value with customers and other stakeholders, we will focus on CSR tasks that we have identified as having particular importance for us.



Initiatives Targeting Material CSR Issues

The NTT DATA Group addresses societal issues by harnessing IT and contributes to the development of a sustainable society by engaging its stakeholders.

Material CSR Challenges	Principal SDGs	Material CSR Issues	Content
Paradigms for society and regional communities	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 11 SUSTAINABLE CITIES AND COMMUNITIES; 17 PARTNERSHIPS FOR THE GOALS	Develop IT human resources	To realize a sustainable future, we will support the cultivation of IT human resources from a variety of angles to ensure that IT is broadly deployed in a fair and appropriate manner as a social infrastructure.
		Contribute to the realization of a fair society	We will contribute to the resolution of issues that local communities face through the use of IT, to realize a fair and sustainable society.
Paradigms for people at work	5 GENDER EQUALITY; 8 DECENT WORK AND ECONOMIC GROWTH; 10 REDUCED INEQUALITIES	Realize diversity in hiring and promotion	By making diversity and inclusion a priority management strategy, we aim to create new corporate value based on the two core concepts of “respecting diversity” and “workstyle innovations.”
		Eliminate illegal labor practices (child labor, forced labor, extended work hours)	We are working to create healthy workplaces across the Group that support high employee satisfaction while striving to achieve workstyle innovations for each employee in each team, placing importance on individual abilities that lead to organizational strength.
Paradigms for the global environment	7 AFFORDABLE AND CLEAN ENERGY; 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 13 CLIMATE ACTION	Respond to climate change	We aim to reduce environmental impact by working as a group to create and expand environmental solutions and promote environmental communications.
CSR infrastructure	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 11 SUSTAINABLE CITIES AND COMMUNITIES; 17 PARTNERSHIPS FOR THE GOALS	Disseminate safe and secure IT infrastructure	In realizing a social infrastructure that people feel safe and secure to use, the entire NTT DATA Group is engaged in, for example, the gaining of certification under quality management standards and the standardization of development and management methods. The Group aims to provide services that are geared toward raising system reliability.
		Innovate advanced IT technologies	We pursue innovation management centered on the core idea of harnessing IT technology to drive innovation. At the same time, we share medium- to long-term issues with our clients and engage in forward-looking technology development and business collaboration.
		Ensure information security	While achieving an appropriate balance between ensuring the safety of information and actively utilizing and sharing information, we will promote the safe sharing of knowledge Groupwide with the aim of creating new value for customers.
		Ensure compliance	We position the Global Compliance Policy, which serves as the foundation of our approach to corporate ethics, as a part of Our Way, and are striving to establish the policy throughout the Group.
		Respond to disaster risks	We put in place and strive to constantly improve disaster business continuity plans (BCPs) as well as contingency plans for systems and services related to social infrastructure.

CASE 1 — Contribute to the realization of a fair society
RWinActor® and WinDirector® RPA tools
FrontGate over-the-counter insurance sales system
P20

CASE 2 — Realize diversity in hiring and promotion
Diversity and inclusion
P22

CASE 3 — Respond to climate change
Mitaka Data Center EAST
P23

CASE 4 — Innovate advanced IT technologies
Cognitive automation engines
Active vibration control technology that uses AI
P24

Society and Regional Communities | Contribute to the realization of a fair society

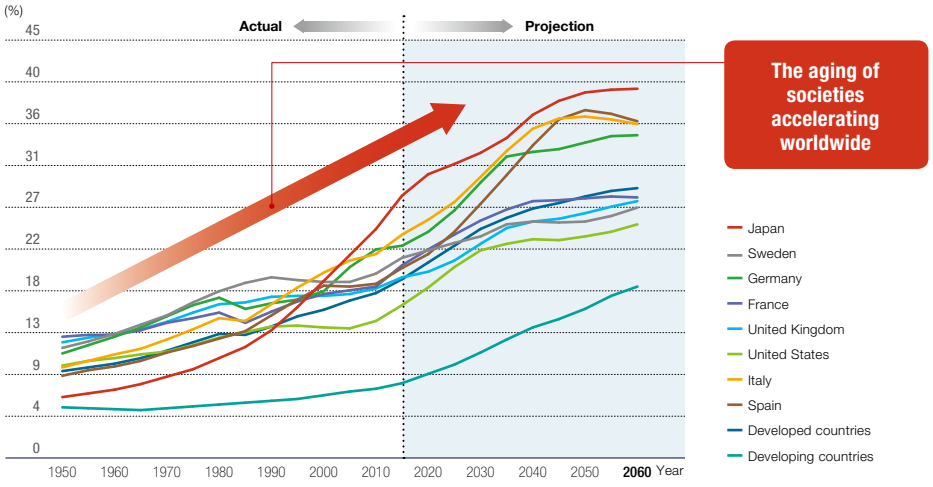
CASE 1 Contraction of the Working-Age Population as Society Ages

Japan's population is aging rapidly. In 2008, the population peaked, marking the country's entry into an era of population decline. According to the projections of the National Institute of Population and Social Security Research, Japan's population will fall below 100 million by 2050. Moreover, the composition of the population will change. The population group aged 65 or above is increasing steadily. In 1997, this group accounted for a larger percentage of the population than the group aged 14 or below. In 2017, the population group aged 65 or above comprised 35.15 million people and accounted for 27.7% of the population. Meanwhile, the working-age population, those aged between 15 and 64, is projected to decline from 60.0% of the population (75.96 million) in 2017 to 53.9% (59.78 million) in 2040.

The aging of Japan's society and the decrease in the working-age population is creating a range of increasingly serious societal and economic issues. These include labor shortages, a loss of international competitiveness as Japan becomes a less attractive investment destination, and economic contraction due to lower domestic demand.

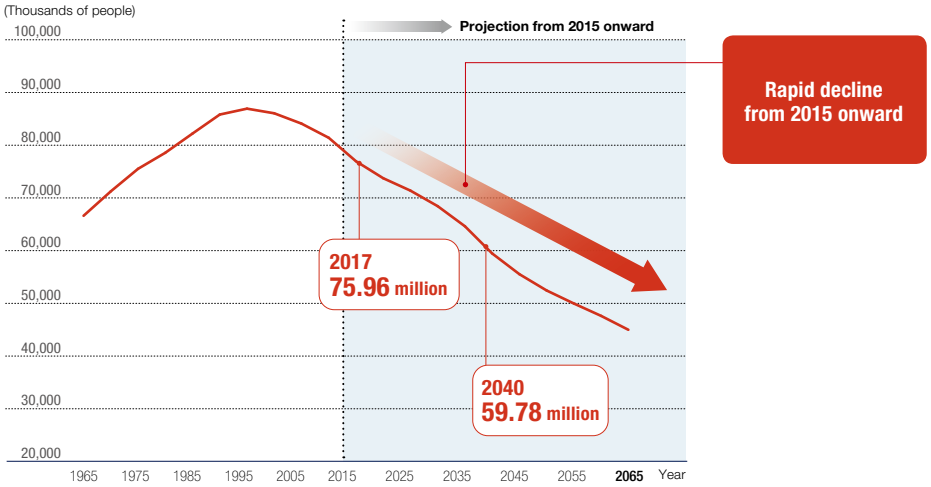
To maintain socioeconomic levels in an era of population decline, Japan will have to create more added value with a finite labor force and heighten per capita productivity.

The Elderly as a Percentage of Populations Worldwide



Source: Prepared based on the 2018 *Annual Report on the Aging Society*, Cabinet Office
http://www.soumu.go.jp/johotsusintokei/whitepaper/ja/h30/pdf/30honpen.pdf
(In Japanese only)

Japan's Population and Demographics



Source: Prepared based on *2018 White Paper on Information and Communications in Japan*, Cabinet Office
http://www.soumu.go.jp/johotsusintokei/whitepaper/ja/h30/pdf/n1000000.pdf
(In Japanese only)

As populations age and working-age populations contract, countries will have to heighten per capita productivity.

CASE 1 > The NTT DATA Group's Solutions

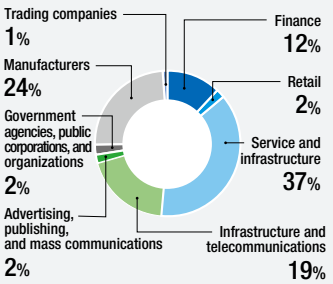
WinActor® and WinDirector® RPA tools

Until now, creating systems that automate or increase the efficiency of office work has been challenging. However, RPA enables the realization of such systems. For example, by using a PC to carry out work that is to be entrusted to RPA and having the RPA system remember the operational procedures, it is possible thereafter to have the RPA system perform the task in question instead of the worker. In this way, the spread of RPA promises to greatly alleviate the burden of routine work. At present, with the decline in the working-age population due to the age of society becoming an issue, the use of RPA to increase productivity has become an important way of addressing the labor shortage issue.

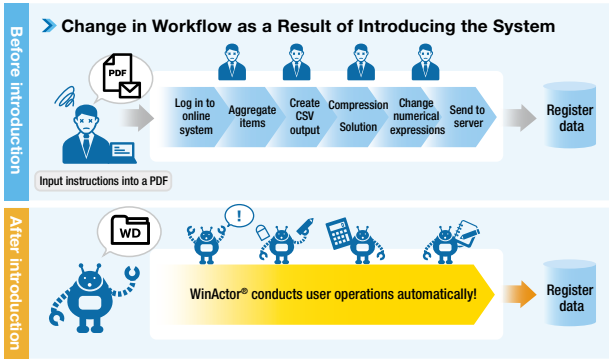
Increasing the Efficiency, Reducing the Burden, and Enhancing the Quality of Routine Tasks

WinActor® and WinDirector® RPA tools realize RPA solutions that are made entirely in Japan and which are based on research technology developed by NTT Access Network Service Systems Laboratories. The tools have earned a strong reputation as a result of user-friendliness that allows business division managers to set automation rules without programing as well as versatility that does not restrict the applications that can be automated. Consequently, as of August 2018 approximately 1,250 companies have introduced these tools, which boast the No. 1 market share in Japan. Moreover, a survey of customer satisfaction announced by *Nikkei Computer* magazine ranked NTT DATA at the top of the RPA category for 2018–2019. This is a testament to the differentiated, extensive services and support—which includes training, administration of certification exams, and technical support—that more than 200 authorized dealers provide nationwide.

Breakdown of Corporate Contracts



Change in Workflow as a Result of Introducing the System



Looking Ahead

As well as helping tackle a range of societal issues, such as productivity enhancement, workstyle reform, and the elimination of personnel shortages, WinActor® and WinDirector® RPA tools promise to assist in the creation of added value by enabling companies to create new businesses and supporting employees' career development.

FrontGate Over-the-Counter Insurance Sales System Linking Banks and Life Insurers Directly

To heighten per capita productivity while heightening the quality of services provided to customers, the proactive use of IT systems that change traditional workstyles is essential.

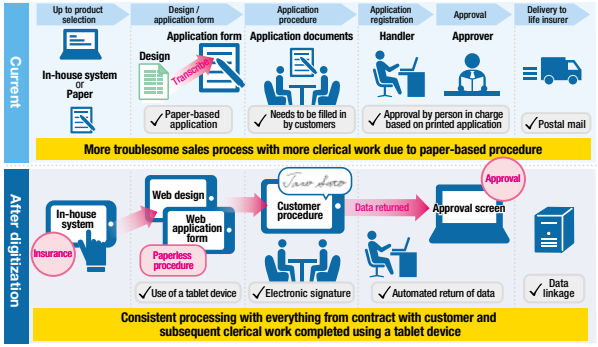
In partnership with The Senshu Ikeda Bank, Ltd., NTT DATA has developed the first system in the banking industry that directly links banks and life insurance companies and enables the completion of all processes—from identifying customers' needs and offering suggestions through to concluding policies—entirely through a tablet device. In May 2017, The Senshu Ikeda Bank and 12 other banks began using the system. As of July 2018, a further 33 banks had already decided to use the system. Including banks that intend to use the system, more than 60 banks have adopted or will adopt the system. The operation of the system enhances the services that banks provide to customers by reducing the volume of forms and documents that they have to complete or affix seals to and by shortening the number of days needed for processing policies. At the same time, the system helps mitigate the problem of contraction in the working-age population as society ages.

Improving Customer Service While Raising Labor Productivity

Our new system enables customers to complete life insurance applications by simply entering several checks and electronic signatures into a tablet device. Thus, the system significantly reduces the number of paper forms customers have to fill out and approximately halves the lead time from application through to policy completion. Previously, because applications were mailed, customers waited roughly two weeks to receive insurance policies. By dispensing with the need for paper forms, our system delivers policies to customers in as little as three days. Moreover, the elimination of paper documentation enables the system to check the information that customers input, thereby greatly reducing delays in policy processing that arise from incorrectly completed forms.

The use of tablet device to remove paper documentation from a process that has until now been cumbersome and centered on paper forms and to systematize the entire process with one stroke has enhanced the services banks provide customers. At the same time, our system helps raise labor productivity by increasing the administrative efficiency and lowering the paper documentation management costs of banks and insurance companies.

Change in Workflow as a Result of Introducing the System



Looking Ahead

We plan to make this solution compatible with the operations of a greater number of insurance companies. Also, plans call for adding functions to the system with a view to eliminating paper from an even broader range of insurance application procedures. NTT DATA will continue providing progressive IT that helps resolve societal issues arising from Japan's dwindling working-age population.

People at Work | Realize diversity in hiring and promotion

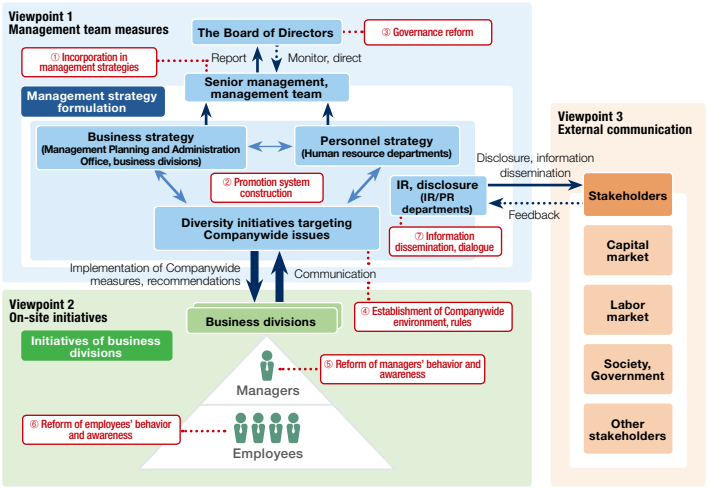
CASE 2

Diversity Management That Enhances Corporate Competitiveness and Sustains Growth

With economic globalization and diversification of customer needs driving dramatic changes in competitive conditions, diversity management that secures and develops talented personnel—regardless of their age, gender, or nationality—is becoming an increasingly important factor in efforts to heighten corporate competitiveness and sustain growth.

Against this backdrop, the Ministry of Economy, Trade and Industry (METI) has been taking steps aimed at increasing the competitiveness of Japan's companies. In April 2018, METI compiled recommendations by convening a study group tasked with examining approaches to diversity management as a competitive strategy (Diversity 2.0). In addition, METI recommended the promotion of diversity that continuously benefits business management by revising the *Diversity 2.0 Action Guidelines*, which METI originally prepared and released in March 2017.

Seven Actions in Accordance with the Diversity 2.0 Action Guidelines



Source: Prepared based on *Diversity 2.0 Action Guidelines*, Ministry of Economy, Trade and Industry
http://www.meti.go.jp/press/2016/03/20170331012/20170331012-4.pdf
(In Japanese only)

Promotion of Diversity and Inclusion through the Empowerment of Diverse Personnel and Workstyle Innovation

Viewing diversity and inclusion as a critical management strategy for global competitiveness, NTT DATA will create corporate value by empowering diverse personnel and innovating workstyles.

To empower diverse personnel, we have set as targets for the end of fiscal 2020 ensuring female employees continue to account for more than 30% of new hires, employing 200 female managers, and establishing a senior management team that includes more than 10 female members working as executives and heads of organizations and in other positions. Also, we support the empowerment of female employees by offering training that helps career development, sending employees for training externally, and providing the Egg Garden in-house day-care center.

As for workstyle innovation, we have established average total annual work hours and a target achievement rate for annual leave taken as key performance indicators (KPIs). By the end of fiscal 2018, we aim to realize an average of 1,890 total annual work hours per employee. We will achieve our targets by providing quarterly progress reports to the senior management team and continuously improving our initiatives. Further, we are not only shortening working hours but also developing systems and workplace environments and heightening development productivity to ensure that we increase the quality of our work during the limited time available and thereby maintain our robust competitiveness.

Earning a Favorable Evaluation for Diversity Initiatives and Receiving a Diversity Management Selection 100 Prime Commendation Details → P43

In light of the *Diversity 2.0 Action Guidelines*, METI began the Diversity Management 100 Prime program in fiscal 2017. Based on the program, METI has been selecting and awarding companies that implement continuous, companywide initiatives to promote diversity management.

In 2013, NTT DATA was selected for inclusion in the Diversity Management Selection 100. Since then, we have advanced ongoing, Companywide measures focused on diversity. For example, the senior management team regularly issues messages concerning diversity. Also, we are changing the mind-set of employees by supporting career development and innovating workstyles. In recognition of these efforts, NTT DATA received a Diversity Management Selection 100 Prime commendation. This award is conferred on the crème de la crème of companies engaged in diversity management, with only two of the 70 companies that applied for the commendation receiving it.

Mains Reasons for the commendation

- **Regular issuance of messages concerning diversity by the senior management team**
- **Efforts to change the mind-set of employees by supporting career development and innovating workstyles**

Receiving the Diversity Management Selection 100 Prime commendation

Looking Ahead

Encouraged by the recent Diversity Management Selection 100 Prime commendation, NTT DATA will develop an environment that enables each employee to realize his or her potential and work with vitality and in which diverse personnel can play active roles. We will continue moving forward to realize diversity and become an attractive company that is the first choice of customers and society.

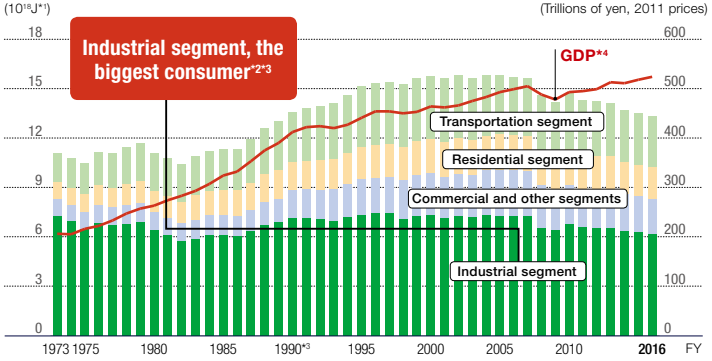
Global environment | Respond to climate change

CASE 3 Reduction of Energy Consumption—Japan's Perennial Issue

Japan depends on imports for the majority of its energy resources. This gives the country an energy structure that is highly susceptible to changes in energy-related conditions both domestically and overseas. Securing supplies of energy—the lifeblood of daily life and industrial activity—is always a major task for Japan.

In response to this situation, in 2015 METI established a long-term energy supply–demand outlook (energy mix) for Japan, which was based on a strategic energy plan approved by a Cabinet decision in 2014. With the achievement of policy goals for safety, supply stability, economic efficiency, and environment-friendliness as its premise, this energy mix sets out Japan's target supply–demand structure. Given that they account for a large share of energy consumption, companies must implement rigorous energy-saving measures if Japan is to realize this energy mix.

Final Energy Consumption and Real GDP



Reduction of energy consumption of the industrial segment, which consumes the most energy, is a major issue

*1: A joule is a unit used to measure energy. 1 MJ = 0.0258 × 10^{-3} crude oil equivalent kl
*2: With respect to comprehensive energy statistics, the calculation method has been changed for the figures of fiscal 1990 and of subsequent fiscal years.
*3: The industrial segment is the total of the agricultural, forestry, fisheries, mining, construction, and manufacturing industries.
*4: The GDP of fiscal 1993 and of the preceding fiscal years are the estimates of The Institute of Energy Economics, Japan.
Source: Prepared based on *Energy White Paper 2018*, Ministry of Economy, Trade and Industry
http://www.meti.go.jp/press/2016/03/20170331012/20170331012-4.pdf
(In Japanese only)

Mitaka Data Center EAST—Accommodating 5,600 Server Racks, the Largest Number in Japan, and Catering to Increasingly Sophisticated Demand

Mitaka Data Center EAST

In recent years, as their use of cloud-computing services grows, companies have been increasingly contracting one-stop service providers to design, build, and operate cloud-computing systems. With a rise in the number of companies transferring data previously managed in-house to data centers (the cloud) and utilizing cloud computing, the role of data centers is becoming ever more important.

Further, today's data centers must be built to withstand earthquakes and other major natural disasters and have high levels of security. In addition, they need to be able to cope with large power loads as power consumption per server rack rises due to the introduction of highly integrated systems and the expansion of cloud-computing services.

To cater to the aforementioned needs, NTT DATA has built a state-of-the-art facility, Mitaka Data Center EAST, next to Mitaka Data Center. Boasting the largest number of server racks in Japan (5,600), the new data center began providing services in April 2018.

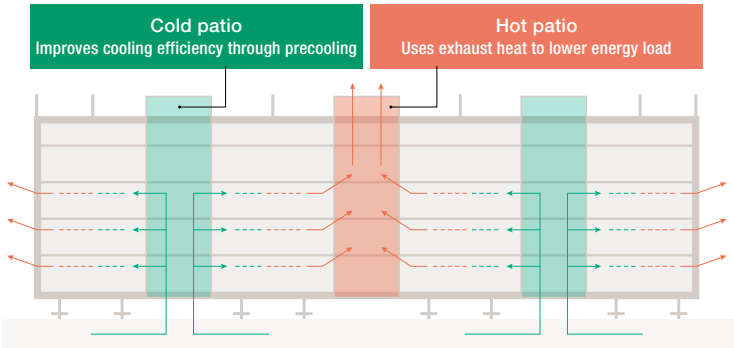
Realizing Advanced Environmental Performance through a Leading-Edge Facility

At Mitaka Data Center EAST, we aim to achieve some of the highest levels of power usage effectiveness (PUE) in Japan by using natural energy and the latest equipment and facilities. Specifically, we aim to realize PUE of 1.3 or less on an annual average and design value basis.

Key Environmental Features

- Direct and indirect outside-air cooling systems that use natural energy
- Atrium with zero CO_2 emissions
- Energy-saving system that uses solar power generation
- Exterior cladding that heightens the facility's performance and saves energy
- Motion detectors with image sensors

Structure of the Outside-Air Cooling System



Looking Ahead

Keeping in mind future technological innovations in relation to servers, other IT devices, air-conditioning, and power equipment, we have designed Mitaka Data Center EAST so that it can be readily upgraded and expanded and has the capacity to receive large amounts of power. This design will allow us to offer leading-edge data center facilities consistently without having to undertake major renovation. As well as providing the latest facilities for many years to come, we will improve the data center even further to lower its environmental impact.

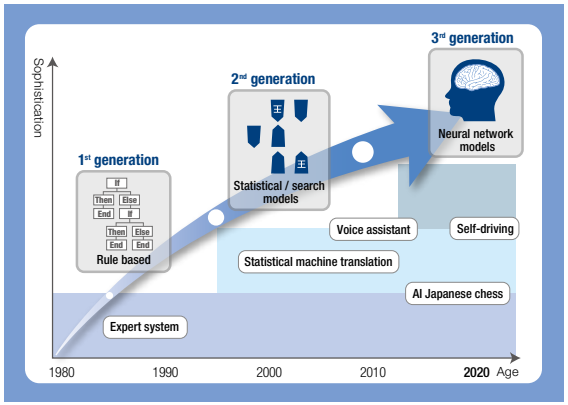
Society and regional communities | Innovate advanced IT technologies

CASE 4

The Advance of AI-Enabled Innovation

AI is attracting attention as a technology with the potential to create new value and drive innovation in business. We can discover new rules and knowledge by focusing AI learning on data volumes of an order of magnitude that would be impossible for humans to handle. This capability promises to benefit a wide range of areas. For example, those engaged in sales or product design can deepen their understanding of customers' latent needs. As for the manufacturing field, the use of AI learning can improve yields. Further, having AI learn from past data can increase prediction accuracy. As a result, companies will be able to anticipate minute changes in customer demand and behavior or detect equipment failure precursors. Other growing applications for AI are automation and the establishment of autonomous capabilities.

The Evolution of AI Technology



AI has evolved through three generations. The first generation supports intellectual tasks through operations in accordance with empirical rules set by experts, while the second generation uses statistical and search models to discover optimal solutions. Today, the third generation is making increased use of neural network models that dramatically improve recognition performance.

The Types of AI

		Types of Technology	Capabilities
1st generation	Rule based	AI that can use knowledge for deduction and searching	Output based on rules input as knowledge (humans set rules)
2nd generation	Statistical / search models	AI that incorporates machine learning	Provision of sample data or feature quantity by humans, learning of rules or knowledge, and automated decisions on newly input data and automated output
3rd generation	Neural network models	AI that incorporates deep learning	Without human intervention in rule setting, autonomous learning of features and rules as well as automated decisions and output

AI in a broad sense

Going forward, engagement with and the utilization of AI in businesses will focus on designing solutions to various work tasks by combining first, second, and third generation AI methods as appropriate while seamlessly merging them with mobile and wearable systems, IoT systems, and analytics systems.

The Advance of AI-Enabled Innovation

Rule based	Automation of intelligent processing	• Helping watch over the elderly through robots and sensors
		• Robotic Context Processor
		• Code Finder
Statistical / search models (machine learning)	Knowledge discovery and prediction	• Use of simulations to forecast and help alleviate traffic congestion
		• Smart ICU
		• Lean Bot, Security Bot
	Automation of intelligent processing	• Helping watch over the elderly through robots and sensors
		• Robotic Context Processor
		• Code Finder
		• Knowledge discovery and prediction
Neural network models (deep learning)	Automation of intelligent processing	• Lean Bot, Security Bot
	Control	• Helping watch over the elderly through robots and sensors
	Automation of intelligent processing	• AI-enabled vibration control technology
		• Robotic Context Processor
		• Automated news article drafting

As well as AI for businesses, NTT DATA aims to provide AI that helps address societal issues. We have a strong track record in the field of optimally combining first-generation rule-based AI, second-generation statistical and search models, and third-generation neural network models to realize AI-enabled systems and solutions that cover knowledge discovery and prediction through to the automation of intelligent processing (implementation) and the establishment of autonomous intelligent processing.

The current high-paced evolution of AI technology poses the question of how best to use AI in tackling the issues of businesses and society.

CASE 4 > The NTT DATA Group's Solutions

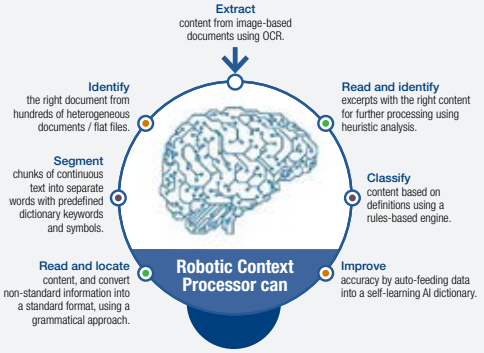
Contribution to the Healthcare Industry through a Cognitive Automation Engine

By providing AI-enabled solutions, the NTT DATA Group helps address an array of societal issues worldwide. One such solution is a cognitive automation engine that subsidiary NTT DATA Services, LLC, has developed. The engine—NTT DATA Robotic Context Processor—contributes to the efficient management of contracts between hospitals and insurers and other complex legal documentation, which is a major task in the healthcare industry.

Receiving Recognition for Bringing Business Innovation to Customers

NTT DATA Robotic Context Processor uses built-in optical character recognition (OCR), natural language processing, and self-learning capabilities to comprehend complex legal documentation and execute appropriate actions based on directives. In this way, our processor significantly reduces the time personnel spend managing various types of documents. In recognition of its contribution to innovation in customers' businesses, this solution received the Best Achievement in Operational Excellence to Deliver Business Transformation at The Business Transformation & Operational Excellence World Summit, an annual event held in the United States to promote operational excellence initiatives. Also, we can increase the speed, accuracy, and cost-effectiveness of document creation even further by using Lean Bot & Security Bot in combination and NTT DATA Code Finder. Lean Bot & Security Bot is an automated workflow monitoring service that helps to automate and increase the efficiency of work, while NTT DATA Code Finder is a medical coding support service based on natural language processing.

Benefits of Introducing NTT DATA Robotic Context Processor



Looking Ahead

NTT DATA will increase the use of NTT DATA Robotic Context Processor, Lean Bot & Security Bot, and NTT DATA Code Finder. At the same time, we will continue advancing innovations with a view to developing services and solutions that address a range of societal issues and help customers digitize their operations.

AI-Enabled Active Vibration Control Technology for Skyscrapers

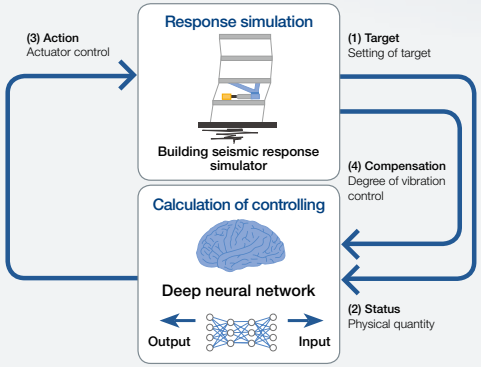
The rapid progress of AI in recent years has increased the practical applications for machine learning and driven the emergence of deep learning. Consequently, advanced AI is playing ever more important roles in a broad range of fields. For example, Japan hopes to use advanced AI to address such societal issues as the risk of earthquakes and other natural disasters.

Our annual *NTT DATA Technology Foresight* report (see page 33) identified as one of 2017's technological trends the ubiquity of artificial neural networks—which are capable of deep learning. In August 2017, NTT DATA and NTT FACILITIES, INC., developed the world's *first* active vibration control technology to use advanced AI to mitigate the vibration of skyscrapers that is caused by seismic motion.

Reducing Shaking Significantly Compared with Conventional Technology

Active vibration control technology is a vibration control method that mitigates the shaking of a building by using external energy to apply the required controlling force. In accordance with the seismic motion, advanced AI that has learned optimal vibration control based on measurement data from a sensor controls dampers, which mitigate the shaking of buildings by absorbing seismic energy. Vibration tests on large-scale models have confirmed that, in comparison with conventional technology, our new technology more than halves the shaking of skyscrapers caused by long-period seismic motion. Therefore, we believe that this technology will reduce damage to skyscrapers resulting from long-period seismic motion and give residents greater peace of mind.

The Use of a Simulator for Deep Reinforcement Learning



In reinforcement learning, minimizing shaking of the building is set as a target. Using an algorithm that gives high scores to control (compensation) that is more effective, the artificial neural network automatically acquires optimal active control rules through trial-and-error learning.

Looking Ahead

We are developing active vibration control technology with a view to using it for real buildings. As well as contributing to long-period seismic motion countermeasures for skyscrapers, we will continue developing AI-enabled services that help address a variety of other societal issues.

Third-Party Evaluations

NTT DATA's CSR initiatives have been highly rated by a number of domestic and overseas research agencies (as of September 2018).

DJSI World Index and Asia Pacific Index

NTT DATA was selected as a member of the Dow Jones Sustainability Indices (DJSI) World Index and Asia Pacific Index. Developed by S&P Dow Jones Indices and RobecoSAM, DJSI is a stock index that assesses corporate sustainability in relation to the three aspects of the economy, the environment, and society.

FTSE4Good Index

NTT DATA has been selected as a component of the FTSE4Good Index, which is designed to promote investment in companies that meet global standards related to ESG criteria.

FTSE Blossom Japan

NTT DATA has been selected as a constituent of FTSE Blossom Japan, an index created by FTSE Russell that assesses excellent Japanese companies on international criteria related to ESG.

Prime Rating by oekom

NTT DATA has been accorded a "Prime" rating in the Internet & Software industry category of CSR ratings by oekom research AG of Germany.

Morningstar Social Development Society Index

NTT DATA has been selected as a component of this stock index of socially responsible investment (SRI), Japan's first, for which Morningstar has chosen and created an index of socially excellent companies listed in Japan.

RobecoSAM Sustainability Award

In recognition of exceptional CSR efforts, RobecoSAM has given NTT DATA a Bronze Class RobecoSAM Sustainability Award. Based in Switzerland, RobecoSAM conducts evaluations and research focused on SRI.

Commitment to Outside Initiatives

The NTT DATA Group has adopted a preventive approach and participates in outside organizations, including those listed below, to share information on societal issues and engage in discussions.

- Japan Data Communications Association (Board member)
- Japan Electronic Payment Promotion Organization (Chair)
- Japan Business Federation
- The Telecommunications Association
- Japan Association of Corporate Executives

Awards

Paradigms for Society and Regional Communities

Recognized as a Leader in IT Services for Worldwide Omni-Channel Engagement in the *IDC MarketScape* Report of 2017

In April 2017, the *IDC MarketScape* report ranked NTT DATA as a "Leader," which is the highest ranking, based on its service strategies and implementation capabilities in the provision of medium-to-long-term engagement with customers. Issued by International Data Corporation of the United States, the report evaluates omni-channel service providers in the financial segment.

https://www.idc.com/

Received "Winner" Award for an Affiliated Merchant Review Solution

At the Japan Information Technology Services Industry Association (JISA) Awards 2017, NTT DATA earned selection as a "Winner" in June 2017. The award commended our solution for corporation (affiliated merchant) review work. In particular, the solution's reduction of workloads for network information collection, automation of the collection procedures, originality, and potential for international rollout received plaudits.

https://www.jisa.or.jp/event/awards/tabid/265/Default.aspx

(In Japanese only)

Received the Minister of Internal Affairs and Communications Award and the Grand Prize in the ASP/SaaS Category at the 11th ASPIC Awards for ECONO-CREA®

In November 2017, ECONO-CREA® received the Minister of Internal Affairs and Communications Award as well as the Grand Prize in the ASP/SaaS Category at the 11th ASP-SaaS-IoT Cloud (ASPIC) Awards. The host, ASPIC Consortium, granted the awards in recognition of our provision to power utilities of a one-stop service that encompasses customer management and supply – demand management as well as portal, business intelligence, and data warehouse functions. The service also garnered recognition as a platform that will contribute to the creation of services by acting as an aggregator and intermediary among various industries.

http://www.aspicjapan.org/event/award/11/index.html

(In Japanese only)

Earned a Business Transformation Award at BTOES18

March 2018, NTT DATA Robotic Context Processor was awarded a Business Transformation Award at the Business Transformation & Operational Excellence Industry Awards 2018 (BTOES18). This annual event promotes initiatives on the part of companies that create new value through improvements in operational processes and the enhancement of on-site operational implementation capabilities and thereby establish competitive superiority.

http://btoes.com/2018-award-winners

Named a Leader and Star Performer in *IoT Services PEAK Matrix™ Assessment and Market Trends 2017*

Issued in December 2017, Everest Group report *IoT Services PEAK Matrix™ Assessment and Market Trends 2017: Have You Taken the Plunge in IoT Yet?* gave NTT DATA a high rating due to its application in large-scale, sophisticated initiatives of consulting capabilities and competence in next-generation IoT that span the entire IoT field and intellectual properties and solutions created through technology development investment.

https://assets1.dxc.technology/workplace_and_mobility/downloads/Everest_Group_-_IoT_Services_PEAK_Matrix__Assessment_and_Market_Trends_2017_-_Focus_on_DXC_Technology.pdf

Singled Out as a Frontrunner in CRM Technology in *Magic Quadrant for CRM and Customer Experience Implementation Services, Worldwide*

In its January 2018 *Magic Quadrant for CRM and Customer Experience Implementation Services, Worldwide* report, IT advisor Gartner, Inc., of the United States, commended us as a leader. The report cites our praiseworthy attributes as expertise in customer relationship management (CRM) technology; outstanding, global capabilities in relation to CX; and the support that we have given customers in their efforts to improve costs and heighten competitiveness.

Disclaimer: Gartner does not endorse any vendor, product, or service depicted in its research publications and does not advise technology users to select only those vendors with the highest ratings or other designation. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

https://www.gartner.com/doc/reprints?id=1-4O35DP2&ct=180109&st=sb

Paradigms for People at Work

Certified as a Level 3 "Eruboshi" Company, the Highest Ranking, Based on the Act on Promotion of Women's Participation and Advancement in the Workplace

In September 2018, companies were certified as "Eruboshi" companies pursuant to the Act on Promotion of Women's Participation and Advancement in the Workplace. NTT DATA has received the highest ranking for a general business owner, Level 3, by meeting all five rating criteria for excellence in initiatives to promote the active involvement of women.

https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/0000129028.html

(In Japanese only)

Received a Gold Award in the PRIDE Index 2018

In October 2018, NTT DATA received a Gold award in the PRIDE Index 2018. This index was established by voluntary organization work with Pride (wwP), which promotes and supports the uptake of diversity management related to lesbian, gay, bisexual, transgender (LGBT) and other sexual minorities. NTT DATA received this rating based on the organization's assessment of the Company's efforts to cultivate a workplace amenable to sexual minorities.

http://workwithpride.jp/pride-i/

(In Japanese only)

Presented with JISA Biz Promotion Award

On November 2, 2017, we received a commendation in the workstyle category of the JISA Biz Promotion Awards, part of the Tokyo metropolitan government's JISA Biz initiative aimed at changing workstyles by mitigating rush hours through the staggering of commuting times. The award recognized NTT DATA's contributions in connection with the realization of Telework Day measures by the Ministry of Internal Affairs and Communications; the Ministry of Economy, Trade and Industry (METI); the Ministry of Health, Labour and Welfare; and the Ministry of Land, Infrastructure, Transport and Tourism as well as in connection with the S-Train Comfortable Commuting Support Campaign, conducted by Seibu Railway Co., Ltd.

https://jisa-biz.tokyo/award/

(In Japanese only)

Won the Chairman's Award at the 18th Telework Promotion Awards

As part of its efforts to promote Telework Day measures, the Japan Telework Association held the 18th Telework Promotion Awards in February 2018. At the event, NTT DATA received the Chairman's Award in recognition of the Company's participation in Telework Day measures and promotion of telework through the conduct of trials among systems development managers and the development of systems that utilize NTT DATA Integrated Development Cloud.

http://japan-telework.or.jp/suishin

(In Japanese only)

Received Selection 100 Prime Commendation

Under its Diversity Management 100 Prime program, METI has been recognizing the efforts of progressive companies since fiscal 2017 by including them in the Diversity Management Selection 100. From among these companies, METI gave a commendation to NTT DATA in March 2018 in recognition of its efforts to further evolve best practices and implement continuous, companywide initiatives for the promotion of diversity management.

http://www.meti.go.jp/policy/economy/jinzai/diversity/kigyo100sen/index.html

(In Japanese only)

Certified as a 2018 "White 500" Enterprise with Outstanding Health and Productivity Management

In February 2018, METI certified NTT DATA as a "White 500" enterprise under the Ministry's system for certifying companies with outstanding health and productivity management. The certification is based on companies' implementation of initiatives that are rooted in the health issues of local communities and support of health promotion initiatives that Nippon Kenko Kaigi is advancing.

http://www.meti.go.jp/press/2017/02/20180220003/20180220003.html

(In Japanese only)

Paradigms for the Global Environment

Received an Award at the Asia Geospatial Technology Innovation Awards 2017 for the AW3D® Global Digital 3D Map Distribution Service

In August 2017, our AW3D® Global Digital 3D Map Distribution Service garnered an award from Geospatial Media and Communications for contributing substantially to the economy and society through numerous projects, including disaster prevention and infrastructure development in the Asia–Pacific region.

http://awards.geospatialmedia.net/gsa/

Received the Grand Prize at the JISA Awards 2018 for the AW3D® Global Digital 3D Map Distribution Service

NTT DATA's AW3D® Global Digital 3D Map Distribution Service was declared winner of the grand prize at the JISA Awards 2018, hosted by JISA in June 2018. The JISA Awards honors the creators of highly original and internationally applicable systems.

https://www.jisa.or.jp/event/awards/tabid/265/Default.aspx

(In Japanese only)

CSR Infrastructure

Selected by METI as a Noteworthy IT Strategy Company

In May 2017, METI recognized NTT DATA as a Noteworthy IT Strategy Company. We received a high rating for our promotion of innovation in manufacturing technology and open innovation as well as for conducting proactive IT management.

http://www.meti.go.jp/press/2017/05/20170531007/20170531007.html

(In Japanese only)

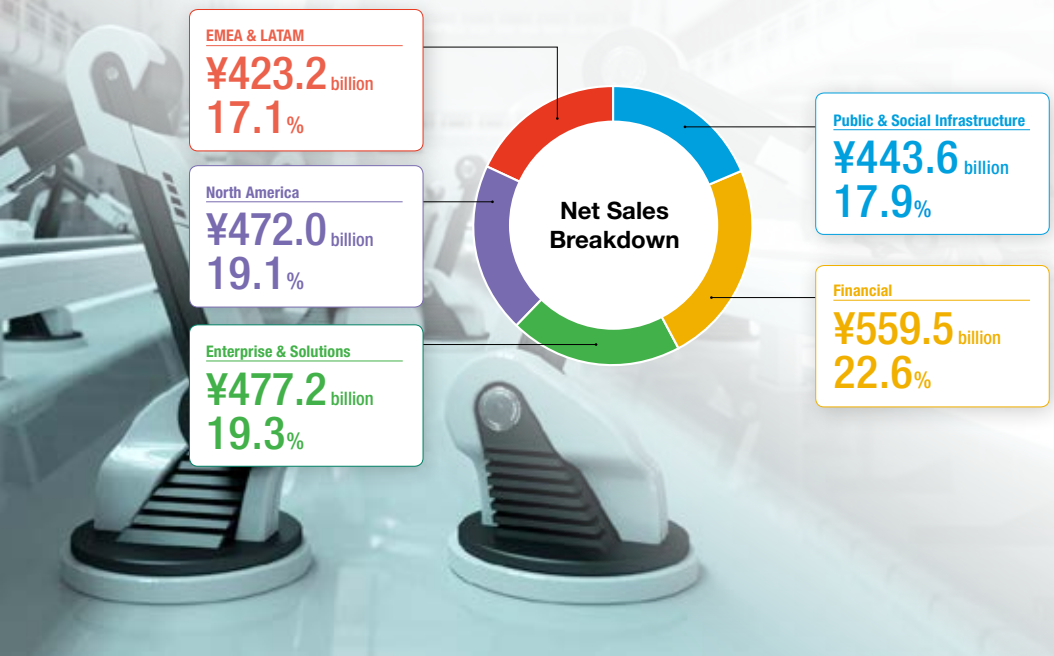
Helping Address Societal Issues through Our Business

In 2018, NTT DATA celebrated the 30th anniversary of its foundation as well as the 50th anniversary of NIPPON TELEGRAPH AND TELEPHONE PUBLIC CORPORATION's establishment of the data communication headquarters that was to become NTT DATA.

The mission statement of the NTT DATA Group calls on it to "use information technology to create new paradigms and values, which help contribute to a more affluent and harmonious society." Over the past 30 years and 50 years, value creation in accordance with this mission statement has sustained the Group's development.

The current era is unpredictable due to remarkable innovations in IT and rapidly accelerating business model transformation. Under these conditions, rather than pursuing profit solely for ourselves, we will demonstrate our strengths and leverage leading-edge technologies with global reach to help address societal issues.

Business Segments



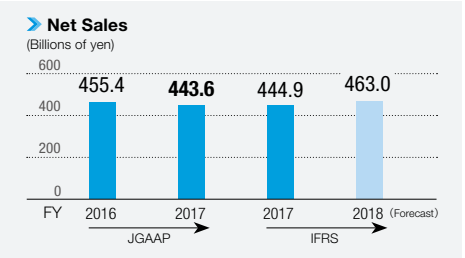
Public & Social Infrastructure Segment

Main Business Fields

Primarily in Japan, we provide high-value-added IT services that invigorate regions and underpin such social infrastructure as government, medical, telecommunications, and electric power.

Main Related Group Companies and Organizations

NTT DATA i CORPORATION, NTT DATA KANSAI CORPORATION, NTT DATA KYUSHU CORPORATION, NTT DATA TOKAI CORPORATION, and NTT DATA CHUGOKU CORPORATION



Main Societal Issues Envisioned

- Upgrading and increasing efficiency of healthcare, localization, urbanization and population concentration, preventive healthcare, ensuring stable supplies of resources and energy, information society, integration of digital and physical, universal design, open government*1, etc.

We will provide high-value-added services that help address societal issues in such fields as government, telecommunications, and energy.

NTT DATA's ranking among IT service vendors in the government and healthcare market
2nd*2

NTT DATA's share of the government and healthcare market in Japan
12.6%*2

*1: Public-segment initiatives in which private-segment companies are able to formulate and implement measures
*2: *Market Share: IT Services, 2017*, Gartner, June 11, 2018
Government and healthcare market: Based on vendor revenue in 2017 in the areas of government, education, healthcare provision, and utilities

Main Solutions That Help to Address Societal Issues

- WinActor® and WinDirector® RPA solutions for Japan, enabling customers' workstyle reform ▶ See page 21
- NACCS system for processing information related to imports, exports, and ports, accelerating and increasing the efficiency of operations significantly
- AMLAD® cloud-type digital archive service solution, enabling customers to digitize valuable historical documents and render them widely viewable
- AW3D® Global Digital 3D Map, contributing to infrastructure development aimed at preventing or mitigating natural disasters
- BizPICO® ASP service, realizing reliable identification and provision of supplementary trail information through the use of national identification number cards
- ECONO-CREA® service, offering one-stop provision of the capabilities that utilities need in a liberalized power retail market

Initiatives Going Forward

We will develop businesses in new markets by continuing to create new social infrastructure that enables partnerships between the public and private segments and leverages our track record, technology, and expertise. Further, we will extend our development of new markets and new business to achieve medium-to-long-term growth that is not solely reliant on existing projects.

Financial Segment

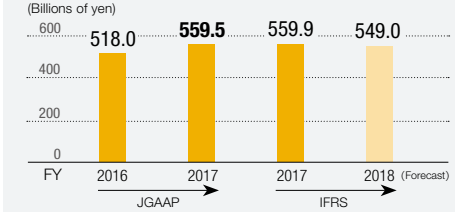
Main Business Fields

We provide high-quality IT infrastructure that supports the business activities of a wide range of financial institutions as well as high-value-added IT services linking this infrastructure.

Main Related Group Companies and Organizations

NTT DATA CUSTOMER SERVICE CORPORATION, NTT DATA SYSTEM TECHNOLOGIES INC., NTT DATA FORCE CORPORATION, JAPAN INFORMATION PROCESSING SERVICE CO., LTD., and NTT DATA Getronics Corporation

Net Sales



Main Societal Issues Envisioned

- Aging of society, economic stagnation, regulatory strengthening and deregulation, innovation creation, expediting business management, globalization, urbanization and population concentration, cyberattacks, information society, and data value enhancement

We will earn the further trust of customers and society by capitalizing on our strengths in financial platforms and digital technologies to identify accurately and address the issues of customers and society.

NTT DATA's ranking among IT service vendors in the financial market

1st[*1]

Market share for Open Canvas API[*2]

For individuals: Approx. **54%**

For companies: Approx. **73%**

*1: *Market Share: IT Services, 2017*, Gartner, June 11, 2018
Financial market: Based on vendor revenue in 2017 in the areas of banking, securities, and insurance

*2: NTT DATA's research as of July 2017: Percentage among megabanks, regional banks, and second-tier banks that disclose the names of vendors providing API infrastructure

Main Solutions That Help to Address Societal Issues

- FrontGate over-the-counter insurance sales, enhancing labor productivity by developing and implementing systems that link banks and life insurers directly ▶ See page 21
- Enhancing efficiency and life quality of call center operations through the use of AI and voice recognition technology
- Enabling money transfers from various financial institutions to other banks 24/7
- Realizing trade information sharing platform by using blockchain technology and working with 14 companies in banking, insurance, integrated logistics, international trading, and other areas
- NTT DATA Open Innovation Business Contest, achieving win–win–win relationships by bringing together customers, venture companies, and NTT DATA

Initiatives Going Forward

We will continue providing social infrastructure in the form of large-scale financial systems. Moreover, based on strong relationships of trust with customers, we will continue ensuring that our systems are of the highest quality. In addition, we will move forward with digitization and globalization as new priority areas. Taking advantage of the NTT DATA Group's global insight and the NTT Group's advanced digital technologies, the business segment will sustain efforts to help address societal issues as a trusted financial IT platform provider in the digital age.

Enterprise & Solutions Segment

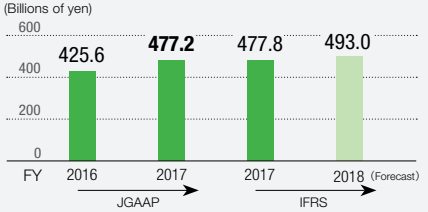
Main Business Fields

We deliver high-value-added IT services that support manufacturers, distributors, and service providers as well as payment services and platform solutions that are linked with IT services.

Main Related Group Companies and Organizations

JSOL CORPORATION, NTT DATA MSE CORPORATION, NTT DATA SMS CORPORATION, NTT DATA BUSINESS SYSTEMS, and NTT DATA WAVE CORPORATION

Net Sales



Main Societal Issues Envisioned

- Innovation creation, globalization, localization, climate change, and information society

We will help customers who want to transform their businesses through digitization.

CAFIS® comprehensive payment platform

700 million transactions processed per month

35 years since service began

Main Solutions that Help to Address Societal Issues

- Mitaka Data Center EAST, helping lower environmental impact ▶ See page 23
- CAFIS® comprehensive payment platform, advancing the realization of a cashless society
- Next-generation omni-channel solutions, enhancing customers' buying experience
- Manufacturing irregularity detection solutions, raising productivity in plants
- Professional service for AI utilization, providing comprehensive support that covers the examination of AI introduction through to operational management

Initiatives Going Forward

With a focus on industries where digitization has a significant impact, we will exploit AI, IoT, and other leading-edge technologies to offer new value and support the global development of Japanese companies.

North America Segment

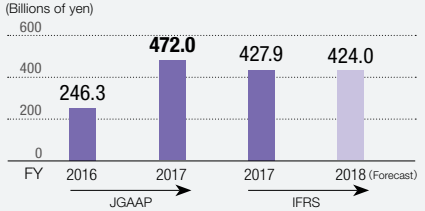
Main Business Fields

We provide high-value-added IT services primarily in North America.

Main Related Group Company

NTT DATA Services, LLC

Net Sales



Main Societal Issues Envisioned

- Innovation creation, globalization, information society, data value enhancement, cyberattacks, upgrading and increasing efficiency of healthcare, and preventive medicine

We will further improve our service provision capabilities in the digital field, which is driving the growth of the IT services market. At the same time, we will expand and accelerate the evolution of our businesses and address the issues of customers and society by leveraging our extensive track record and expertise in outsourcing, etc., particularly in the healthcare, public, and financial fields.

Main Solutions That Help to Address Societal Issues

▶ See page 25

- NTT DATA Robotic Context Processor, helping increase the efficiency of contract management through the use of AI in the language processing of contracts and other documents
- Lean Bot & Security Bot, automating and increasing the efficiency of work through automated monitoring of operational workflows
- NTT DATA Code Finder, offering a solution that increases the speed and accuracy of healthcare through the natural language processing of medical coding

Healthcare business

Earned **the rank of leader** in the 2017 *Everest Group PEAK Matrix™ for Healthcare Payer IT Service Providers report*

Workplace services

Earned the ranks of leader and star performer in the *Market Trends and PEAK Matrix Assessment™*

Cloud services

Earned a place in the winners' circle in the *2017 HfS IT Infrastructure Management and Enterprise Cloud Services Blueprint Report*

Initiatives Going Forward

We are accelerating the development and sales of innovative offerings in digital, cloud, and security to help our clients around the globe adopt to changing market dynamics to drive their businesses forward.

EMEA & LATAM Segment

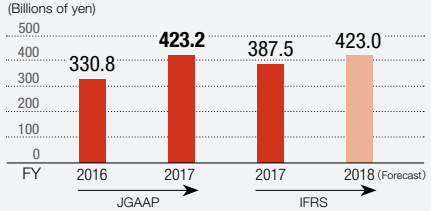
Main Business Fields

We provide high-value-added IT services primarily in EMEA and Latin America.

Main Related Group Companies and Organizations

NTT DATA EMEA Ltd., NTT DATA Business Solutions, and everis Group

Net Sales



Main Societal Issues Envisioned

- Innovation creation, globalization, information society, data value enhancement, cyberattacks, and softening of growth among developing countries

We will gather the strength and resources of Group companies in EMEA & LATAM to promote integrated business management and increase profits through the synergy effect. We will also increase our local presence further by helping address the issues of customers in respective regions.

Countries in Europe and Latin America where our share of the IT market is **at least 2%*** Spain, Italy, Turkey, Colombia, and Chile

* "Market Share: IT Services, 2017", Gartner, June 11, 2018

Main Solutions That Help to Address Societal Issues

- everis, providing video management-software security solutions through the use of biometrics technology and high-performance graphics processing units for facial recognition
- everis, providing allWaste service, which helps beautify areas by upgrading garbage collection through capabilities for monitoring large garbage containers on streets and managing garbage collectors' travel routes and status

Initiatives Going Forward

By realizing strengths in particular industries and fields and pursuing collaborations between the NTT DATA Group and the NTT Group, the business segment will expand its business portfolio and strengthen service provision capabilities. In addition, we will establish optimal delivery capabilities and conduct cohesive operational management in EMEA and Latin America to provide customers with even better services.

Social

The NTT DATA Group addresses societal issues by harnessing IT and contributes to the development of a sustainable society by engaging its stakeholders.

Approach

At the present time, as business becomes ever more global and IT continues to evolve, the needs that companies ask us to meet are becoming more diverse. Responding to those needs requires us to constantly hone our powers of foresight and create new mechanisms that are of benefit to society.

Recognizing the critical importance of providing its clients with safe and secure services, the NTT DATA Group has been actively facilitating the supply of, for example, highly reliable as well as people-friendly systems, thereby contributing to the development of society. Through these efforts we will create new businesses that will nimbly pick up on changes in the world and expand our business domains, while helping to resolve wide-ranging societal issues.

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With Clients

The NTT DATA Group provides safe and secure services to clients and strives to enhance these services by continuously keeping pace with client needs.

Management Approach

The NTT DATA Group strives to remain constantly abreast of emerging information technologies, applying new approaches to resolve the needs of our clients and society at large. We recognize the critical importance of providing clients with safe and secure services and provide highly reliable systems by constructing a systematic quality management system and establishing advanced methods for system development. To meet the diverse needs of our clients, we conduct client satisfaction surveys and carry out activities intended to reflect the opinions and requests we receive in improving our services so that they are even better from the client standpoint.

Innovation Management

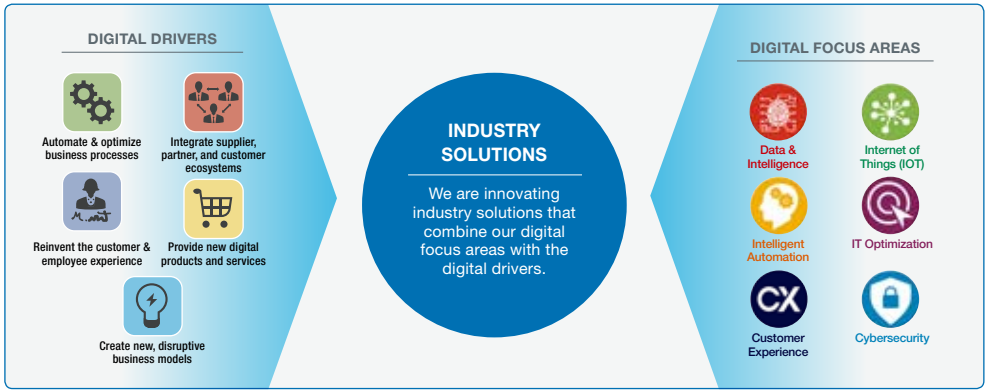
The NTT DATA Group pursues innovation management centered on the core idea of harnessing IT technologies to drive innovation, seeking solutions to societal issues, and developing a sustainable society. We are sharing medium- to long-term issues with our clients to accelerate our efforts in diverse new businesses.

Basic Policy

Rapid advances in technology are prompting drastic changes in business and living environments, creating new markets and prompting innovation in existing businesses. To ensure optimal decision-making in response to these conditions, we believe in the importance of working with clients to clarify changes in the business environment and then looking to the future, elucidating the path ahead of us.

NTT DATA publishes the *NTT DATA Technology Foresight* report, which gives our insights in innovative technologies the Company expects will affect future business and living environments. In this way, we aim to help clients address business issues, as well as various societal issues. We have also identified "Digital Focus Areas" as our focus technology domains that we will address with priority investment measures, contributing to further advances in client businesses in the digital era.

NTT DATA's Digital Agenda



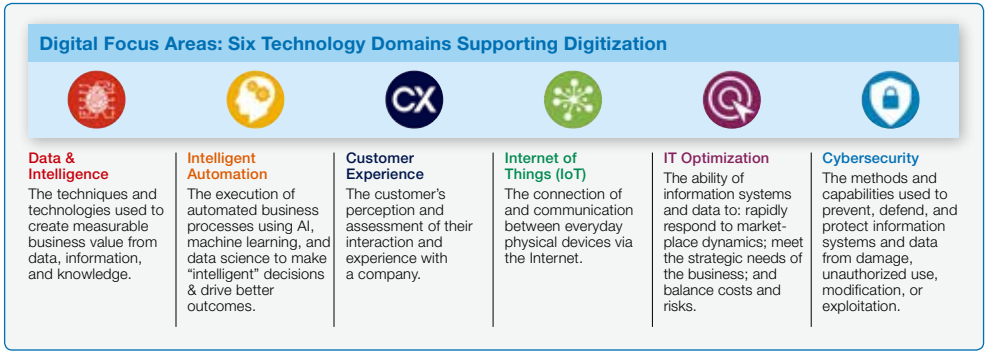
"Digital Focus Areas"

In July 2017, NTT DATA established the Global Marketing Headquarters to handle cross-Company initiatives aimed at bolstering its brand in global markets. The headquarters is helping to create flexible, cross-regional alliances at the global level to support global client companies and promote the globalization of delivery resources.

We are also working with clients on digital strategies that will arm them to take the next step: accelerating digital transformation. We view our role as clearly defining and reinforcing the digital focus areas that will be necessary to this process.

Through such initiatives, we will partner with global clients to help them move their digital strategies forward. We will also work with clients on joint projects and investments in solutions, rebuilding our structure for approaching global client companies.

The Concept of Digital Focus Areas



NTT DATA Technology Foresight

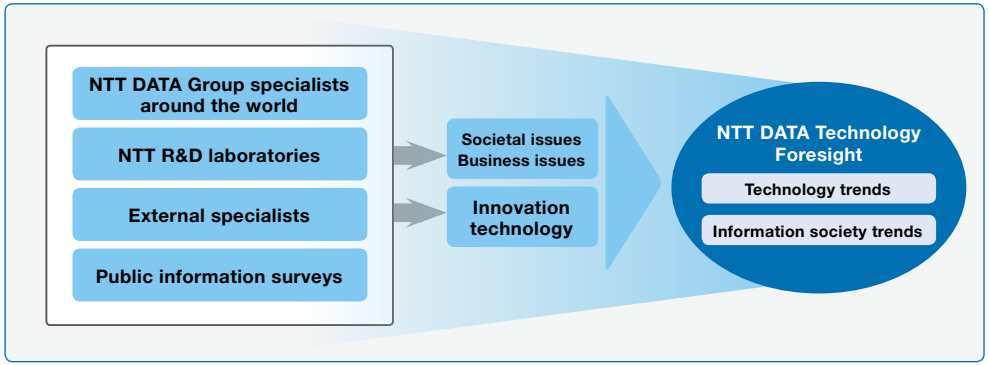
NTT DATA conducts surveys and research on information industry trends (near-future outlook) that are expected to have a major impact on client businesses over the medium to long term, conducting its work from the client's perspective and based on societal and business issues. We also research the underlying technology trends. We release this information in the annual *NTT DATA Technology Foresight* report.

Specifically, we analyze political, economic, social, and technological trends. We also engage in wide-ranging information-collection activities and discussions that extend to NTT DATA Group companies and NTT R&D laboratories in Japan and overseas. These activities include interviews with external specialists in various fields. Through these activities, we have identified core issues warranting particular attention in social and business fields as well as groundbreaking technologies that are evolving and spreading with remarkable speed. Extrapolating from these, we have defined four information society trends and eight technology trends, on which we transmit information.

Through *NTT DATA Technology Foresight*, we work with clients to create an image of the future. By developing the technologies and services necessary to realize that future, we aim to create new businesses and promote the development of society as a whole. We take part in joint verification tests with clients around the world to confirm the feasibility and effectiveness of the technologies and services we have developed.

https://www.nttdata.com/global/en/Foresight#

NTT DATA Technology Foresight Formulation Process



Global Open Innovation

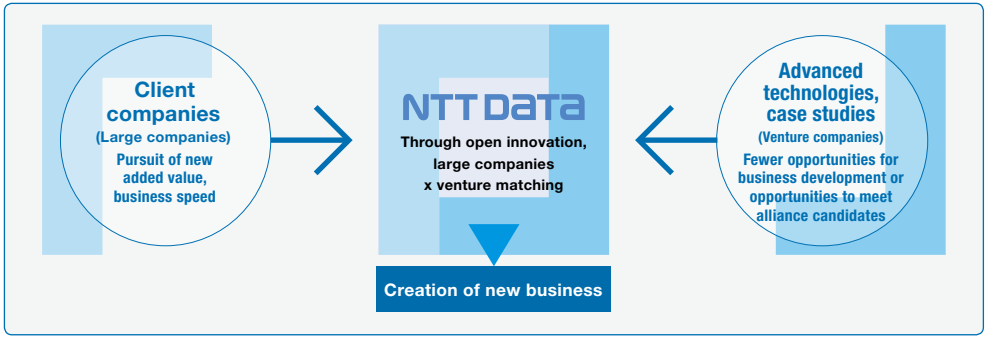
The growing prevalence and falling price of the Internet and various other technologies has lowered the barriers to innovation. Against this backdrop, NTT DATA promotes open innovation, working with venture companies that possess advanced business models and technologies, as well as large client companies, to accelerate the creation of innovative businesses and create a win–win–win situation for these organizations and NTT DATA. We have created a community of more than 4,000 people that takes part in regular monthly meetings as well as twice-yearly open innovation contests.

Through these contests, we engage in innovative business creation via a next-generation social infrastructure comprising NTT DATA's business divisions, venture companies, and large client companies. Since the start of this activity in 2013, we have collaborated with venture companies in FinTech, energy, digital marketing, healthcare, and various other fields, resulting in the commercialization of more than 10 businesses.

Since fiscal 2016, we have held global contests in more than 15 cities around the world. The contests help foster cross-border alliances among venture companies working to resolve a host of issues in various countries, large client companies hailing from different countries, and the NTT DATA Group's business divisions in those countries. The contests contribute toward truly open innovation, which leads to business creation and helps bolster the overall capabilities of the NTT DATA Group around the world. In fiscal 2018, we are launching the SDG Startup Program, aimed at leveraging open innovation to address the 17 SDGs outlined by the United Nations.

http://oi.nttdata.com/en

Concept Map



[Activity in 2017]

NTT DATA Open Innovation Contest

In fiscal 2017, we held our Open Innovation Business Contest twice, corresponding to the sixth and seventh contests. The winner of the sixth contest was a peer-to-peer urban planning proposal by Crowd Reality, Inc. The winner of the seventh contest, which took place in 15 cities around the world, was Gestoos, selected in Barcelona, Spain. Gestoos proposed an innovative gesture-recognition solution that uses AI to recognize and comprehend minute hand movements and behaviors, and then uses this information for machine operations and content use. With the winning companies, NTT DATA set up dedicated collaboration teams and is conducting proof-of-concept (POC) client proposals in the lead-up to commercialization. We are nurturing the seeds of alliance businesses from sources other than winning companies, too, and have already commercialized more than 10 projects.

FinTech x Finance EDI: Open Innovation Business Contest Powered by JBA

NTT DATA and the Japanese Bankers Association (JBA) participated in the finals of FinTech x Finance EDI Open Innovation Business Contest Powered by JBA in December 2017. Our two organizations presented a new service that employs financial electronic data interchange (EDI) to improve corporate productivity and enhance growth.

In the finals, the project was evaluated from such perspectives as novelty, feasibility, dissemination and growth, and synergy with financial EDI. Global Wise Co., Ltd., was a Grand Finale winner, while Tradeshift Japan Co., Ltd., received the judges' special award and SmileWorks Inc. and Money Forward, Inc., were selected for superior awards. As an extra prize, we have begun working together with the Grand Finale winner on a feasibility study.

http://www.nttdata.com/jp/ja/news/information/2017/2017121301.html (In Japanese only)

Collaborating with Social Coin, Grand Finale Winner of the Fifth Open Innovation Contest, on a Solution for Regional Understanding Employing AI

Social Coin, based in Barcelona, Spain, was selected as the Grand Finale winner in the Fifth Open Innovation Contest, held in March 2017. Social Coin and NTT DATA are jointly developing and providing a solution that uses AI to analyze people's opinions on social media and other digital platforms. This information can potentially be used to gain an understanding of their consciousness of and emotions toward a region or community. This joint business makes use of Social Coin's proprietary clustering technology, which uses AI, as well as NTT DATA's worldwide Twitter data and voice analysis technology to recognize affairs that are becoming regional issues and help resolve those issues through hints and ideas that result in a deeper understanding. The two companies have launched a "regional issue generation lab" to compare cities in Japan, Spain, and other parts of the world, heightening awareness of regional issues related to the SDGs and providing solutions related to regional revitalization.

http://www.nttdata.com/jp/ja/news/release/2018/pdf/en022300-01.pdf

Launch of a Joint SDG Startup Program

NTT DATA and the Japan Innovation Network (JIN) have launched an SDG global startup program as a business for helping to attain the SDGs.

It is difficult for individual companies to propose future businesses and initiatives that can resolve complex and broad-ranging societal issues on their own. For this reason, NTT DATA and JIN believe in the importance of resolving issues through open innovation, combining knowledge and solutions from innovators around the world. To this end, we are providing this program business, which hinges on alliances with startup companies across the globe.

Currently, companies are designating the issue of innovation as being pivotal to their SDG initiatives. They are using open innovation to create solutions and support the formulation of specific directions for commercialization. Combining JIN's SDG resolution techniques with a network of innovation-related institutions in countries worldwide, we will form alliances with venture companies across the globe that we have cultivated through our From the Port of Toyosu® global innovation contest and our ecosystem partners in different companies, as well as providers of infrastructure and other system solutions. As a result, we aim to contribute toward efforts from Japan to reach the SDGs.

http://inforium.nttdata.com/ (In Japanese only)

Sharing the Fruits of Innovation

In a variety of ways, the NTT DATA Group shares its cutting-edge initiatives and contributes to the realization of a sustainable society.

[Activities at the INFORIUM Toyosu Innovation Center]

In 2015, we established the INFORIUM Toyosu Innovation Center. Since then, we have operated the center as a place where visitors can experience the cutting-edge technologies that the NTT DATA Group is developing.

As a place for creating new businesses with clients, the center offers space for holding workshops on co-creation activities. This space is used by domestic and international customers alike.

https://www.nttdata.com/jp/ja/inforium/ (In Japanese only)

INFORIUM Toyosu Innovation Center

["Ima-Shun!" Highlights the Latest Technology Trends]

We disseminate information on technology trends under the latest buzzwords.

http://www.nttdata.com/jp/ja/insights/trend_keyword/index.html (In Japanese only)

["Innovation EYE" for Ideas on IT Strategy]

Cutting-edge IT projects are introduced by innovation navigators tasked with the mission of actively transmitting the knowledge of the NTT DATA Group and contributing to society.

http://www.nttdata.com/jp/ja/insights/innovation_eye/index.html (In Japanese only)

[Web Media INFORIUM Is Connecting Technology to the Future]

We publish our corporate information magazine INFORIUM twice a year to introduce readers to exceptional foresight together with the innovative initiatives that the NTT DATA Group is undertaking.

In May 2016, we launched a website that collaborates with the magazine to provide information that could inspire businesspeople with ideas for using technology to open new possibilities for the future.

https://inforium.nttdata.com/ (In Japanese only)

[AQUAIR™ Digital Business Design Studio]

In June 2018, NTT DATA opened AQUAIR™, a digital business design studio.

The AQUAIR™ studio enables the seamless realization of clients' digital businesses, from planning through to verification testing and marketing. We have erected virtual stores for verification testing and users can experience leading-edge technologies and workstyles. The studio facilitates a wide range of activity, such as prototyping, both in virtual reality (VR) and in physical space; the use of verification testing to analyze user behavior and sensations; and marketing responses. The studio

shares human resources and know-how with the NTT DATA Group's 10 overseas design studios, allowing us to take advantage of advanced overseas cases and consult with global specialists.

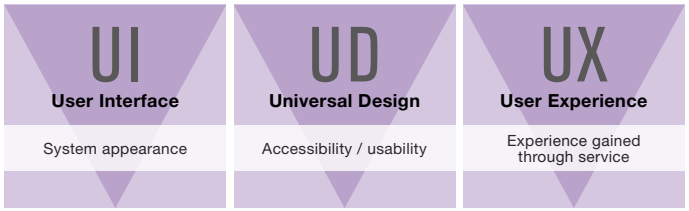
Going forward, NTT DATA will work with clients to realize digital businesses that contribute to resolving societal issues.

http://www.nttdata.com/jp/ja/news/release/2018/052500.html (In Japanese only)

Initiatives for Improving Accessibility

The widespread adoption of IT in society has brought with it the problem of the digital divide*1. The NTT DATA Group, recognizing in each IT user the potential for innovation, promotes the development of people-friendly information systems centered on universal design (UD)*2. We are pursuing a wide-range of initiatives, from applying UD in the systems and services we deliver to clients to training and enhancing the awareness of employees.

Furthermore, the definition of "easy-to-use" services has advanced with an increasing importance on "user experience (UX)" approaching deeper "satisfaction" from the "user"s point of view." UX indicates a way of thinking focused on the degree to which user demands for fun, comfort, and convenience can be realized. UX places importance on a user-focused design approach unlike traditional approaches rooted in technology or markets. Since 2002, NTT DATA has adopted designs from the user's perspective in its system development process in an effort to design systems that are people-friendly, satisfying, and resolve accessibility issues in the ICT and IoT fields.



*1: The economic and social gap or imbalance that exists between those who have access to computers and the Internet and the capability to use them and those that do not
*2: Design aiming for ease of use by all people, irrespective of age, gender, nationality, disability, or individual experience and abilities

Trial Launch of the "Customer Friction Factor," a Metric for Quantitatively Assessing the User Experience

In April 2018, NTT DATA commenced the trial launch of the Customer Friction Factor (CFF), with a view to full-scale application in Japan. The CFF is a metric developed by NTT DATA Services to quantitatively assess user experience (UX).

End users make use of a wide range of communication channels, including stores, response desks, websites, smartphone apps, and telephones. When consumers accept services, flow lines grow more diverse, which can interrupt the smooth flow of services when the next step is unclear or in the event of a request for repetition. Systems and services that utilize corporate operations may also experience difficulties, when coordination is patchy or slow.

In addition to addressing such issues from the service provider end, consumers are increasingly calling for service improvements that focus on UX. Using conventional methods, assessing UX using quantitative diagnostics of multiple channels was problematic, and the scope for defining problems and executing improvement measures was limited.

CFF, meanwhile, is a quantitative assessment method in which specialists diagnose and quantify discomfort parameters, defined from an evaluation viewpoint, that end users experience when using a service. Furthermore, relative values can be obtained through comparison with other services, making it possible to consider approaches for improving UX and check the degree of improvement.

By trialling CFF on a variety of projects, NTT DATA has verified assessment criteria for Japan by obtaining values from diagnostic and various other perspectives. We aim for a full-scale business rollout in fiscal 2019.

Initiatives for Promoting UX

In April 2018, NTT DATA and overseas Group company everis held UX Week, a user experience (UX) event. UX Week shares the knowledge everis has accumulated through years of design experience—that company's area of specialty since its launch 10 years ago—with NTT DATA. The event enables a number of employees to become acquainted with UX, helps nurture designers, and aims to facilitate the creation of a global design network. Held over a four-day period, UX Week was attended by 148 employees.

This event broke down into two programs: UX Sales & Management, comprising sessions focused on the UX business and management, and UX Practice, a workshop concentrating on UX applications.

In UX Sales & Management, we aim to learn about how UX concepts and designs impact business, how we can promote UX to clients, and how to form and manage related projects. Additionally, we shared information regarding how design experience secures and advances products, with a focus on specific examples. In this segment, which centered on case studies, we shared ideas on how design experience helps in obtaining and moving forward with projects.

UX Practice workshop

The UX Practice segment included a lecture on UX design methodology and a workshop for actually experiencing UX design. At the workshop, attendees learned about problem areas with existing digital projects, areas for improvement from a UX perspective identified by expert review, the creation of personas for uncovering end-user needs, and the creation of context maps to elucidate how digital products are used. We strove to enhance employee skills by providing opportunities to learn specific UX design methods through staged processes.

Developing Safe and Secure Systems

The bringing to fruition of systems and services that offer round-the-clock, year-round stability is a key responsibility and forms the basis for providing services to clients.

In realizing a social infrastructure that people feel safe and secure to use, the entire NTT DATA Group is engaged in, for example, the gaining of certification under quality management standards and the standardization of development and management methods. The Group is working to provide services that are geared to raising system reliability.

Initiatives to Improve Quality

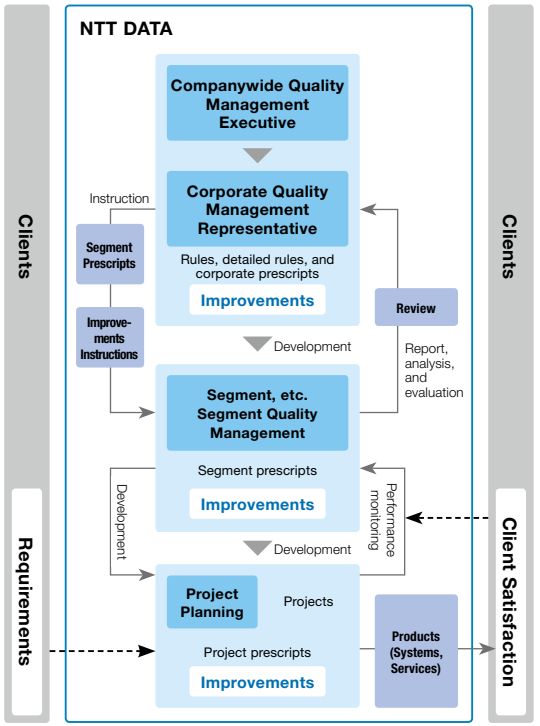
[Building a Management System Based on ISO 9001 and Continuously Promoting Improvement Activities]

NTT DATA obtained ISO 9001 certification—the international standard for quality management—on a Groupwide basis in 1998 and subsequently adopted a systematic approach for a quality management system that is operational across the entire organization. Since fiscal 2007, NTT DATA has created unified Companywide rules governing system development and management methods and has clarified procedures for applying the rules to bolster the system on a Groupwide basis. Further, in March 2010 we formulated an implementation method to boost quality and productivity, which we have also deployed Companywide, under our unified rules. In addition, we quickly focused on making process improvements and enhancing the transparency of system development, and incorporated Capability Maturity Model Integration (CMMI)* to formulate development and operational standards. We have recognized the importance of raising the standard of quality control at development sites, including those of Group companies. We are therefore taking steps to roll out CMMI throughout the Group and to share quality—related information.

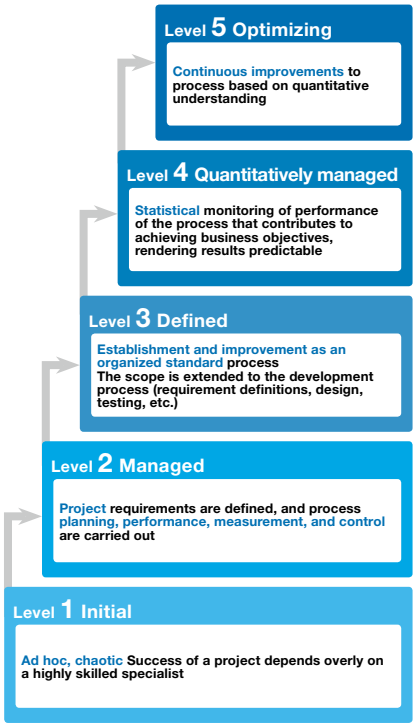
As part of our global effort to enhance quality, we have deployed a quality assurance system at Group companies overseas. With support from Japan, we have achieved CMMI maturity level 2 in Romania. We continue to support process improvement utilizing CMMI to offshore locations in China. Through regular opinion exchanges within Asia, we are working to raise quality at overseas Group companies.

* CMMI is an approach managed by the CMMI Institute that expresses the level of maturity of the organization undertaking system development on a five-point scale.

NTT DATA Quality Management System



Capability Maturity Model Integration (CMMI)



[Enhancing and Standardizing Project Management]

NTT DATA is endeavoring to enhance and standardize project management in order to improve the quality and efficiency of system development. In April 2016, we opened the Agile Professional Center as an entity that applies the agile development method to collaborate with clients in creating new businesses and services. We also integrated our R&D organization for production management, which includes project management, with our product support organization to establish the Project Management Solution Center.

Agile Professional Center

The Agile Professional Center was established to create new businesses in collaboration with clients in response to the expanding business need for generating innovation. Around the world, we have established agile development locations, where we are reinforcing three functions: the cultivation of agile and professional human resources, advanced R&D, and an on-demand, agile development structure.

Project Management Solution Center

The Project Management Solution Center was established to research and develop innovative project management methods, reinforce them through verifiable methods familiar to the actual worksites, and provide them within the Group in an easy-to-use manner. The center also established the NTT

DATA Global Standards, which has unified standard operating procedures for system development throughout the world and is taking responsibility for the development of next-generation management tools that will raise efficiency of aspects of management such as tracking and quality assurance. The center provides complete, one-stop support for the adoption, introduction, and full utilization of solutions. Through expanded utilization of research and development results, the center is improving capabilities across the entire Group and is reducing the number of problematic projects.

Quality Management Portal Site

Since fiscal 2010, NTT DATA has operated the Quality Management Portal Site. Our objective was to enable the sharing of all kinds of information related to quality among the different development locations, including those of Group companies.

This site offers responses to industry standards related to quality and consolidates internal rules and expertise, and we work to make this information available for use by all employees. Going forward, we will continue with our initiatives to reduce quality control operations by making better use of quality assurance expertise.

[Response to Serious Issues]

At NTT DATA, executives and employees promptly notify the quality assurance desk in the event of any serious quality issue with a commercial system. The Quality Assurance Department and external relations desk have set up an emergency contact system whereby the Corporate Management Committee deliberates countermeasures to highly serious issues. Particularly serious incidents are reported to senior managers. At the same time, we work to thoroughly ascertain and analyze the root cause of the loss, and preventive measures are formulated to prevent recurrence. We report to the competent authorities, as necessary, according to the law. We also notify customers by disclosing appropriate information on our website.

In fiscal 2017, NTT DATA and its Group companies experienced zero serious system failures or incidents.

Measures to Ensure Security of Commercial Systems

Recently, there have been multiple incidents of illegal access to information through breaches (vulnerabilities) of information systems, resulting in personal and confidential information leaks, business disruption, and other harmful outcomes. Because most illegal accesses make use of known attacks, against which countermeasures are available, we should apply preventative measures across our systems without leaving any vulnerability.

The NTT DATA Group shares the latest trends in security technology and vulnerability information within the Group in a timely manner. In having built the system that is now in operation, the Group incorporated processes to maintain the necessary level of security and has established mechanisms to enable the system to maintain that level of security. The system in place is also subjected to regular security diagnostic testing carried out by security experts. To be able to provide safe and secure systems and services on an ongoing basis, the NTT DATA Group has worked on, for example, appropriate responses to newly discovered vulnerabilities.

Ensuring Safe and Secure Environments with Total Security Management

The NTT DATA Group harnesses the expertise it has gathered from its ample experience and track record to propose optimal solutions, including security governance designs that reflect changes in the clients' business structure, superior security technology required for systems where safe operation is of paramount importance, and the latest security methods for safely constructing IoT environments. It has recently become important to prepare against contingencies on the assumption that protective security measures may be bypassed altogether by sophisticated targeted attacks or information leaks caused by internal improprieties. To contain and localize the damage, we must provide reliable detection of an attack and swift response and recovery. We help to reinforce the security measures of our clients by offering security consulting to identify the risks and providing solutions and services for neutralizing and protecting against risks. Furthermore, we provide enhanced support services for detection, response, and recovery through services such as constructing systems compatible with IoT environments, including sandboxes*1, SIEM*2, SOC*3, and CSIRT*4, as well as monitoring system management.

*1: Solution for detecting malware by running programs within a protected virtual environment
*2: Security Information and Event Management: Solutions that enable the detection, analysis, and visualization of indications or traces of unauthorized access, which are difficult to discover with security devices alone.
*3: Security Operation Center: A center or system for conducting comprehensive monitoring of IDS/IPS, firewalls, DB firewalls, and Web application firewalls (WAF)
*4: A CSIRT is an incident response team of computer security specialists. These teams collect and analyze information on security incidents, security-related technologies, and vulnerabilities, and conduct activities including implementing effective countermeasures and training.

Initiatives for Improving Client Satisfaction

Initiatives that involve listening to what clients have to say and targeting improvements in their levels of satisfaction are an important issue when considering contributions toward addressing societal issues through business operations. In line with its Clients First approach, the NTT DATA Group strives to improve client satisfaction as a means of contributing to their success.

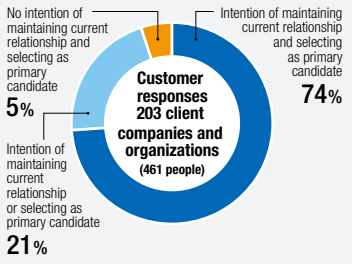
Promoting Improvement through Interviews and Questionnaires

In accordance with its belief that a client-oriented approach lies at the root of sustainable corporate growth, NTT DATA conducts oral and written surveys of its regular clients every year. The aim of this self-monitoring exercise is to enable us to deliver improved services from a client standpoint.

In fiscal 2017, we conducted interviews with and listened to the opinions and requests of people from 56 client companies and organizations, obtaining information regarding their opinions and requests. We also gained feedback through questionnaires received from 461 people in 203 client companies and organizations. The first questions in this survey are about the relationship with the Company, asking whether respondents intend to continue the relationship going forward and whether they would like to be the first choice for consultation. In response, 74% of clients responded "I would like to continue the relationship going forward" and "I would like to be the first choice for consultation." Based on interviews and survey results, the entire Company will engage in improvement activities, the analysis of results, identification of issues, formulation of improvement action plans, and the implementation of action plans.

In the years to come, we will continue to systematically engage in these efforts with the intention of further improving the level of customer satisfaction.

NTT DATA's Actual Position for Customers



With Shareholders and Investors

NTT DATA is working to enhance its corporate value in response to the trust and expectations of its shareholders and investors by appropriately distributing profits and ensuring transparency in its information disclosure.

Management Approach

NTT DATA is guided by its fundamental policy of appropriately distributing profits while working to increase corporate value over the medium to long term by achieving sustained growth for the Group through such means as investing in new and other business activities and ensuring efficient management of business operations. We intend to pay a stable dividend based on a comprehensive assessment for achieving a balance between the sustainable development of our business and shareholder returns.

To increase the transparency of our management, we follow our Disclosure Policy and disclose information in a timely and appropriate manner. Additionally, the Disclosure Committee is responsible for formulating policies related to the disclosure of management information and for constructing a mechanism for reflecting all shareholder opinions in our management. The committee endeavors to enhance our IR activities and stimulate two-way communication by, for example, creating opportunities for direct dialogue.

Approach to Information Disclosure

Policy

NTT DATA adheres to its Disclosure Policy and discloses information of material importance to the Company in a timely, just, and fair manner in accordance with relevant laws and regulations, including Japan's Financial Instruments and Exchange Act and the securities listing rules of the Tokyo Stock Exchange.

Moreover, to the greatest extent possible, we actively endeavor to conduct fair disclosure of information that we consider to be useful to shareholders and investors, even when it is not deemed to be of material importance.

System for Ensuring Constructive Dialogue

System

NTT DATA has appointed a director to be responsible for IR and set up an office specializing in IR (the Investor Relations Office) to engage shareholders and investors in constructive dialogue. To ensure that internal departments collaborate on IR activities in a coordinated manner, we hold regular meetings of the Disclosure Committee, which has its secretariat in the Investor Relations Office and comprises representative directors, the head of the Finance Department, and heads of other critical organizations whose participation is requested by the Head of the Finance Department. The committee deliberates on the formulation of the disclosure guidelines for management information as well as its ongoing disclosure. The Disclosure Committee met eight times in fiscal 2017.

Mechanism for Reflecting Shareholder Opinions

We ensure that shareholder opinions and concerns gathered each quarter are effectively incorporated into the Board of Directors' meetings, regular meetings attended by representative directors, Disclosure Committee meetings, and other meetings.

Feedback collected in the fourth quarter of fiscal 2017 included opinions in favor of domestic digital business expansion and initiatives aimed at increasing results in EMEA and Latin America. On the other hand, some opinions expressed concern about possibly unprofitable projects. We also received proposals regarding further expansion of our digital business overseas and issues facing attempts to strengthen our consulting capacity. In addition to initiatives like these, we work to understand the opinions and concerns of shareholders and investors by providing them with opportunities for engaging in direct dialogue with the president and CEO and executive officers.

Returning Profit to Shareholders

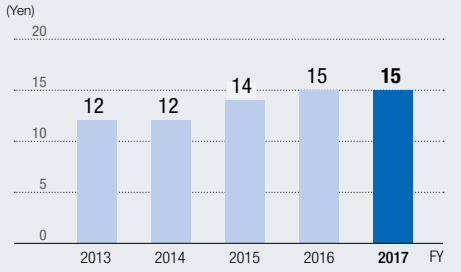
Ensuring Stable Dividends Based on Operating Results and Financial Position

NTT DATA is guided by its fundamental policy of appropriately distributing profits while working to increase corporate value over the medium to long term by achieving sustained growth for the Group through such means as investing in new and other business activities and ensuring efficient management of business operations.

We will aim to pay dividends upon stable and comprehensive consideration of trends in consolidated results, financial conditions, business investment and technological development for future sustainable growth, and the balance between these dividends and expenditures aimed at the maintenance and enhancement of our financial constitution. Furthermore, when we determine dividend payment amounts, we place great importance on maintaining a consistent consolidated cash flow payout ratio*1.

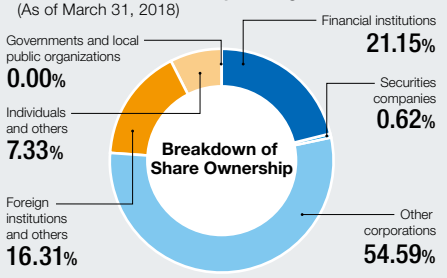
*1: Cash flow payout ratio: Total dividends / (Net income attributable to owners of parent + Depreciation + Loss on retirement of fixed assets + Goodwill amortization – Capital expenditures)

Annual Dividends per Share*2



*2: A 1:5 stock split was implemented with an effective date of July 1, 2017. Figures from before fiscal 2016 are calculated as if the stock split had been conducted previously. Figures for fiscal 2016 are calculated as if the stock split had been conducted at the beginning of the fiscal year.

Distribution of Ownership among Shareholders
(As of March 31, 2018)



Communication with Shareholders and Investors

Enhancing IR activities for shareholders and investors and promoting two-way communication are key issues for NTT DATA's IR activities. To this end, we conduct briefings for institutional investors and individual investors in order to cultivate an understanding of our management strategies and business activities.

Direct Communication through Presentations and Meetings

NTT DATA holds quarterly earnings presentations, individual meetings, and small gatherings for all of its investors in Japan and overseas. At these events, top management explain results, the business environment, strategies, forecasts, and matters relating to ESG.

In fiscal 2017, we responded to about 330 inquiries from investors and analysts and held briefing sessions on a variety of business fields, with respective members of top management participating as lecturers. As part of our efforts to communicate with individual investors, we also held briefings for them both online and in groups. We will continue our efforts to promote two-way communication with shareholders and investors.

Reinforcing Information Dissemination through IR Tools

Since fiscal 2016, NTT DATA has been publishing annual reports as integrated reports for investors in Japan and overseas that are also available on its website. Moreover, since the 28th Ordinary General Meeting of Shareholders, we have continued to print the Notice of Convocation in color and disclose the content on our website as well as the Tokyo Stock Exchange website before distributing it to shareholders in an effort to facilitate an ongoing understanding of the results and nature of our businesses activities.

Additionally, NTT DATA is working to revitalize its two-way IR activities. We accomplish this by receiving opinions from shareholders and investors and offering the latest information in a timely manner through RSS feeds of press release updates and video streaming of earnings presentations.

We will continue to improve our IR tools to provide information on the results and nature of our businesses in a timely and easy-to-understand manner.

With Business Partners

The NTT DATA Group pursues initiatives for constructing a sustainable supply chain by promoting open and fair transactions toward a mutually successful future with its business partners.

Management Approach

The NTT DATA Group believes that developing mutual understanding and forging relationships of trust with its business partners constitute the essential elements of fair business activity. Accordingly, we have formulated our Procurement Policy and Fair Transaction Rules as part of a rigorous effort to ensure fair transactions. We have established and are propagating our supply chain CSR procurement guidelines in order to build a sustainable supply chain. In addition, we are promoting sustainable initiatives along with our suppliers through improvement measures such as conducting surveys regarding CSR procurement and monitoring the status of compliance with guidelines.

Building Strong Relationships with Business Partners

Properly managing a supply chain is a basic responsibility of companies that society demands. Along with promoting open and fair transactions, the NTT DATA Group works to improve the quality of its products and services and workplace environments through active communication with its business partners so that we can move forward together.

Thoroughgoing Fair Transactions

Amid the widening acceptance of CSR, companies are expected to promote initiatives ensuring thorough compliance with fair business practices together with business partners. The NTT DATA Group strives to uphold fair business practices with its partners by maintaining and publicizing guidelines for promoting CSR along the supply chain and ensuring adherence to its Procurement Policy.

Procurement Policy

NTT DATA publishes its Procurement Policy on its website as a basic guide to procurement transactions. We aim to engage thoroughly in fair transactions by setting up internal rules such as procedures for properly implementing procurement contracts. In May 1997, NTT DATA created its Fair Transaction Rules as a compilation of the laws, regulations, rules, and code of conduct that must be followed in transactions and contracts with customers and business partners. We have revised our Fair Transaction Rules periodically to reflect changes in laws and regulations.

Procurement Policy

1. We shall foster mutual understanding and build relationships of trust while providing opportunities for fair competition among our suppliers around the world.
2. We shall procure competitive products and services according to our business needs based on economic rationality and a comprehensive assessment of quality, price, delivery time, and reliability.
3. Our procurement activities shall respect human rights and consider the environment in order to contribute to society, while strictly adhering to laws, regulations, and social norms.

Supply Chain Management

The NTT DATA Group fosters mutual understanding and builds relationships of trust with its business partners by appropriately monitoring and managing the supply chain. The Group also performs a spend analysis for transactions with all of its approximately 1,900 suppliers. From all transactions, we carefully screen our business partners in the key categories of software outsourcing, hardware, and software procurement to identify our key suppliers. As of March 31, 2018, spending on transactions with key business partners accounted for approximately 39% of total transactions. Within this amount, for software outsourcing, we have established a business partner system for conducting evaluations based on transaction volume, quality, management conditions, and performance. Every two years, we accredit subcontracted suppliers displaying excellence as business partners (BPs) or associate partners (APs).

Additionally, NTT DATA objectively evaluates its partner companies in terms of quality, financial health, and contractual obligation, giving particular attention to their legitimacy, as part of its thorough efforts to promote fair transactions. Furthermore, to secure transparency of the supply chain and undertake responsible procurement, NTT DATA and the NTT DATA Group abide by “the NTT Group’s Approach to Conflict Minerals” to promote initiatives for eliminating the use of conflict minerals, which serve as the source of funding for militant groups. Some of these ESG aspects are included in the articles of the basic agreement.

We have also established supply chain CSR procurement guidelines and are spreading their application among our suppliers. At the same time, we are securing future improvements by conducting surveys and evaluations regarding CSR procurement and monitoring compliance with guidelines and supplier initiatives. Through these efforts, we are promoting CSR activities that involve close collaboration with our suppliers.

Furthermore, we conduct a survey among our suppliers regarding supply chain CSR promotion guidelines stipulating procurement that considers human rights and the environment, as well as societal demands including the assurance of product and service quality and safety. In fiscal 2017, approximately 36% of our suppliers responded to this survey. We also interview managers and employees at the suppliers, as necessary, to confirm the status of their initiatives and identify problem areas as well as to disseminate our guidelines far and wide.

Communication with Business Partners

Each year, NTT DATA conducts mutual evaluations and interviews to improve the quality of software development as well as prevent various contractual problems by deepening mutual understanding with key suppliers in software outsourcing. To forge sound relationships with its BP companies, NTT DATA holds annual Core BP and BP Presidents’ Meetings, in which people in the top position at companies participate.

In December 2017, we held a Core BP Presidents’ Meeting attended by representatives of all of our Core BP companies. At this meeting, we held discussions regarding the current state of NTT DATA, its Medium-Term Management Plan, and the technological innovation it is working to achieve.

Representatives from 40 companies, including the five Core BP Companies, attended the BP Presidents’ Meeting in February 2018, where they shared information and discussed topics including NTT DATA’s management policies, trends regarding target growth in public & social infrastructure, financial and enterprise & solution segments, software outsourcing policies, results of mutual evaluations, and the need for rigorous efforts on compliance and information security.

Forging Win–Win Relationships

NTT DATA believes that forging solid collaborative relationships with its BP companies, including issues related to aspects of ESG, is effective for realizing a broad range of objectives, such as appropriate pricing, efficient operations, strict compliance, and information security.

The development of favorable relationships with BP companies has also contributed to securing human resources and improving productivity and quality at BP companies, which in turn has led to raising the competitiveness of the supply chain as a whole. Particularly when it comes to BP companies with similar business outlines, we are working to maintain highly competitive development capabilities by building good relationships with specific partners, improving the efficiency of various procedures, and sharing expertise.

With Employees

The NTT DATA Group is promoting the active participation of diverse human resources while seeking to strengthen its global competitiveness by creating a work environment in which employees feel comfortable in fully demonstrating their abilities and by nurturing an organizational culture that provides a genuine sense of personal growth.

Management Approach

The NTT DATA Group recognizes "diversity and inclusion" as one of its management strategies to succeed against global competition and achieve sustainable future growth by meeting the diversifying needs of society. In pursuing this strategy, we intend to create new corporate value in accordance with the two core concepts of "respecting diversity" and "workstyle innovations." To realize these goals, we are pursuing a united Group effort to establish an organization that generates superior value by enhancing our systems for merit-based compensation, including transparent personnel evaluations, as well as encouraging employees to create a better work–life balance and work so they can vigorously engage in their jobs and fully demonstrate their abilities. We also conduct employee satisfaction surveys covering all employees at NTT DATA and its Group companies.

The results are analyzed and shared during training and in the workplace to discuss possible solutions for outstanding issues in an effort to create rewarding work environments and nurture an organizational culture that encourages the continuous growth of each individual employee.

Hiring and Promoting Human Resources

NTT DATA is expanding into global markets and operating in a business environment where there is growing demand for new and unprecedented IT services. Consequently, recognizing the need to bring together a greater diversity in perspectives and capabilities, NTT DATA endeavors to conduct its recruiting activities fairly and with an emphasis on diversity, aiming to expand work opportunities and optimize placements.

We will continue to recruit new graduates and mid-career personnel, employ people with disabilities, reemploy retired workers, and take other steps. In this manner, we will bring together employees with diverse values and allow them to work together. Through these efforts, we strive to evolve into a company that creates new value while adapting to the ever-changing business environment.

Hiring Human Resources

[Hiring Diverse Human Resources]

In our hiring practices we prioritize aptitude, motivation, and ability over gender, nationality, age, and academic record. Thus far, we have taken on new graduates from more than 100 educational institutions and our diverse mid-career outreach channels include online sites.

While expanding its business fields overseas, NTT DATA has been proactive in its efforts to hire foreign nationals from several countries each year to work in a variety of fields, both within and outside Japan.

NTT DATA will continue to undertake broad-based hiring as it works toward becoming a Trusted Global Innovator.

Data on Employees in Japan

	Fiscal 2014		Fiscal 2015		Fiscal 2016		Fiscal 2017	
	Nonconsolidated	Group companies	Nonconsolidated	Group companies	Nonconsolidated	Group companies	Nonconsolidated	Group companies
Number of employees	11,110	21,751	11,213	21,772	11,227	23,314	11,263	25,381
Male	9,117	17,871	9,134	17,267	9,065	18,613	9,017	19,459
Female	1,993	3,880	2,079	4,505	2,162	4,701	2,246	5,922
Number of employees in management positions	2,292	3,914	2,370	3,969	2,407	4,178	2,477	4,550
Number of men in management positions [Ratio]	2,180 [95.1%]	3,719 [95.0%]	2,250 [94.9%]	3,770 [95.0%]	2,272 [94.4%]	3,937 [94.2%]	2,331 [94.1%]	4,272 [93.9%]
Number of women in management positions [Ratio]	112 [4.9%]	195 [5.0%]	120 [5.1%]	199 [5.0%]	135 [5.6%]	241 [5.8%]	146 [5.9%]	278 [6.1%]

* Figures as of March 31 of each fiscal year
* We updated data concerning the number of women in management positions at domestic Group companies for fiscal years 2014–2016 to match revisions to the definition of this figure.

Employee Data Concerning Average Age, etc. (Non-consolidated NTT DATA)

	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017
Average age (In years)	37.1	37.6	38	38.4
Men	38.1	38.6	39.1	39.5
Women	32.6	33	33.4	33.8
Average years of service	13.4	13.9	14.3	14.7
Men	14.2	14.8	15.2	15.7
Women	9.5	9.9	10.4	10.7
Employee separations (Number of employees)	273	276	335	342
Number of male separations (Turnover rate)	228 [2.5%]	241 [2.6%]	272 [3.0%]	286 [3.1%]
Number of female separations (Turnover rate)	45 [2.2%]	35 [1.7%]	63 [2.9%]	56 [2.5%]
New managerial appointments (Number of employees)	192	180	183	188
Men	180	169	163	167
Women	12	11	20	21

* Figures as of March 31 of each fiscal year

Number of Employees by Age (Non-consolidated NTT DATA)

	Total	Men	Women
Under 30	2,144	1,352	792
30–39	4,186	3,228	958
40–49	3,399	3,025	374
50–59	1,532	1,410	122
60 or above	2	2	0
Total number of employees	11,263	9,017	2,246

* Figures as of March 31, 2018

Number of Employees in Management by Position (Non-consolidated NTT DATA)

	Total	Men	Women
Department manager equivalent or higher	555	530	25
Section manager equivalent	1,922	1,801	121

* Figures as of March 31, 2018

Diversity Indicators

Indicators	Fiscal 2017
Percentage of female employees	19.9%
Percentage of women in junior management	12.2%
Percentage of women in top management	6.3%
Percentage of total female management working in the Profit Center Department (not including the Staff Department)	91.1%

New Hires and Reemployed Retired Workers (Non-consolidated)

	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017	Fiscal 2018
Number of newly recruited graduates*1 (Non-consolidated)	379	379	378	385	418
Men	262	255	247	245	266
Women	117	124	131	140	152
Number of mid-career hires	20	8	15	26	—
Men	15	7	12	20	—
Women	5	1	3	6	—
Number of employees with disabilities*2 [Employment ratio] (Non-consolidated)	254 [2.10%]	260 [2.13%]	280 [2.27%]	287 [2.32%]	314 [2.51%]
Number of reemployed retired workers*1 [Utilization ratio of the NTT DATA Reemployment System]	130 [74.14%]	120 [72.22%]	105 [78.26%]	102 [77.42%]	95 [64.71%]
New recruitment	43	26	18	24	22
Continued recruitment	87	94	87	78	73

*1: Figures for the number of newly recruited graduates and retired employees using the NTT DATA Reemployment System are as of April 1 for each fiscal year.
*2: The number of employees with disabilities is as of June 1 for each fiscal year. (Each person with a severe disability is counted as two people.)

Starting Salary (Actual Results for April 2017) and Average Monthly Salary

	Doctoral Degree	Master's Degree	Bachelor's Degree	College of Technology Graduate
Starting salary	¥295,370	¥246,820	¥220,320	¥191,110

* Average annual salary for fiscal 2017: ¥8,207,330

Personnel Management System

NTT DATA's framework for managing employees emphasizes performance, achievements, and activities irrespective of employment status. We expect our employees to put the Group vision into practice and raise their level of professionalism. Our employees' concept of work focuses on performance and achievement through this approach, and it has firmly taken root across the Company.

Furthermore, we have developed a framework to reflect degrees of task achievement in the remuneration of contract employees, with options for conversion to permanent employment status for workers deemed to have high long-term performance potential.

We strive for transparency in our appraisals of performance by examining diverse aspects, including an evaluation of achievements against the employee's personal goals, through one-on-one interviews with managers and multidimensional evaluations.

In addition, we avoid placing disproportionate weight on short-term performance improvements by paying due consideration to mid- to long-term incentives for maintaining long-term motivation, such as an employee stock purchasing program, retirement benefits, and a defined contribution pension plan.

Nurturing Human Resources

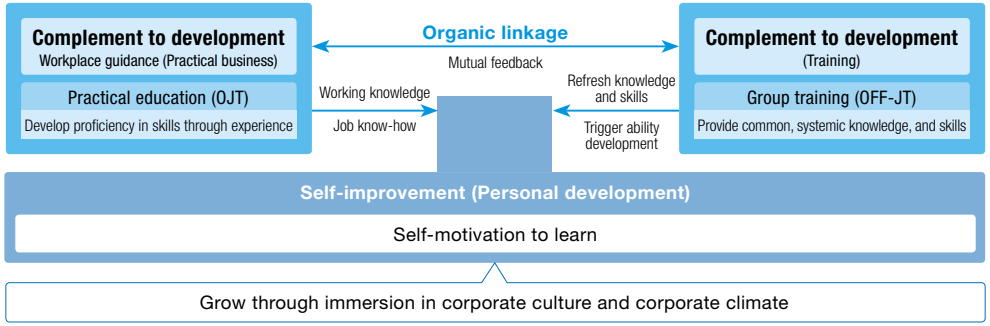
Supporting Employee Skills Development

NTT DATA's personnel education and development is anchored in the employee's aspiration to learn and grow by setting goals on their own initiative. Our basic policy for personnel education is to offer on-the-job training (OJT) as the center of educational opportunities, complemented and enhanced by off-the-job Group training (OFF-JT).

At each workplace, we clearly define the roles of staff responsible for different aspects of training under a system in which employees set their own annual education plans as a means for raising motivation to learn by systematically addressing both the workplace and the employees.

Additionally, to meet the needs of the ever-changing business environment, we are focusing on nurturing human resources with advanced expertise and responsiveness to change, as well as those who can demonstrate their talents in the global marketplace.

Approach to Personnel Education and Development

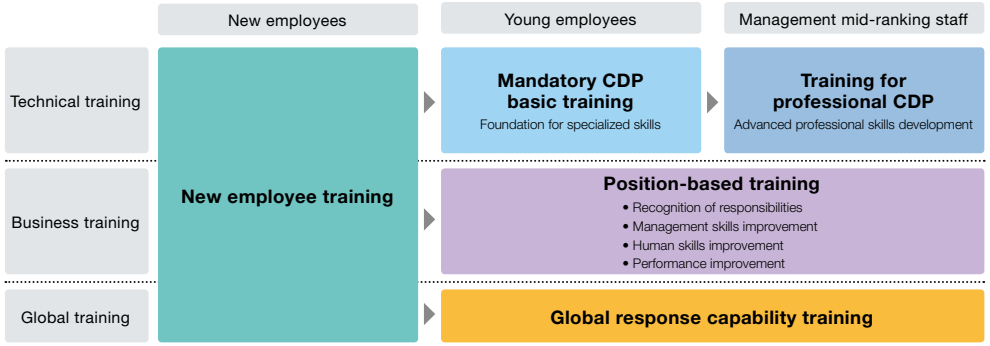


Framework for Various Training Programs

NTT DATA offers business training to facilitate business skills improvement, technical training to boost specialist expertise, and global training to hone global response capabilities, with employees free to select courses attuned to their position and job assignment when needed. Moreover, we have established an environment in which all our employees are able to acquire knowledge and skills to a certain degree pertaining to operations outside of their regular job assignments.

In new employee training, we offer programs for forming the essential mind-sets and abilities necessary for developing into disciplined human resources.

Framework for Various Training Programs



Participants and Training Costs in Fiscal 2017

	Participants and Other Data	Annual Number of Study Hours per Participant	Training Cost per Participant
New employee training programs, etc. (Including mandatory CDP basic training)	Number of participants: Approx. 400	560 hours (75 days)	¥4.2 million
Professional CDP certification	Number of participants certified: Approx. 1,200 Aggregate number of employees certified: Approx. 9,200	60 hours (8 days)	¥500 thousand
Professional CDP training	Days of training: Approx. 30,000 person-days		
Position-based training (Period covered, people undertaking training, by position)	Days of training: Approx. 50,000 person-days		
Global response capability training	Approx. 800 participants (Reference) Days of training: Approx. 5,000 person-days		

Human Resource Cultivation System Based on Professional CDP

As clients' IT needs diversify in this ever-changing business environment, companies require human resources who can respond appropriately and flexibly. NTT DATA has put in place a Professional Career Development Program (CDP) that was designed to transform its employees into professional human resources who are highly specialized and can flexibly adapt to change. We are seeking to apply the program to domestic Group companies as well. Through this program, we show each employee's current accreditation level and what each employee needs to do to further develop his or her skills in an easy-to-understand format in order to support each employee's self-directed growth from the time they join the Company until retirement.

The creation of new solutions and the expansion of business fields are increasingly important today, so we will continue to work on promoting the cultivation of professional human resources in the NTT DATA Group.

Policy and Current Status of Global Human Resource Development

At NTT DATA, we are collaborating with overseas Group companies to develop training programs that will enable our human resources to be active on the global stage.

Specifically, we began the Global Leadership Program in fiscal 2009, which targets the Company's top domestic and international management, and Global Workshop-LIT in 2012, which is designed to help employees master network building and intercultural communication with overseas Group company members. Additionally, we launched Regional Leadership Program-JAC in fiscal 2013, which aims to conduct business leader training in Asian regions.

Furthermore, we are promoting personnel exchanges between domestic and overseas Group companies and are creating systems that contribute to shaping the unique and diverse culture of the NTT DATA Group.

Global Leadership Program

Regional Leadership Program-JAC

Promoting Diversity and Inclusion

[Basic Policy]

The NTT DATA Group has adopted the message "we enhance our creativity by respecting diversity" as one of the three pillars of its Group Vision, "Trusted Global Innovator." We are promoting diversity and inclusion based on these principles and recognize them as one of our important management strategies for success against global competition. By encouraging active participation from our diverse human resources and reforming their workstyles, we are working to create new corporate value.

[Promotion System]

To encourage diversity and inclusion, we established the Diversity Promotion Office, under the direction of the Chief Personnel Affairs Officer, in 2008. Since fiscal 2012, we have concentrated on advancing women in the workplace and reducing annual work hours by changing workstyles in a bid to create a work environment where each individual employee can thrive.

We regularly hold sessions regarding female participation in the workplace at the NTT DATA Global Conference, which gathers Group leaders from countries throughout the world. Additionally, during the Global Summit of Women held in Japan in May 2017, we conducted a workshop involving female leaders at NTT Group companies throughout the world, and the managing director and CFO of NTT DATA Germany visited Japan to participate. Through efforts like these, the entire Group is working both domestically and internationally to promote diversity and inclusion.

[Reforming Governance]

In order to diversify our Board of Directors, we elect outside directors and auditors, as well as foreign directors. We have also newly appointed one female senior vice president to the position of Board

secretary general. With efforts such as these, we are securing diversity in terms of both nationality and gender. Our decision-making managerial bodies, such as our Corporate Management Committee, also feature diverse participants, including female organization heads and foreign directors.

In addition to these initiatives, Board members participate in surveys regarding the Board's effectiveness and conduct self-assessments and analyses. Additionally, we have established an Advisory Board that gathers opinions and proposals from management and from experts outside of the Company.

[Third-Party Evaluations]

As a result of our various initiatives, we have received various third-party certifications and praise, including the Grade-3 (highest level) Eruboshi certification for promoting female participation in the workplace, the new Kurumin logo for supporting employee childcare, and inclusion in the Telework Pioneer 100 list for our activities related to telework. METI also awarded us its Diversity Management Selection 100 Prime Commendation in March 2018 for being one of the very top companies in Japan engaging in ongoing and companywide diversity management.

Additionally, for the second year in a row, the Group received a rating of Gold in PRIDE Index 2018, an index established by the private organization work with Pride (wwP) that evaluates corporate initiatives supporting sexual minorities.

Active Participation from Diverse Human Resources

NTT DATA is actively engaged in creating environments in which diverse human resources can fully participate and display their abilities to the highest extent possible, regardless of their gender, nationality, age, disability, type of employment, culture, custom, lifestyle, value, sexual orientation, or gender identity.

[Goals for Advancing Women's Careers]

Following the enactment of the Act of the Promotion of Women's Participation and Advancement in the Workplace in Japan, NTT DATA formulated an action plan for developing the necessary environment for advancing women. It also gave us an opportunity to once again reflect upon past initiatives, and we intend to consistently and steadily work toward achieving our goals through a Companywide effort.

Goals for Advancing Women's Careers (Non-consolidated)

Plan period	From April 1, 2016 to March 31, 2021
NTT DATA issues	1. While there were no outstanding issues regarding gender discrimination in hiring or the state of continuous employment between men and women, we must continue working to increase job applications by female students and develop the population of female science students applying for jobs. 2. Optimization of total working hours 3. Low percentage of women in deputy manager positions that make up the population of top management and other management positions, and candidates for management positions
Quantitative targets	Target 1 Continue raising the percentage of female recruits to above 30% by the end of fiscal 2020 ▶ Maintained at above 30% for approximately the past 10 years Target 2 Achieve average total working hours of 1,890 hours per employee annually by the end of fiscal 2018 ▶ Enhanced efforts since 2013 have resulted in a reduction to an average of 1,901 hours annually in fiscal 2017 Target 3 Increase the number of women in management positions to at least 200 by the end of fiscal 2020 ▶ Increased by 11 women from the previous fiscal year to a total of 146 women, as of March 31, 2018 (Employees listed under Target 4 are not included among employed managers.) Target 4 Increase the number of women in senior management positions (directors, heads of organizations, etc.) to at least 10 by the end of fiscal 2020 ▶ Nine women serve in senior management positions, as of July 1, 2018

[Initiatives Aimed at Encouraging the Empowerment of Women]

NTT DATA is placing particular focus on strengthening its diversity initiatives aimed at encouraging the empowerment of women. We conduct career development training to meet our target ratios for female employment and our objectives concerning the number of women working in management positions. Rounding out our varied diversity initiatives, we are also implementing diversity training for management.

Primary Initiatives for Advancing Women in the Workplace

- Transmission of messages from top management through our in-house website
- Forums where top management discuss their own thoughts regarding diversity
- Diversity management training for current managers
- Formulation of development plans and monitoring for female employees
- Outside training for female candidates for leadership positions
- Seminars for promoting career development for employees on or about to take childcare leave
- Three-party career development consultations for employees who return from leave, such as childcare or nursing care leave
- Women's Initiative @ NTT DATA, voluntary activities by women in management positions
- Introduction of profiles and career descriptions of diverse women in management positions via the Women's Advancement website

[LGBT and Sexual Minority Initiatives]

NTT DATA is promoting initiatives that support sexual minorities, such as those in the LGBT community, from the standpoint of creating environments that allow for active participation from a diverse range of human resources. In addition to sharing messages from top management, we are promoting several related initiatives, including workplace seminars that encourage understanding regarding LGBT issues, an LGBT helpline, basic knowledge training for employees working in personnel, ESG promotion, and recruiting and behavior guidelines for "allies," straight supporters of LGBT rights. Starting in fiscal 2018, we will work to expand systems supporting spouses and families in traditional households to include same-sex partners.

[Promoting Employment of People with Disabilities]

To help employees with disabilities realize their potential, NTT DATA has sought to create various work opportunities through NTT DATA DAICHI Corporation, a special subsidiary established in July 2008.

In addition to its initial operations, NTT DATA DAICHI began providing data input operations in fiscal 2012. In fiscal 2015, it began handling in-house delivery of reference materials as well as screening and approval of application forms. In fiscal 2016, it became involved in convenience store back office operations and other duties. Moreover, following the expansion of each of the Company's business operations, we continue to maintain hiring activities in collaboration with vocational training schools for persons with disabilities.

NTT DATA DAICHI Activities

IT Services	Office Business
● Maintenance and upgrades of internal and external websites for NTT DATA and Group companies ● Basic skills training in website production for persons with disabilities	● Answering and redirecting calls made to main switchboards ● In-house line management ● Long-term storage and management of internal documents ● Collection and shredding of confidential documents ● Production of employee IC cards ● Office cleaning and greenery maintenance ● Printing (Business cards, training texts, and other documents) ● Data entry operations ● Delivery of in-house documents ● Screening and approval of application forms ● Convenience store back office duties

[Promoting Reemployment of Retired Workers]

The NTT DATA Group has a Career Staff System that caters to employees who have reached the mandatory retirement age but wish to continue working until 65. This hourly wage system offers an array of workstyle options that can be adopted to the requirements of participants, including full-time employment, reduced working hours, and three- and four-day working weeks.

Additionally, we have established a child and nursing care consulting service to help our employees feel secure in managing both work and child and nursing care. This service provides consultations regarding related systems and provides information and advice in response to the various doubts and distress that our employees may experience in their everyday lives.

We hold nursing care seminars tailored to our employees' needs four times per year in order to provide support. We also incorporate balancing nursing care with work into our life plan training for 35- and 50-year-old employees. These initiatives are aimed at fostering an organizational climate that allows our employees to manage work with their private care needs. In addition to these initiatives, we have also joined the remote nursing care support services offered by the NPO, Umi wo Koeru Care no Te, providing direct nursing care support for our employees.

[Life Plan Training]

NTT DATA provides training and incentives for each age group to strike a work–life balance while offering total support for their life plans. We will continue to offer training and help for employees in designing their life plans in balance with work.

Training by Age Group and Activities in Fiscal 2017

Age Group	Content of Training	Activities in Fiscal 2017
Two years after joining the Company	● Cafeteria Plan System ● Asset formation via asset-building savings plans ● Turning points in life (marriage, childbirth, buying a home)	256 employees participated in four sessions
Age 35	● Metabolic syndrome and self-care ● Public pension system and Company pension system ● Revisions in insurance and housing costs, savings and investment	153 employees participated in four sessions
Age 50	● Public pension system and Company pension system ● Revisions in insurance and housing costs, savings and investment ● Nursing care and inheritance	454 employees participated in eight sessions
Mandatory retirement age	● Retirement benefits, corporate pensions, public pensions ● Work options after retirement (internal system) ● Financial planning	121 employees participated in four sessions

[Support for Continuing Careers]

In order to help employees balance childbearing and rearing, nursing care, and work responsibilities with less worry, the NTT DATA Group is upgrading its leave systems while enhancing employee understanding and improving the workplace environment that makes these systems easier to use.

Other Primary Initiatives in Support of Career Continuation

- Offer an environment in which employees on childcare or nursing care leave can continue to view Company information
- Introduce childcare and nursing care leave systems and offer a communication handbook that provides support for those balancing care and work
- Hold seminars that support simultaneous management of work and nursing care

[Upgrading Childcare and Nursing Care Systems]

We are implementing various measures in terms of childcare support and, based on the Act on Advancement of Measures to Support Raising Next-Generation Children, received the Kurumin Next-Generation Certification Mark from the Ministry of Health, Labour and Welfare in 2008. Since then, we have continued to receive this certification, most recently in December 2017.

In terms of support for nursing care, since 2011 NTT DATA has enabled employees to use the remote nursing care support services provided by the NPO Umi wo Koeru Care no Te with the aim of offering direct support to employees with nursing responsibilities at home. Moreover, since 2012 we have supported employees with life plan training sessions for workers reaching age 50. In 2016, we also introduced life plan training for workers reaching age 35 as well as seminars on nursing care, introducing our nursing care support initiatives to provide employees with a wide range of information and enhance their awareness.

[In-House Day-Care Center, the Egg Garden]

Stemming from an idea raised by employee volunteers, we established the Egg Garden, an in-house day-care center for our employees on the first floor of the Toyosu Center Building Annex in Tokyo, in December 2011. The provision of an environment enabling employees to give birth and take childcare leave with their minds at ease, allowing them to return to work as planned, supports the ongoing careers of employees. Employees that take advantage of the Egg Garden tend to return to work more quickly after taking childcare leave.

Sixteen children were registered for the monthly childcare service, and 93 children were registered for the temporary childcare program in fiscal 2017. We will continue promoting use of the facility.

Principal Systems (Non-consolidated)

Principal Childcare Systems	Principal Nursing Care Systems
● **Childcare leave** Childcare leave can be extended until the child reaches four years of age. The deadline for application to return to work is one month prior to the expected return.	● **Nursing care leave** Nursing care leave can be extended up to a maximum of 18 months.
● **Shorter working hours for childcare** Shorter working hours for childcare are available until the child completes his or her third year of elementary school. The application deadline for shorter working hours is two weeks prior to the start.	● **Shorter working hours for nursing care** Shorter working hours for nursing care are available for a maximum of three years separate from nursing care leave.

Trends in the Number of Employees Using Childcare and Nursing Systems (Non-consolidated)

	Fiscal 2014		Fiscal 2015		Fiscal 2016		Fiscal 2017	
	Women	Men	Women	Men	Women	Men	Women	Men
Childcare leave (People)	129	17	149	12	160	20	172	19
Shorter working hours for childcare (People)	208	2	240	2	278	7	310	5
Nursing care leave (People)	1	4	3	3	4	4	5	6
Shorter working hours for nursing care (People)	0	0	1	0	0	1	0	1

Percentage of Employees Who Return to the Company and Remain with the Company after Childcare or Nursing Care Leave (Non-consolidated)

	Fiscal 2014		Fiscal 2015		Fiscal 2016		Fiscal 2017	
	Percentage of employees who return	Percentage of employees who remain	Percentage of employees who return	Percentage of employees who remain	Percentage of employees who return	Percentage of employees who remain	Percentage of employees who return	Percentage of employees who remain
Childcare leave	98.4%	98.3%	98.4%	96.8%	98.2%	98.8%	97.3%	—
Nursing care leave	40.0%	100.0%	60.0%	66.7%	100.0%	100.0%	88.9%	—

Reforming Workstyles

In 2005, NTT DATA was engaging in workstyle innovation, aiming to become a company that provided its customers with change through IT in accordance with its Group Vision at the time, "Global IT Innovator." Starting in fiscal 2018, we have changed our Group Vision to "Trusted Global Innovator" and are continuously working to provide this innovation, currently through changes in our workstyles and how they affect our customers.

Our workstyle reforms involve more than just simply reducing working hours; while raising their own work quality, all employees are making time within their days to aim for self-actualization. By using this time effectively, they are achieving growth and making continuous and active contributions, helping us to achieve our goal of maintaining a strong level of competitiveness.

Elsewhere, NTT DATA is aiming to become a "favored company on the labor market" by practicing health management, establishing new systems and work environments, improving development and production, and rectifying long working hours that occur due to collaboration with clients and business partners.

Moving forward, we will continue to grow as employees, individuals, and as a company by influencing each other positively.

[Reducing Long Working Hours]

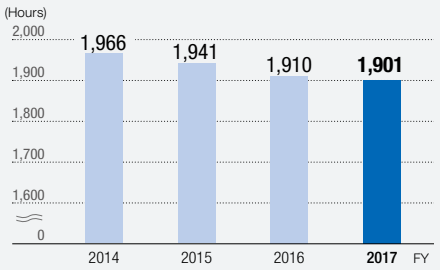
Promoting Initiatives toward Addressing the IT Industry's Issue of Long Working Hours

In the IT industry, long working hours are an ongoing problem. NTT DATA is promoting efforts aimed at decreasing total working hours based on the appropriate management of working hours.

Up to now, we have sought to manage working hours by recording computer log on and log off times and managing working hours using smartphones to log start and stop times. We have also set reduction targets for total working hours at each workplace and promoted the consideration and implementation of measures for attaining the targets.

In fiscal 2018, we are working to reduce our average total working hours to 1,890 per employee annually. We have established reduction targets for all organizations within the Company and progress toward their achievement is being reported to management every quarter. Additionally, we have implemented a plan–do–check–act (PDCA) cycle, through which we continuously review and improve initiatives.

Total Annual Working Hours Per Employee (Non-consolidated)



Encouraging Employees to Take Paid Leave

NTT DATA promotes work–life balance for its employees by encouraging them to be proactive in taking paid refreshment leave*1 and anniversary leave*2.

As a result of our promotional efforts, employees took an average of 17.7 days of paid leave per person in fiscal 2017. Moving forward, we will continue to incorporate various policies and measures while working to increase employee utilization of paid leave.

*1: Employees can take more than four consecutive days of vacation when a work milestone is achieved.
*2: Employees decide their own anniversary date and plan to take vacations every year on this anniversary.

Average Paid Leave Taken in Days, Rate of Paid Leave Taken (Non-consolidated)

	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017
Average paid leave taken in days per person	17.4	17.0	18.2	17.7
Average rate of paid leave taken (%)	86.8%	85.0%	91.0%	89.0%

Opening the Way for Workstyles That Are Not Location Dependent

NTT DATA has operated a teleworking employment program since February 2008 as one specific strategy aimed at workstyle reform.

In April 2018, we revised our teleworking system to increase policy flexibility regarding where and for how long our employees can utilize teleworking. These revisions included removing limits on the number of days teleworking can be utilized and allowing employees to telework in places outside other than their homes. Currently, about 80% of NTT DATA employees are taking advantage of this system.

Additionally, we have encouraged workstyle reform by establishing flexible time policies; more than half of our employees utilize our flex-time system, which began in April 1993, and our discretionary work system, which began in December 2010.

Furthermore, we are establishing new infrastructure by moving our development environment to the cloud and implementing teleconferencing. Moving forward, we will continue to promote workstyle reforms that enable our diverse human resources to contribute actively.

Teleworking System Users and their Proportion (Non-consolidated NTT DATA)

	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017
Teleworking (Includes mobile work) Number of users	7,214	7,408	7,673	8,807
Teleworking (Includes mobile work) Ratio of users (%)	64.9%	66.1%	68.3%	78.2%

Participation in Telework Days as a Special Cooperating Organization

In an effort to reduce crowding during the Tokyo 2020 Olympic and Paralympic Games, the Tokyo metropolitan government and municipal authorities have designated July 23–27 as "Telework Days," as these dates coincide with the games' opening ceremonies. Companies, organizations, and government bodies are being encouraged to view the event as an opportunity to participate in a national campaign targeting workstyle reform.

NTT DATA participated in the 2018 Telework Days as a "special cooperating organization"; an organization cooperating in measuring the impact of large-scale teleworking by 100 or more people. A total of 42,600 employees took part in this five-day initiative. As the Toyosu area, where our Head Office is located, is expected to experience congestion on the day of the event, we had employees engage in teleworking (approximately 14,700 people), encouraged them to shift commuting times by taking advantage of discretionary work and flex-time systems (approximately 19,900 people), and recommended taking time off for annual paid leave and summer vacations (approximately 8,000 people). Additionally, in connection with Telework Days, NTT DATA participated in JISA Biz (business at a different time) to help reduce congestion during rush hour.

NTT DATA continues to promote measures related to workstyle reform. As a company that broadly deploys IT services that support corporate workstyle changes, we are also contributing to workstyle innovation Japan.

Primary Initiatives Promoting Workstyle Reform

- Ongoing implementation of the "changing workstyles" seminars for newly appointed department and section managers
- Environmental improvements tailored to each organization that allow for flexible workstyles, including Companywide conversion to thin-client terminals, discretionary work systems, teleworking systems, and flex-time systems
- Efforts to encourage employees to take paid leave (including refreshment leave and anniversary leave)
- Flexible operation of system ensuring break time
- Increase in the number of employees that can utilize our teleworking system and the number of places in which they can engage in telework
- Introduction of successful workstyle reform examples through our in-house website

Employee Health Maintenance and Promotion

NTT DATA promotes employee health and mental healthcare in cooperation with its various workplaces centered on the industrial physicians and health nurses at its Health Promotion Office.

Long working hours is an issue characteristic to the IT industry. To address this issue, since fiscal 2011 our Health Promotion Office has checked the degree of fatigue of employees whose monthly overtime exceeded 45 hours. We have an industrial physician or health nurse interview those confirmed to have a high degree of accumulated fatigue. Furthermore, all employees are required to fill out an online medical history questionnaire after undergoing medical examinations so the Health Promotion Office can ascertain their subjective physical and psychological symptoms and how they are doing in the workplace. Through these efforts, we are promoting early detection of those in poor health and are building awareness regarding self-care among employees.

Implementation of Mental Health Management Exams

Since fiscal 2009, NTT DATA has conducted annual mental health management examinations for all of its employees serving in management positions to provide them with a basis to apply when looking after their subordinates (reporting line care).

A total of 125 people, primarily newly appointed managers at NTT DATA and their peers, passed the exam in fiscal 2017. Moving forward, we will provide managers with training from the perspective of line care to raise awareness regarding the importance of mental health management.

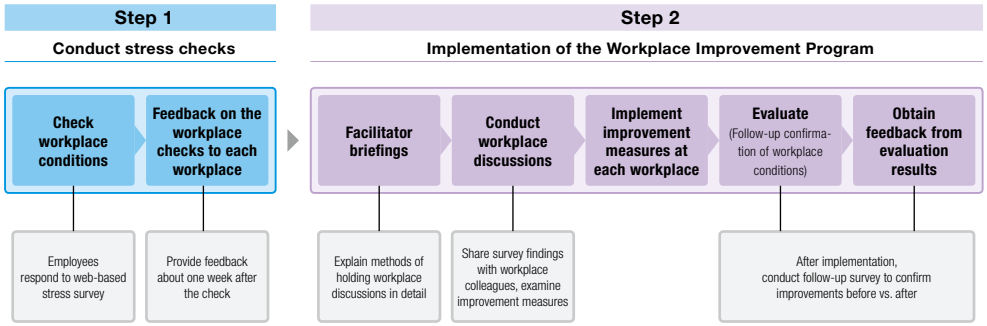
Creating Safe Workplace Environments through Health and Safety Committees at Worksites

NTT DATA has formed Health and Safety committees for each of its organizational units to ensure an environment in which employees can work in safety and comfort and to improve the safety consciousness of staff.

Workers in the IT industry tend to feel heavily stressed by the nature of their work. At Health and Safety Committee meetings, the accumulated fatigue checks and interviews by industrial physicians or health nurses, both conducted by the Health Promotion Office, are shared in a continuous effort to improve the workplace environment.

NTT DATA implements an annual stress check for all employees and conducts group analysis in each workplace. The results are provided as feedback to each workplace and used in workplace environment improvement activities.

Flow of the Workplace Improvement Program



Industrial Accident Prevention Initiatives

With regard to the prevention of industrial accidents, in addition to conducting two annual workplace safety patrols, we engage in activities to raise in-house awareness of National Safety Week, National Industrial Health Week, and the Accident-Free Holiday Campaign organized by the Ministry of Health, Labour and Welfare and the Japan Industrial Safety and Health Association. Going forward, with the aim of achieving no accidents, the Health and Safety Committee will continue its efforts to ensure that employees remain on guard against potential hazards while endeavoring to completely eliminate occupational accidents.

Number of Occupational Accidents

	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017
Number of occupational accidents	5	6	4	2

Labor Relations

A Better Work Environment Based on Labor–Management Dialogue

The Company conducts labor–management talks with NTT DATA unions regarding issues pertaining to working conditions as they arise. NTT DATA's basic stance is to emphasize thorough dialogue between labor and management in addressing various issues. Additionally, essentially 100% of our employees are members of labor unions, excluding managers, who are not permitted to join unions, as they are responsible for administration of operations.

Pursuing Employee Satisfaction

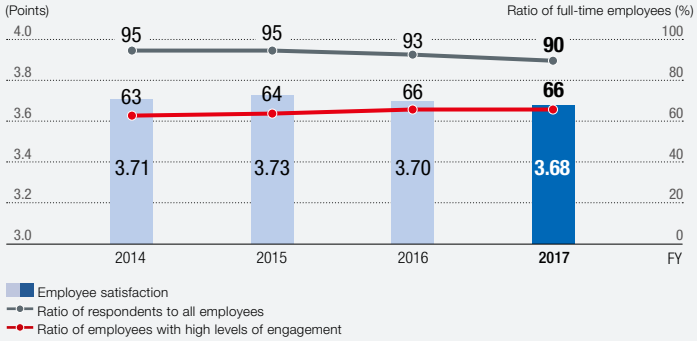
Ongoing Employee Satisfaction Surveys

The NTT DATA Group strives to improve workplace environments and Company mechanisms and ascertain issues pertaining to the creation of a company where employees can work comfortably. These efforts include the regular implementation of attitude surveys targeting all NTT DATA Head Office and domestic Group company employees, which are connected to workplace environment improvements. In the fiscal 2017 survey, NTT DATA Head Office employee satisfaction was ranked 3.68 points out of a total of five points, indicating continued satisfaction. Additionally, 66% of employees reported high levels of engagement, on par with prior results.

In the meantime, we also began conducting the "One Voice" employee engagement survey for employees working at our Group companies overseas. More than 80% of participants reported high levels of engagement, as overseas Group companies work to enhance workplace environments based on survey results.

The NTT DATA Group will continue striving to create rewarding workplace environments through these initiatives.

Employee Satisfaction Survey Results (NTT DATA, domestic Group companies)



A full score is 5.0. Employee satisfaction is measured in four stages, including requires improvement (below 3.0), requires attention (from 3.0 to 3.29), normal (from 3.3 to 3.59), and satisfied (3.6 and above). The ratio of employees with high levels of engagement measures the percentage of employees who responded with a five (strongly agree) or a four (agree somewhat) with regard to engagement.

NTT DATA Kids Lab

To help raise employee satisfaction, the Technology and Innovation General Headquarters holds the NTT DATA Kids Lab at our Head Office in Toyosu. This event is conducted twice per year, during spring and summer break, for our employees' elementary- and middle school-aged children. A total of 32 children participated in fiscal 2017, which established "programming" and "globalism" as its themes. The children created video games using computer programming and made original guide-books along with foreign employees. Survey results indicated that 80% of children experienced changes in awareness regarding their guardians' work thanks to this program, and nearly 90% of these guardians expressed satisfaction with the event. We will continue to implement this program moving forward and will work to develop IT human resources and improve employee satisfaction.

Computer programming workshop

Global workshop

With Regional Communities and Society as a Whole

The NTT DATA Group works to create and develop a healthy society through social contribution activities that emphasize employee participation, and through the development of IT systems designed to help resolve societal issues.

Management Approach

The NTT DATA Group contributes to the advancement of society as a whole by developing and providing IT solutions for global societal issues. To encourage each individual employee to proactively pursue social contribution activities, the Social Contribution Promotion Office takes the lead in promoting effective initiatives under our social contribution policy. We will continue to fulfill our responsibility as a corporate citizen by engaging in effective social contribution activities that are in line with international initiatives and guidelines such as the SDGs adopted at a United Nations summit in 2015.

Contributing to Regional Communities and Society as a Whole

Promoting Social Contribution Activities

In April 1992, NTT DATA established a Social Contribution Promotion Office to plan and promote social contribution activities. Since then, we have conducted activities that benefit people, targeting fields that include education, welfare, regional communities, and international contribution as well as a diverse array of activities related to the natural environment, culture, and the arts. At the same time, we are working to raise employee awareness concerning volunteer activities, while promoting a wide range of activities, including those that take advantage of our business activities and initiatives that are implemented throughout the Group.

Expenditures for Social Contribution Activities (Millions of yen)

	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017
Expenditures for social contribution activities	326.42	271.07	299.36	320.15
Donations (Funding for matching gifts: Amount extended by the Company)	85.73	93.10	138.40	37.27
Expenditures for various other social contribution projects	240.69	177.97	160.96	282.88

Our Social Contribution Policy

Based on our mission statement, the NTT DATA Group will continue to conduct social contribution activities with an awareness of its social responsibility as a corporate citizen. To this end, we have established five action policies.

- Development of IT human resources
- Global social contribution activities
- Realization of a fair society
- Response to climate change
- Support for disaster recovery

Social Contribution Activities

https://www.nttdata.com/global/en/sustainability/social-contribution

Development of IT Human Resources

Worldwide attention is on the United Nations Program for Education for Sustainable Development (ESD). Under this initiative, companies are expected to contribute to the education of children and young generations of people.

With a clear focus on the future, the NTT DATA Group supports education from diverse perspectives to ensure that ICT will be broadly deployed in a fair and appropriate manner as a social infrastructure. We recognize this is an important responsibility for us as a Trusted Global Innovator.

IT Experience for Children, the Future Leaders of the Next Generation

IT Experience for Children was launched in 2004 as an event offering elementary school children a fun opportunity for gaining hands-on experience with IT. To reflect the changing IT environment, the content of the event was changed into a programming class that even beginners could enjoy. The event has been held twice a year, in spring and summer, since 2014.

We held the event a total of five times at the NTT DATA Komaba Training Center in 2017, in both March and August. Approximately 430 children participated. In 2018, we held the event at the same place on July 29 and welcomed a total of 73 children as participants.

Programming is a way for us to actualize our ideas for the future. Accordingly, we will continuously work to provide fun IT learning opportunities that will inspire children to create their own futures.

Work-Study Programs for Junior High and High School Students

Each year, NTT DATA runs a work-study program for junior high and high school students. The program provides an opportunity for experiencing the near future using Big Data and demonstrations of the latest technologies. In fiscal 2017, a total of 377 students participated, primarily from junior high schools and high schools. They discussed ways to use IT to answer and resolve everyday questions and issues.

We will continue running the program with the dual objectives of giving young people / the younger generation firsthand experience of working in society and deepening their understanding of how IT—which we now tend to use subconsciously on a daily basis—really works.

In February 2018, we test-ran the NTT DATA and Progress Time High School Student Ideathon,

with “changing schooling through IT” as the theme. Over 30 high school students from all across Japan gathered to discuss ideas regarding how to innovate school education using IT and made presentations afterward. The presentations and ideas were judged by an expert involved in new business in the field of education. Those selected as superior will continue to be reviewed so that they can be turned into new businesses in the future.

Regional Revitalization Ideathon

In January and February of 2018, NTT DATA jointly sponsored the Regional Revitalization Ideathon with the local governments of Taikicho, Hokkaido and Kobayashi-shi, Miyazaki.

On the days of the Ideathon, Besta Fintech Lab provided a venue for the local governments of Taikicho and Kobayashi-shi and more than 30 university students by connecting them through IT. The students gave presentations to related government authorities regarding their ideas about how to inspire local regions using IT. One of these ideas involved establishing a technological school that would transform Taikicho into Japan’s Silicon Valley by providing lectures and workshops concerning the relationships between agriculture and IT and outer space and IT to people living in local regions. Another involved providing hands-on agricultural experiences for visitors at a Kobayashi-shi guest house. The growth progress of vegetables planted during these experiences would be converted into images and videos, which could be checked through an app called GROW after visitors returned home. These ideas received high praise from the Ideathon’s judges, who were municipal personnel from Taikicho and Kobayashi-shi.

This program both deepened the relationship between NTT DATA, local communities, and the students living in them and contributed to the training of IT human resources.

Group discussion

Separate group presentations

Promoting Human Resource Development via Industry–Academia Cooperation

NTT DATA supports and works alongside a range of educational organizations on initiatives aimed at fostering the next generation of IT human resources. As part of this drive, we are involved in various industry–academia cooperation initiatives for supporting the development of technologies at universities in Asia and their extension to practical uses, as well as help foster human resources.

Since May 2012, NTT DATA and SFC Research Institute at Keio University have promoted research related to Big Data management based on open cloud computing concepts through the School on Internet (SOI) Asia Project, a foundation for Internet education and research with 28 leading universities in 14 Asian countries.

Through these efforts, we aim to strengthen “collaborative research,” “cooperation with government and local companies,” and “human resource exchanges” originating at top universities in a rapidly growing Asia.

List of SOI Asia Project Partners

Country	Organizations
Republic of Indonesia	University of Brawijaya, Sam Ratulangi University, Hasanuddin University, Bandung Institute of Technology, Syiah Kuala University
Lao People’s Democratic Republic	National University of Laos (NUOL)
Republic of the Union of Myanmar	University of Computer Studies, Yangon, University of Computer Studies, Mandalay
Kingdom of Thailand	Chulalongkorn University, Asian Institute of Technology, Prince of Songkla University, Chulachomklao Royal Military Academy (Thailand)
Malaysia	University Sains Malaysia, Asian Institute of Medicine, Science & Technology University
Socialist Republic of Vietnam	Institute of Information Technology, University of Science and Technology of Hanoi, Vietnam National University
Republic of the Philippines	Advanced Science and Technology Institute, University of San Carlos
Mongolia	Mongolian University of Science and Technology
Federal Democratic Republic of Nepal	Tribhuvan University
Kingdom of Cambodia	Institute of Technology of Cambodia, University of Health Sciences-Cambodia
People’s Republic of Bangladesh	Bangladesh University of Engineering and Technology
Republic of Singapore	Temasek Polytechnic
Democratic Republic of Timor-Leste (East Timor)	National University of East Timor
Japan	Tokyo University of Marine Science and Technology, Japan Advanced Institute of Science and Technology, Nara Institute of Science and Technology, Keio University
Other international organizations	The United Nations Educational, Scientific and Cultural Organization / Southeast Asian Ministers of Education Organization / University Network, Thailand / Canal ASEAN Virtual Institute of Science and Technology / Collaboration for Network-Enabled Education, Culture, Technology and Science (Connect-Asia) / Nepal Research and Education Network

Supporting Human Resource Development for Middle Management

NTT DATA provides support for the Innovation Management College of Japan (IMCJ)*, an innovation leadership training program overseen by the Chief Information Officer (CIO) that targets the middle management of corporations. The objective of the program is to generate “Innovation Leaders” who will transform their corporations through the strategic use of information as a management resource and IT.

During fiscal 2017, 23 employees participated in IT management training conducted by user companies as part of our human resource development program, bringing the total to date to 229 employees. Additionally, participants volunteered to discuss issues that have arisen as aggressive IT investment continues to progress and formulated an action plan for solving these issues. Research regarding the creation of mechanisms that elicit creativity from participating companies began in 2016. This research helped lead to the establishment of implementation guidelines. With these initiatives, we are working to create new value by innovating companies’ business models and strengthening their product and service development through IT and revitalize initiatives aimed at enhancing competitiveness.

* This college was established by the Japan Users Association of Information Systems in April 2009, with programs targeting people in middle management. NTT DATA supports various aspects of the college, including its research activities and the planning of its human resource development program.

Response to Government Policies

We ensure that all political donations made in Japan are conducted in accordance with our Global Compliance Policy and our supply chain CSR procurement guidelines and in strict observance of the Political Funds Control Act. NTT DATA’s total domestic political donations during fiscal 2017 amounted to ¥3.5 million.

Contributions from Overseas Group Companies

The NTT DATA Group, as a global corporate group, is conducting a variety of activities to help establish better societies in regions throughout the world.

Consolidated coverage

53 countries and regions

Number of consolidated subsidiaries

302

Number of participants in contribution activities

17,577

Cost of contribution

¥486,340,000

EMEA and Latin America	China, APAC, and Japan	North America
Cost of contribution activities	Cost of contribution activities	Cost of contribution activities
¥40,090,000	¥320,150,000	¥126,100,000
Number of participants in contribution activities	Number of participants in contribution activities	Number of participants in contribution activities
1,012	9,380	7,165

List of Contribution Activities Performed by Overseas Group Companies

Region	Company Name (Location of Head Office)	Activities
North America	NTT DATA Services (America)	● Global Volunteer Week (Donated food, supported orphanages, donated clothing, and held food drives) ● Activities related to regional community revitalization (Supported construction of schools and access to education) ● Support activities for disaster-stricken areas (Provided support for regions affected by flooding in southern India) ● Activities in support of developing the next generation (Sponsored internships for students)
EMEA and Latin America	NTT DATA UK (United Kingdom)	● Activities related to regional community revitalization (Participated in employment support volunteer activities) ● Development of next-generation human resources (Provided job-hunting support for female college students and support for local students) ● Activities in support of creating new business opportunities (Held open innovation conventions)
	NTT DATA Deutschland GmbH	● Activities related to regional community revitalization (Conducted Christmas charity activities) ● Activities in support of creating new business opportunities (Conducted open innovation activities) ● Activities in support of developing the next generation (Provided educational support for local students) ● Contribution to urban transportation through business (Developed map apps)
	NTT DATA Romania	● Support activities for children (Provided Christmas presents and food for children in orphanages) ● Improvement activities supporting Romania’s education system (Spread IT education) ● Activities related to regional community revitalization (Encouraged children with disabilities to participate in sports, provided support to children receiving dialysis treatment, and held holiday camping trips for children living in orphanages) ● Activities in support of developing the next generation (Commended superior local students, supported fashion events, conducted surveys to discover IT professional, and supported technical education projects) ● Medical support activities (Measured air pollution levels)
	everis (Spain)	● Activities related to regional community revitalization (Participated in Ronald McDonald House Charities)
	itelligence (Germany)	● Childcare and nursing care support for employees (Established day-care centers) ● Activities related to regional community revitalization (Conducted charity marathons) ● Company sporting events
China and APAC	China NTT DATA China	● Promotion of employment of individuals with disabilities ● Contribution to sustainable urban transportation through business (Helped to relieve traffic congestion)
	APAC NTT DATA Vietnam	● Training support for the next generation (Collaborated with the Global IT Engineer Training Program) ● APAC Volunteer Week Project (Provided educational support, donations, and support for the elderly and those with disabilities)

Development of VOSAP, a Mobile App That Supports the Lives of People with Disabilities

NTT DATA Services (United States and India)

Left: VOSAP's icon
Right: Slope installed using VOSAP

Serious Issues Facing Those with Disabilities in Developing Countries

The World Health Organization (WHO) estimates that over one billion people, or about 15% of the world's population, suffer from disabilities. Developing countries, such as India, are grappling with the issue that accessibility mechanisms for people with disabilities have not been integrated into their infrastructures, including transportation, buildings, and the Internet. In these countries, many people with disabilities are not able to commute to work or school on their own and are being neglected by society. In 2015, to help resolve these problems employees of NTT DATA Services played a central role in improving accessibility to urban transportation and various facilities and helped start up NPOs that support the independence of people with disabilities in terms of education and employment. They also developed VOSAP, a mobile app that allows anyone to participate in volunteer work in support of people with disabilities.

Through SNS, VOSAP Can Support Safe Living for People with Disabilities

VOSAP is an app that aims to change societal awareness regarding issues facing people with disabilities by gathering and transmitting beneficial information concerning these issues and solution strategies from registered volunteer workers. Through this app, registered volunteer workers can work as a team, participating in online communities and building networks for resolving common issues.

VOSAP allows registered volunteer workers to photograph various facilities, including banks, ATMs, restaurants, and hospitals, and post them onto the Internet. The workers can then rank them in terms of accessibility and add them to maps that indicate their locations. Using this map, people with disabilities can determine which facilities will be easy for them to use and expand their ranges of activity.

Results of Activities and Future Initiatives

VOSAP was released to the public in 2018, and more than 4,000 people in the united states, India, and the United Kingdom are currently registered as participant volunteers. Starting in 2018, NTT DATA Services will make proposals to the government and media and collaborate with companies and universities to develop Individual Social Responsibility (ISR) thinking. These efforts will help us encourage further participation in volunteer opportunities. Furthermore, we will develop unique infrastructure improvement models that will enable us to support countries and regions with undeveloped infrastructure, including India.

Members of the app development team

Global Volunteer Week Activities

NTT DATA Services (United States and India)

Left: Donation of a sewing machine
Right: Residents of Attukal with volunteer staff

An Indian Village with Deeply Rooted Poverty Issues

NTT DATA Services has established an annual Global Volunteer Week in which its employees conduct regional support activities as individuals and in teams. In 2017, more than 7,000 employees performed about 200 instances of volunteer work in the 10 days following October 4. These instances was performed by our Coimbatore Team, which supported the Indian village of Attukal.

Attukal is a small village that comprises only about 60 households and is located roughly 50 km away from Coimbatore, a large city in India's southern region. The residents formerly lived in the forest, but frequent damage caused by wild elephants and pigs forced them to migrate and live outside of the forest using government support. Attukal rates low on the Human Development Index, which the United Nations established as a tool for measuring degrees of economic and societal growth, and faces serious issues in terms of health, environment, and employment.

Support for Continuous Improvement in Quality of Living

Employees at NTT DATA Services continue to conduct activities in Coimbatore after volunteer periods had ended to provide support for job-seeking village residents in addition to material assistance. Upon beginning their volunteer work, our team in Attukal broke down into five smaller teams of 200 people to tackle central issues of health, environment, hunger, education, and employment while working alongside village residents. To help improve the residents' immune systems, we provided education concerning highly nutritious diets and the safe procurement of water. We also established digital and electric environments by providing solar panels and conducted specialized job training for women. Through these efforts, we provided support for the village's development and its residents' quality of life.

Results of Activities and Future Initiatives

In 2017, NTT DATA Services dispatched an instructor and donated 10 sewing machines to support the abilities of Attukal's women to earn money for themselves. We provided the village with 30 automobiles that will allow the residents to commute to a school located about 9 km away and receive lasting education. In addition, we planted trees and established a community hall, inside which the residents can gather. Moving forward, NTT DATA Services will continue to perform these initiatives and contribute to improving the lives of village residents while establishing new support measures with a particular focus on the field of health.

Children helping agricultural support by planting seedings

Using Employee Skills and Expertise to Provide Support for NPO PR and Marketing Activities

NTT DATA UK (United Kingdom)

Participants of charity run

Building Partnerships with NPOs

Marketing and public relations (PR) are indispensable to NPOs that are active in resolving societal issues because they promote understanding regarding their activities and increase both financial and ideological support for their causes. Despite this fact, NPOs have limited PR budgets when compared to normal companies, so communicating necessary information is sometimes difficult. In order to use its employees' skills and experience to support NPOs' activities as much as possible, in 2017 NTT DATA UK began a partnership with the Lessons for Life Foundation, which provides educational support for children in Africa.

Operational Support Using IT

In March 2017, NTT DATA UK's support team collected approximately £2,000 in donation money through its participation in a charity cycle event, which involved cycling to Paris, and later in the Paris Marathon.

In the second half of 2017, we supported improvements in digital technology supply and the construction of digital strategies to contribute to problem solving using IT. These initiatives involved evaluating the implementation of our sales force, information analysis and optimization, and providing advice regarding content management system options.

Results of Activities and Future Initiatives

NTT DATA UK's activities in support of the Lessons for Life Foundation's activities involved more than just utilizing our strengths as a digital company; they also provided our employees with the opportunity to conduct team-based structural reinforcement and heighten their sense of belonging to NTT DATA UK. Our employees conducted these activities by forming a team that included consultants with whom members did not interact during normal operations and employees that conduct business with clients from different fields. Moving forward, we will continue to provide support for activities of NPOs while utilizing our employees' expertise.

Participants of charity event

Contributing to Environmental Conservation by Developing Car-Sharing Apps

NTT DATA Germany and everis (Germany and Spain)

Screenshot of Unit-e, our car-sharing app

Encouraging the Adoption of Environmentally Conscious Means of Transportation

While sharing economies have been spreading across the entire world in recent years, the NTT DATA Group has been working to optimize transportation and reduce CO_2 emissions by developing a car-sharing service. In 2017, NTT DATA Germany developed and released iCS, a car-sharing application, as a solution for raising the convenience of transportation using IT. Traffic conditions are also a problem in Spain's capital of Madrid, where inner city traffic restrictions affect even commuting. To enable employees to smoothly commute to work, the Mobile IT Department at everis developed and provides the Unit-e car-sharing app.

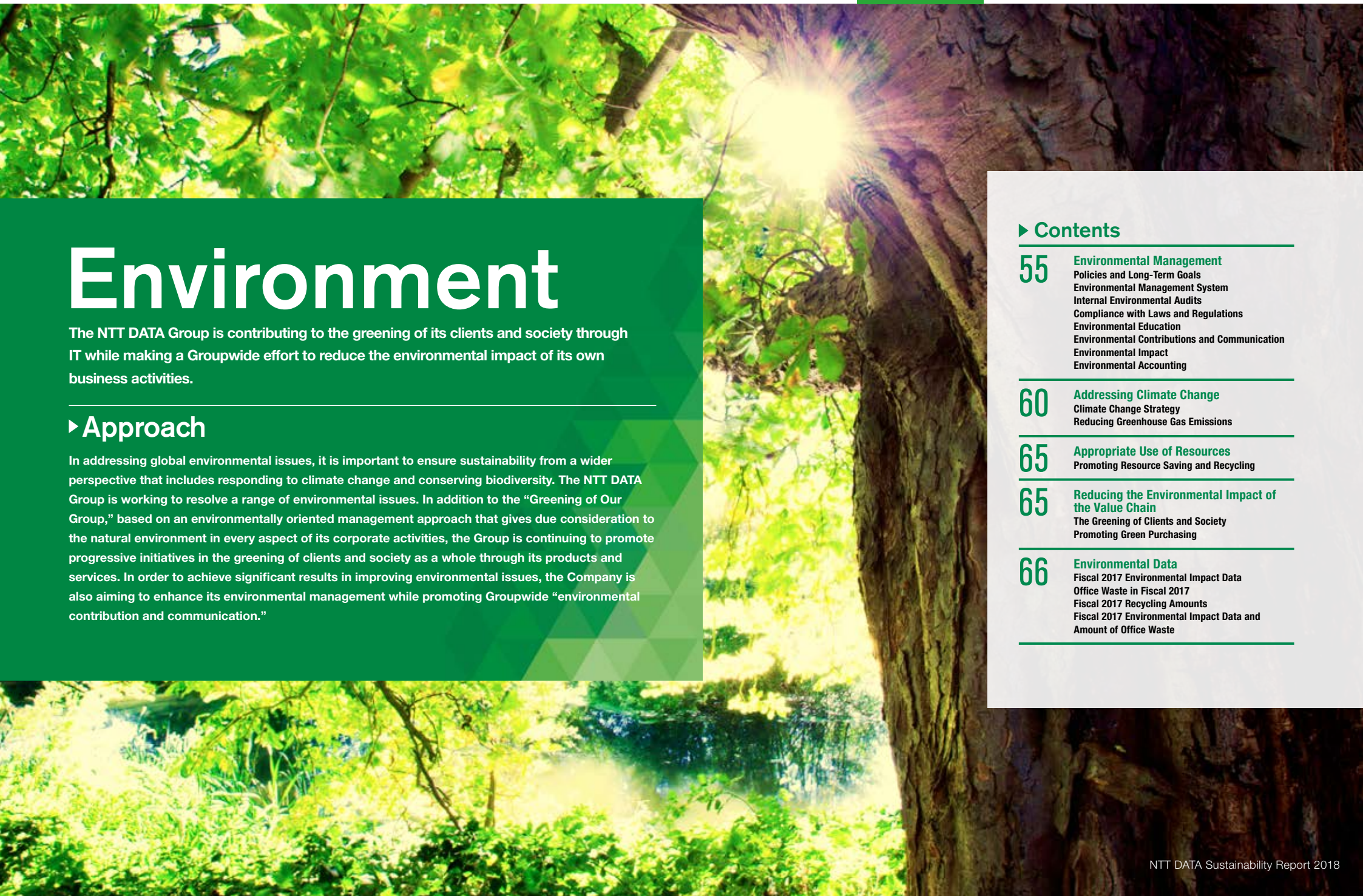
Development of Matching and Reservation Apps

The iCS that NTT DATA Germany developed allows users to make car reservations and payments all through one app. With this app, the Company is responding to a variety of user needs by installing various options, including boarding location, area of use, number of passengers, and car variety. Additionally, NTT DATA Germany has added a function that allows users to reserve vehicles that belong to local municipalities or companies and are not currently in use. This feature will allow more people to use the service and contribute to improving environmental preservation.

Unit-e, an app that everis has developed specifically for its employees, matches workers who both own cars and are heading to the same destination so they can ride together, saving on transportation costs and reducing CO_2 emissions. The app was downloaded 1,250 times during the two months after it was developed and released and is being used on 175 routes, as of 2018.

Results of Activities and Future Initiatives

NTT DATA Germany is supporting the conversion to smart cities by helping spread the use of electric vehicles (EVs) in an effort to reduce CO_2 emissions moving forward. In 2018, everis expanded its app's range of use to include offices outside of Madrid and has begun utilizing it in all of its locations in Spain, which are spread across 16 regions. The company will continue to encourage employees to utilize the app through e-mails, corporate blogs, advertisements, and information sessions while working to improve its contents and resolve environmental issues.



Environment

The NTT DATA Group is contributing to the greening of its clients and society through IT while making a Groupwide effort to reduce the environmental impact of its own business activities.

Approach

In addressing global environmental issues, it is important to ensure sustainability from a wider perspective that includes responding to climate change and conserving biodiversity. The NTT DATA Group is working to resolve a range of environmental issues. In addition to the "Greening of Our Group," based on an environmentally oriented management approach that gives due consideration to the natural environment in every aspect of its corporate activities, the Group is continuing to promote progressive initiatives in the greening of clients and society as a whole through its products and services. In order to achieve significant results in improving environmental issues, the Company is also aiming to enhance its environmental management while promoting Groupwide "environmental contribution and communication."

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Environmental Management

In order to further entrench the management of operations with a firm regard to the environment, and maintain our efforts to promote the protection of the environment, we believe it is important to establish a foundation for promoting action and create a framework for environmental management across the Group as a whole. With the goal of promoting activities to protect the environment across the Group, the NTT DATA Group has established the Groupwide Organization for Promoting Environmental Protection Activities and remains committed to promoting environmental management based on a PDCA cycle.

Policies and Long-Term Goals

Stance on Environmental Protection

The NTT DATA Group established its Environmental Policies in July 1999. Since then, we have focused not only on reducing the environmental impact of our own activities, through such measures as the announcement of our Environmental Messages beginning in fiscal 2010 and the revision of our Environmental Policies in fiscal 2011, but also on providing environmentally responsible systems and services in our capacity as an information services provider, and participating in activities aimed at reducing the environmental impact of society as a whole.

Environmental Policies of the NTT DATA Group

We believe that, given the increasingly serious nature of global environmental problems, we must address these as management issues and work toward contributions that resolve the environmental problems facing the world and society.

The NTT DATA Group, which applies IT to create new paradigms, contributes to environmental protection by providing systems and solutions that can replace or alleviate the need for actual movement of people and goods. At the same time, recognizing the major impact of business activities on the environment, we are promoting an ongoing and planned approach to environmental protection so as to realize a society that is in harmony with the earth but enjoys the abundance of modern life.

1. Environmental Considerations in Conducting Business

The NTT DATA Group is working to lessen the environmental impact of its business activities, setting quantitative goals and targets to the extent possible, and reviewing these periodically as part of an ongoing betterment program.

(1) We are promoting environmentally responsible system development.
(2) We are actively carrying out green purchasing.
(3) We are working to prevent pollution and limit resource use, by implementing policies for saving resources and energy, promoting reuse and recycling, and reducing waste.

2. Meeting Legal Obligations

In carrying out business activities, we observe all applicable environment-related laws and other agreements and obligations.

3. Raising Awareness

Through environmental education and environmental and social contribution activities for our employees and partners, we are enhancing and boosting recognition of environmental awareness activities.

4. Promoting Communications

We work proactively to promote environmental communications to stakeholders both within and outside the NTT DATA Group.

June 2018
Yo Honma,
President and Chief Executive Officer

Environmental Messages

Earth Solutions

Using IT to Resolve Environmental Problems

The NTT DATA Group promotes environmental management that helps resolve environmental issues directly facing Earth and human societies based on its three action plans, which are rooted in its Environmental Policies.

Action Plans

Contributing to the greening of our clients and society through IT

- Promote the visualization of environmental impact assessments of the systems and solutions provided by the NTT DATA Group
- Help to reduce society's environmental impact by promoting the creation and expansion of environmental solutions.

Contributing to the global environment by promoting the greening of the NTT DATA Group

- Steadily reduce CO_2 emissions by the Group by raising the efficiency of and implementing operational improvements to its data centers and by such workstyle innovations as hot-desking
- Implement systematic cuts to paper usage and waste volumes

Engaging each employee in thinking about the environment and making his or her own active contribution

- Promote environmental social contribution activities across a range of fields both as an organization and individuals
- Promote proactive environmental communication, within and outside the Group

The "Eco Strategy 2030" Organization for Promoting Environmental Protection Activities

The NTT Group set "Eco Strategy 2030" with targets for its environmental efforts for the period up to fiscal 2030. As a member of the NTT Group, the NTT DATA Group will also pursue its initiatives under Eco Strategy 2030.

Realizing a Low-Carbon Future	We will seek to increase the amount of CO_2 emissions reduction in society by our contribution to at least 10 times more than the NTT Group's own emissions.
	We will seek to raise power efficiency per communication data for our telecommunication businesses to at least 10 times higher than in fiscal 2013.
	We will seek to play our part in adaptation to climate change by actively promoting initiatives through all our activities. Additionally, we will collaborate with our stakeholders.
Implementing Closed-Loop Recycling	We will seek to achieve zero CO_2 emissions with regard to the final disposal ratio for waste discharged from the NTT Group.
Planning a Future of Natural Harmony	We will seek to play our part in preserving ecosystems by actively promoting initiatives through all our activities. We will also collaborate with our stakeholders.

Environmental Management System

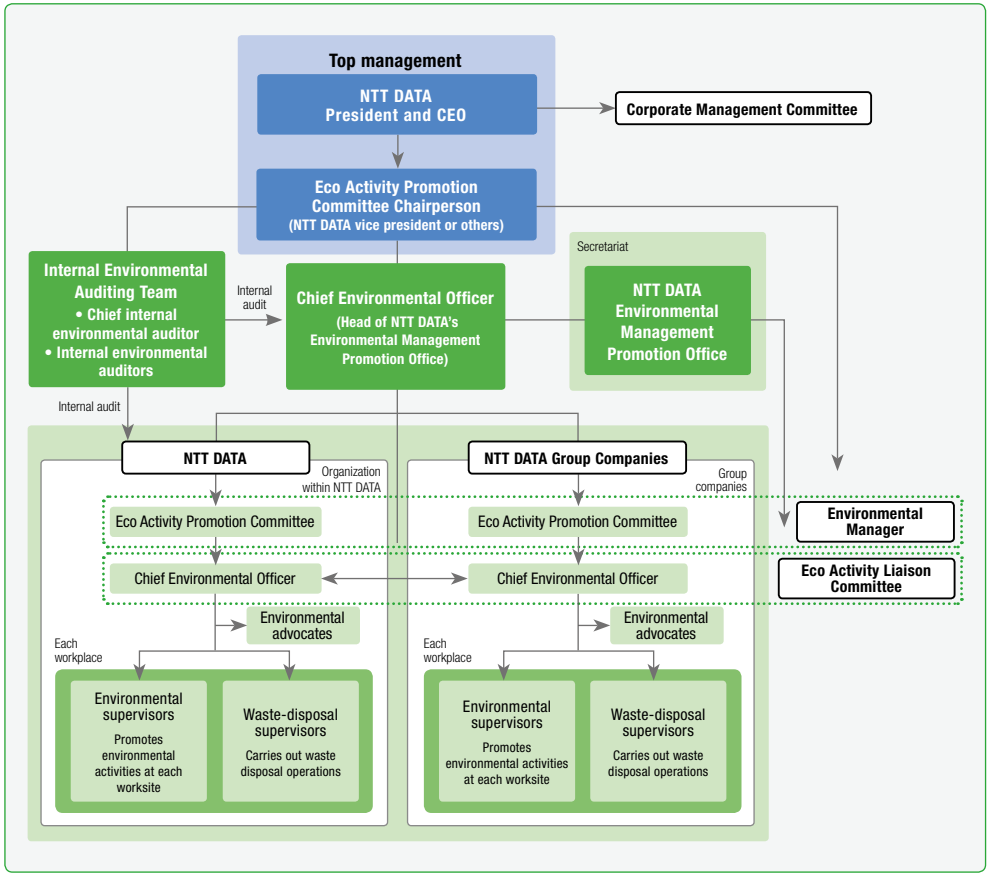
Strengthening the Cross-Group Environmental Management System

The NTT DATA Group is building a cross-Group environmental management system centered on the Eco Activity Promotion Committee and the Eco Activity Liaison Committee.

The Eco Activity Promotion Committee ascertains the activity status of Group companies and discusses the following fiscal year's targets, policies, and other issues. Deliberation results are shared with the Eco Activity Liaison Committee, which meets twice each year and whose members include environmental managers and environmental advocates of ISO 14001-certified departments and Group companies. This information is reflected in individual organizational units' targets.

We reorganized the Environmental Protection Promotion Office as the Environmental Management Promotion Office in July 2009 to advance environmentally oriented management throughout the Group and bolstered collaborative relationships between relevant departments. In addition, we assigned environmental managers to Group companies that are not yet ISO 14001 certified and are reinforcing the Group's environmental management system.

Organization for Promoting Environmental Protection Activities



Continuous Deployment of Ongoing Improvement Activities Based on ISO 14001

In April 1998, NTT DATA set up a dedicated unit to establish the Organization for Promoting Environmental Protection Activities and has received ISO 14001 certification for environmental management.

We began seeking Group integrated certification in 2004 and have been endeavoring to extend the scope of our environmental management system to the entire Group. In November 2017, we completed our transition to ISO 14001:2015 and are endeavoring to strengthen our environmental initiatives.

As of March 31, 2018, a total of 34 Group companies, including NTT DATA, had attained ISO 14001 certification. Of this total, 29 companies acquired Group integrated certification, while five companies gained independent certification. As a result, the environmental management system's coverage rate of sales totaled 61%, with 49% by Group integrated certification and 12% by independent certification.

Status of ISO 14001 Certification (As of March 31, 2018)

NTT Group Entities That Have Acquired Certification	
NTT DATA CORPORATION	NTT DATA INSTITUTE OF MANAGEMENT CONSULTING, Inc.
NTT DATA HOKKAIDO CORPORATION	NTT DATA CCS CORPORATION (Head office, Data center)
NTT DATA TOHOKU CORPORATION	JSOL CORPORATION (Tokyo head office)
NTT DATA SHINETSU CORPORATION	NTT DATA SYSTEM TECHNOLOGIES INC.
NTT DATA TOKAI CORPORATION	NTT DATA SEKISUI SYSTEMS (Osaka head office, Tokyo head office)
NTT DATA HOKURIKU CORPORATION	NTT DATA INTELLILINK CORPORATION
NTT DATA KANSAI CORPORATION	NTT DATA SOFIA CORPORATION
NTT DATA CHUGOKU CORPORATION	NTT DATA DAICHI CORPORATION
NTT DATA SHIKOKU CORPORATION	DACS CORPORATION (Head office, Tokyo branch office, Osaka data center, BPO center)
NTT DATA KYUSHU CORPORATION	NTT DATA BUSINESS SYSTEMS
NTT DATA i CORPORATION	NTT DATA FINANCIAL CORE
NTT DATA WAVE CORPORATION	NTT DATA FRONTIER CORPORATION
NTT DATA SMS CORPORATION	NTT DATA MANAGEMENT SERVICE (Head office, Tokai office, Kansai office)
NTT DATA CUSTOMER SERVICE CORPORATION (Tokyo head office, Shikoku office)	NTT DATA UNIVERSITY CORPORATION
NJK Corporation	
NTT Group Entities That Have Acquired Certification Independently	
Japan Information Processing Service Co., Ltd.	NTT DATA UK Limited
NTT DATA MSE CORPORATION	Everis Participaciones, S.L.
CATS CO., LTD.	

Internal Environmental Audits

Improving Activity Levels through Periodic Internal Environmental Audits

The NTT DATA Group periodically conducts internal environmental audits to confirm conformance with ISO 14001 specifications and PDCA cycle functionality.

In fiscal 2017, we conducted two actual audits carried out by internal environmental auditors from organizations other than the one being audited. In addition, internal environmental auditors conducted two environmental audits of their own organizations on a self-audit basis.

We hold meetings before and after audits to confirm important audit items and the status of Groupwide environmental management systems, as well as to share suggestions, improvements, and other information as part of a drive to bolster the levels of internal environmental auditing and Group environmental protection activities.

Results of Internal Environmental Audits for Fiscal 2017

Term of Implementation	First Audit: June 26 to July 24, 2017		Second Audit: January 25 to March 2, 2018	
Target organizations and companies	● NTT DATA	Actual inspection: 8 organizations Self-audit: 12 organizations	● NTT DATA	Actual inspection: 8 organizations Self-audit: 22 organizations
	● Group companies	Actual inspection: 10 companies	● Group companies	Actual inspection: 8 companies
Audit results	● Actual inspection:	5 serious cases, 13 minor cases, 21 cases for observation	● Actual inspection:	2 serious cases, 21 minor cases, 13 cases for observation
	● Self-audit:	0 serious cases, 1 minor case, 1 case for observation	● Self-audit:	No serious cases, 2 minor cases, 4 cases for observation

Training Internal Environmental Auditors

The NTT DATA Group has expanded the scope of ISO 14001 certification, maintaining consummate systems to foster internal audit staff (88 staff members as of March 31, 2018).

In fiscal 2017, internal environmental auditors reviewed the environmental assessments conducted by each organization and Group company at the start of the fiscal year to enhance the quality of the assessments as well as to improve the competence of internal environmental auditors. To enable us to implement internal audits in accordance with ISO 14001:2015, we also held practical study groups for our internal environmental auditors.

In order to enable more effective internal audits, our experienced auditors are passing on their expertise while we endeavor to more firmly establish our commitment to ISO 14001:2015 policies by enhancing the abilities of our internal environmental auditors with long-term training, including guidance from outside experts.

Compliance with Laws and Regulations

Periodically Confirming the Status of Compliance with Laws and Regulations

We determine items that require monitoring and measurement with respect to various laws and regulations, including Japan's Law Concerning the Rational Use of Energy (Energy Conservation Act) and Waste Management and Public Cleansing Law, while periodically confirming the status of compliance. Moreover, we address the need to monitor, measure, and report on the volume of CO_2 emissions in accordance with Japan's Law Concerning the Promotion of Measures to Cope with Global Warming and the Ordinance on Environmental Protection issued by the Tokyo metropolitan government. Furthermore, in fiscal 2017 we committed no violations of environmental regulations.

Major Laws and Regulations and the Scope and Number of Facilities Impacted in Fiscal 2017

Major Laws and Regulations	Target Items	Number of Facilities Impacted
Energy Conservation Act	Crude oil equivalent, Number of facilities using 3,000 kl/year or more	13
	Crude oil equivalent, Number of facilities using 1,500 kl/year or more	4
Air Pollution Control Act	Number of smoke-generating facilities	4
Water Quality Pollution Control Act	Number of oil storage and other facilities	60
Sewerage Service Act	Number of facilities generating 50 m^3 or more of wastewater per day	3

Environmental Education

Conducting Business- and Role-Specific Environmental Education

The NTT DATA Group conducts various environmental education activities to help employees properly understand the significance and purpose of environmental protection and environmental management based on ISO 14001 standards. These activities are also aimed at raising awareness toward environmental issues. Our efforts span an e-learning curriculum that covers the basics of CSR and environmental education, courses for waste-disposal supervisors, environmental managers, environmental advocates, and environmental supervisors, as well as education programs customized for each organization and business function.

To encourage an understanding of and promote environmentally oriented management, we are extending CSR and environmental education on the basics of environmental conservation beyond ISO 14001-certified companies to include all Group companies in Japan.

In fiscal 2017, we introduced some examples of how we contributed to the achievement of SDGs through our business activities. These examples provided employees with an opportunity to think about the connections between our operations and CSR.

We intend to maintain our efforts to enhance the content in fiscal 2018 by adding the latest topics.

Number of Course Participants in Fiscal 2017

CSR and environmental education	37,780
Course for waste-disposal supervisors	801
Course for environmental managers, environmental advocates, and environmental supervisors	915

Environmental Contributions and Communication

Promotion of Social and Environmental Contribution Activities

In accordance with the promotion of awareness activities set forth in the NTT DATA Group's environmental policies, we strive to raise awareness on environmental issues by educating our employees and temporary staff through social and environmental contribution activities. To promote participation in these activities across all organizations, we have been continuously setting yearly targets for participation numbers since fiscal 2010.

In fiscal 2017, each Group company cooperated, sharing information and actively engaging in the activities, and we achieved a total of 5,517 participants.

We will also continue to proactively participate in events held in each region in 2018, including clean-up activities around office buildings.

Environmental Impact

Targets for Fiscal 2018 and Onward (Medium-Term Targets)

The NTT DATA Group establishes three-year medium-term targets as part of its ongoing ISO 14001 improvement activities and reviews those targets each fiscal year against results.

Since fiscal 2009, we have promoted the greening of clients, society, and our Group while engaging in environmental contribution activities and increasing communication. We have established targets for our environmental activities attuned to this shift in direction.

With the goal of further raising environmental targets, we revised the focus of our target CO_2 emissions indicator from the basic units of sales value to total CO_2 emissions and amended the measurement criteria of our indicator for waste material from zero CO_2 emissions of industrial waste to the final disposal rate of waste as a whole in fiscal 2012.

Starting in fiscal 2018, we will use fiscal 2013, instead of fiscal 2008, as a reference year when setting environmental targets. The entire NTT DATA Group continues to work toward reducing its environmental impact in order to meet these targets.

Targets for Fiscal 2018 and Beyond

(Scope of data: NTT DATA and 29 Group companies in Japan that have acquired Group integrated ISO 14001 certification)

Scope	Target Definitions	Fiscal 2017 Results	Fiscal 2018	Fiscal 2019	Fiscal 2020
Reduce the environmental impact of society through the promotion of green IT	Newly posted Smart & Green IT*1 solutions	8 cases	—	—	—
	Through its contributions, the NTT Group will seek to increase the reduction of CO_2 emissions in society to at least X times more than the amount of its own emissions.	—	4 times	4 times	4 times
Reduce greenhouse gas (GHG) emissions	CO_2 emissions	21% reduction*2	—	—	—
	GHG emissions	—	5% increase or less*3	17% increase or less*3	0% reduction or more*3
Reduce the amount of copy paper purchased	Amount of copy paper purchased (Gross amount calculated on a number-of-sheets basis)	54% reduction*2	4% reduction or more*3	4% reduction or more*3	4% reduction or more*3
Reduce the amount of waste for final disposal	Amount of waste for final disposal (Gross amount)	95% reduction*4	80% reduction or more*5	80% reduction or more*5	80% reduction or more*5
	Ratio of waste for final disposal (Final disposal amount / total amount of waste)	0.5%*6	1.0% or less*6	1.0% or less*6	1.0% or less*6
Social and environmental contribution activities	Number of activity participants*7	5,517	4,600 or more	4,700 or more	4,800 or more

*1: Smart & Green IT: http://www.nttdata.com/jp/ja/green_it/index.html (In Japanese only)
*2: Base year is fiscal 2008
*3: Base year is fiscal 2013
*4: Figures for amount of waste for final disposal exclude effective utilization of thermal energy (thermal recycling) generated by incineration at final disposal. Base year is fiscal 2008.
*5: Figures for amount of waste for final disposal exclude effective utilization of thermal energy (thermal recycling) generated by incineration at final disposal. Base year is fiscal 2013.
*6: Figures for amount of waste for final disposal exclude effective utilization of thermal energy (thermal recycling) generated by incineration at final disposal.
*7: Results produced through the activities of individuals are included in totals for fiscal 2017 but are excluded from goals for fiscal years 2018–2020.

Fiscal 2017 Target Attainment Status

The figures are based on data collected from NTT DATA Group companies that have acquired both ISO 14001 and Group integrated certification.

Group Targets and Results in Fiscal 2017

(Scope of data: NTT DATA and 29 Group companies in Japan that have acquired a Group ISO 14001 certification)

Scope	Target Definitions	Base Value (Base fiscal year: 2008)	Fiscal 2017		
			Target Value	Results	Assessment
Reduce the environmental impact of society through the promotion of Green IT	Newly posted Smart & Green IT solutions	—	5 cases	8 cases	○
Reduce GHG emissions	Amount of CO_2 emissions	306,562 t	16% reduction or more (257,512 t or less)	21% reduction (241,197 t)	○
Reduce the amount of copy paper purchased	Amount of copy paper purchased (Gross amount calculated on a number-of-sheets basis)	327,800,000 sheets	37% reduction or more (206,510,000 sheets or less)	54% reduction (150,130,000 sheets)	○
Reduce the amount of waste for final disposal	Amount of waste for final disposal (Gross amount)	402 t	90% reduction or more (40 t or less)	95% reduction (20 t)	○
	Ratio of waste for final disposal (Final disposal amount / total amount of waste)	—	1.0% or less	0.5%	○
Social and environmental contribution activities	Number of activity participants	—	5,700 or more	5,517	×

Overview of the NTT DATA Group's Environmental Impact

We believe that the reliable and continuous achievement of our goals to reduce the NTT DATA Group's environmental impact is a fundamental responsibility of our environmental management efforts. To minimize the environmental impact of its business activities, the NTT DATA Group monitors and analyzes the types and amounts of resources and energy consumed by various processes and their environmental impacts.

The environmental impact posed by the NTT DATA Group's business activities primarily arises from the emission of greenhouse gases resulting from the consumption of energy, mainly as electric power. However, there are many other factors that affect the environment, including data center construction and the use of paper and water resources. In addition, we cannot ignore the environmental impact of energy consumption resulting from the operation of systems and services provided by the NTT DATA Group by clients. The NTT DATA Group strives to correctly ascertain and analyze the environmental impact of its business activities and to utilize these results in various improvement activities.

Material Flow Diagram

INPUT

Inside the NTT DATA Group

Acquired third-party certification

Energy

	Unit	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017
Utility power	10,000 kWh	49,169	47,661	49,437	48,063
Kerosene	kl	16	16	0	29
Light gas oil (excluding Company vehicles)	kl	27	25	68	40
A–C heavy oil	kl	21	0	20	237
City gas	10,000 m³	173	142	175	172
Gasoline (Company vehicles)	kl	601	623	632	664
Light gas oil (Company vehicles), steam, cold energy	kl	24	21	24	29
Steam, cold energy	GJ	41,372	41,372	43,388	48,223

Water resources

	Unit	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017
Clean water consumption	10,000 m³	61	34	55	58

Paper resources

	Unit	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017
Copy paper	t	859	866	316	746
Fliers distributed to clients, and other materials	t	46	54	30	19

Specified chlorofluorocarbons (CFCs) used for air-conditioning systems

	Unit	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017
Number of air-conditioning system units using specified CFCs	Units	91	25	86	83

Construction materials

Construction materials, cables, etc.

Sales → Planning / Design → Manufacturing / Testing → Data center → Installation at client sites

OUTPUT

Acquired third-party certification

Greenhouse gases

	Unit	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017
Electricity use	10,000 t-CO_{2e}*1	25.4	23.4	24.0	22.7
Gas / Fuel use	10,000 t-CO_{2e}	0.4	0.3	0.4	0.5
Heat use	10,000 t-CO_{2e}	0.2	0.2	0.2	0.3
Company vehicle use	10,000 t-CO_{2e}	0.1	0.1	0.2	0.2
Alternative CFCs	10,000 t-CO_{2e}	—	—	0.3	0.0
Total	10,000 t-CO_{2e}	26.1	24.1	25.1	23.6

Water resources

	Unit	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017
Drainage amount	10,000 m³	47	24	27	23

Office waste

	Unit	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017
Amount generated	t	5,046	4,763	5,865	4,573
Incineration / Landfill	t	851	64	65	68
Amount recycled	t	4,073	4,685	5,800	4,505
Amount of final disposal*2	t	122	13	24	24

Construction waste

	Unit	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017
Amount generated	t	428	36,512	11	1,118
Amount recycled	t	404	36,473	11	1,083
Amount of final disposal	t	24	39	0	35

Outside the NTT DATA Group

Energy → Service operation at client sites → Greenhouse gases (CO_2)

Scope of Environmental Impact Measurement
Fiscal 2014: NTT DATA (all organizations), 73 Group companies (Japan only)
Fiscal 2015: NTT DATA (all organizations), 75 Group companies (Japan only)
Fiscal 2016: NTT DATA (all organizations), 69 Group companies (Japan only)
Fiscal 2017: NTT DATA (all organizations), 68 Group companies (Japan only)

*1: Indicates CO_2 equivalent
*2: Thermal recycling has been taken into consideration for the calculation of data since fiscal 2015.
*3: Figures for fiscal 2015 increased due to the demolition of a large-scale building.
*4: Figures for fiscal 2017 increased due to construction of new buildings, etc.

Environmental Accounting

Aiming to Conduct Efficient and Effective Environmental Preservation Activities

In fiscal 2017, Group environmental cost comprised ¥0 million in investments and ¥472 million in expenses.

Environmental Accounting Conservation Cost
(Scope of data: All organizations of NTT DATA and 68 Group companies (Japan only)) (Millions of yen)

Ministry of the Environment's Environmental Accounting Guideline Categories	Major Initiatives	Fiscal 2014		Fiscal 2015		Fiscal 2016		Fiscal 2017	
		Investment	Expenses	Investment	Expenses	Investment	Expenses	Investment	Expenses
Business area costs		1	277	6	187	121	51	0	216
Pollution prevention costs	Asbestos countermeasures, PCB management, etc.	0	21	0	21	120	1	0	54
Global environment	Implementation of energy conservation measures; measures to reduce CO_2 emissions through the introduction of outdoor-air cooling devices; elimination of specified CFCs in air-conditioning equipment, etc.	0	0	0	0	0	0	0	0
Resource recycling costs	Inter-office waste disposal, construction waste countermeasures, office paper curtailment countermeasures, etc.	1	256	6	167	1	50	0	163
Upstream / Downstream costs	Compliance with the Act on the Promotion of Sorted Collection and Recycling of Containers and Packaging	0	0	0	1	0	0	0	0
	Labor costs related to environmental protection activities, ISO certification acquisition, building greening, environmental PR, etc.	0	256	0	261	0	262	0	255
R&D costs	Environment-related R&D	0	0	0	0	0	0	0	0
Citizen activity costs	Environmental contribution to regional communities	0	1	0	1	0	0	0	1
Total		1	534	6	449	121	313	0	472

Investments within business areas increased in fiscal 2016 due to the installation of oil tank leakage monitoring equipment.

Due in part to the disposal of polychlorinated biphenyl (PCB), fiscal 2017 business area costs increased compared to fiscal 2016.

Addressing Climate Change

The rising concentration of greenhouse gases and other factors are impacting the climate in ways that have led to the increased severity and frequency of natural disasters such as typhoons and floods while also significantly impacting everyday life across society and industry. In December 2015, the Paris Agreement, which serves as a new international framework for global warming countermeasures beyond 2020, was adopted at the 2015 United Nations Climate Change Conference (COP21). Addressing climate change was also included in the United Nations SDGs adopted in September 2015. As illustrated by these developments, response to climate change in terms of mitigation and adaptation has gained even greater significance as a common global concern. The NTT DATA Group is pursuing strategic initiatives through its business with the intention of offering a more effective response to climate change.

Climate Change Strategy

Company Level

The Environmental Management Promotion Office analyzes the financial impact of regulatory trends (including carbon taxes, purchase schemes for renewable energy, and cap-and-trade systems) as well as trends in environmental load indicators (energy consumption / greenhouse gas emissions, paper resource usage, waste material volumes, and water usage). Using their analysis, the office reports to the CRO and Eco Activity Promotion Committee Chairperson on both risks and opportunities it deems significant and measures for addressing them. The Chairperson then proposes critical matters for consideration to the Board of Directors, where we hold discussions regarding possible response measures.

Asset Level

The Facility Management Division, which has expertise in building design, compiles information on environmental load indicators for each data center and office (including energy consumption / greenhouse gas emissions, paper resource usage, waste material volumes, and water usage), the status of energy conservation measures, and regulatory trends at the local government level, and reports its findings to the Environmental Management Promotion Office. If this office deems that any reported matter is likely to significantly impact the Company's business, it reports this matter to the Eco Activity Promotion Committee Chairperson. The committee Chairperson then proposes critical matters for consideration to the Board of Directors, where we hold discussions regarding possible response measures.

Prioritization of Risks

The Internal Control Promotion Committee, which is responsible for Companywide risk management, conducts comparative evaluations between different risk factors. The committee evaluates approximately 40 risk candidate items, using a two-axis matrix based on degree of impact (very large, large, medium, or small) and likelihood of occurrence (very high, high, medium, or low). Items deemed to have both a degree of impact of "large" or higher and a likelihood of occurrence of "medium" or higher, or a degree of impact of "medium" or higher and a likelihood of occurrence of "high" or higher, are defined as "material risks." Material risks have the potential to inflict a substantial financial impact on the Company.

Offices

We are reducing CO_2 emissions volume by approximately 12,987 t-CO_{2e} each year by efficiently operating office facilities through efforts such as optimizing the operation of air supply and exhaust systems and optimizing the number of air conditioners and hours of operation.

Products and Services

The NTT DATA Group builds and operates environmentally friendly Green Data Centers. In March 2018, we completed construction on Mitaka Data Center EAST, a collective of key elements of the services offered by our Green Data Centers, including high voltage direct current (HVDC) power supply systems*1, virtualization technologies, and air current control systems for cooling. Mitaka Data Center EAST shortened operating times for air-conditioning equipment by installing an outside air-cooling system that utilizes natural energy. We are aiming to be in Japan's top class of energy-efficient companies with a PUE*2 of 1.3 or less*3 (annual average, design value).

*1: This is an electrical power system that supplies a direct current (DC) straightaway to IT devices by only conducting one conversion. Previous power supply systems received power through an alternating current (AC) and then later conducted three AC–DC conversions, twice through an uninterruptable power supply and once inside of the IT device.
*2: Power usage effectiveness: An indicator that expresses the electricity consumption efficiency of data centers
*3: This is an indicator that expresses the electricity consumption efficiency of data centers.

Risks and Opportunities Related to Climate Change

[Transitional Risks]

Compliance with climate change regulations presents transitional risks of increased costs for actions such as facility upgrades and additional operational functions.

For example, the Paris Agreement aims to realize a world with zero CO_2 emissions from 2050 onward. For the NTT DATA Group, nearly all of our CO_2 emissions come from electric power consumption, thus we assume business continuity will require the procurement of electricity from renewable energy sources. However, as the potential for generating renewable energy and the certificate trading system in Japan are currently underdeveloped, achieving this is extremely difficult. Also, there are concerns that domestic regulations will be substantially strengthened, increasing the cost burden associated with CO_2 emissions and seriously hindering business continuity. If we were forced to switch to renewable energy all at once at current electric power consumption levels, the estimated cost increase would be at least ¥4.6 billion. In response to these types of risks, the NTT DATA Group has been installing renewable energy-based private power generation equipment at its Company buildings. In March 2018, we completed construction on Mitaka Data Center EAST, which has adopted an outside air-cooling system that utilizes photovoltaic power generation and natural energy (outdoor air during the spring, fall, and winter), bringing our total number of buildings with photovoltaic power equipment to three. Currently, two of our other buildings are also utilizing low-carbon energy, participating in district cooling and heating (DHC) systems. Installation costs for renewable energy-based private power generation equipment (excluding costs at Mitaka Data Center EAST) and DHC system participation costs at our other two buildings add up to roughly ¥700 million. Going forward, we will move incrementally forward with the switchover to renewable energy and other low-carbon energy sources. Our current renewable energy generation capacity is 169 MWh.

Furthermore, under the Tokyo metropolitan government's Ordinance on Environmental Preservation, large facilities are required to reduce total CO_2 emissions from energy usage and to participate in a cap-and-trade program of emissions trading. A total of nine NTT DATA Group buildings in Tokyo are subject to the ordinance, which presents the risk of increased operating costs due to measures aimed at complying with the ordinance. Estimated costs associated with this ordinance are expected to amount to approximately ¥100 million between 2015 and 2019. (Calculations for the second compliance period were based on the need to purchase 10,000 t-CO_2 of credits (certificates) priced at ¥10,000/t-CO_2. However, we anticipate that we will be able to partly offset these costs against surpluses from the first compliance period.) To manage this risk, we are implementing measures such as upgrading to highly efficient electrical equipment and air-conditioning equipment and enhancing operation of air-conditioning, lighting, and other shared facilities. The cost of addressing this risk for the period between fiscal 2016 and fiscal 2017 was approximately ¥700 million. As a result of these efforts, total CO_2 reductions for fiscal 2017 were 40,069 t-CO_{2e}, a reduction rate of approximately 26%.

Additionally, the NTT DATA Group is working to find solutions to societal issues, such as climate change, through its business operations and is implementing progressive and environmentally superior workstyles. These efforts have led to high third-party praise regarding our ESG (which was included in the DJSI World and Asia Pacific indexes), as well as high employee satisfaction and retention rates (turnover rate of 3.0%, lower than the telecommunications industry average of 10.2%). We estimate that we would suffer an approximately ¥62 billion decrease in yearly income if the third-party praise we receive concerning our ESG and our employee satisfaction rates were to fall to industry-standard levels (calculated based on increases in turnover rate [10.2% - 3.0 = 7.2%] combined with net sales per employee). In response to these types of risk, we conduct annual employee training regarding global trends in climate change and the NTT DATA Group's response to them. Furthermore, we have distributed information access devices for teleworking to employees, allowing for flexible workstyles at home or in satellite offices. Expenses for training and development aimed at raising employee expertise are approximately ¥6.7 billion, while our distribution of information access devices for teleworking produces an annual running cost of roughly ¥1.1 billion.

[Risks Driven by Physical Impact]

With regard to physical impact caused by climate change, there is a risk that abnormal weather phenomena such as large typhoons, flooding, heatwaves, and torrential rains could shut down the power supply to data centers, while flooding and lightning could halt operations at the data centers. Some 60% or more of the NTT DATA Group's sales are connected with its data centers, and its main data centers are located on middle latitudes in the northern hemisphere, which are frequently experiencing heavy rainfall due to climate change. Due to these unique characteristics, suspensions of operations at our data centers could have severe impacts on our business, and could also negatively impact large-scale systems that support social infrastructure, such as financial and medical services. For these reasons, operational suspensions at our data centers carry the risk of causing enormous damage to society at large.

With these factors in mind, the NTT DATA Group has equipped its data centers with in-house emergency generators in readiness for power outages. However, if these generators halt operations due to flooding, there is a risk that our data center business continuity may be jeopardized. Operation

of our data centers could also be interrupted by malfunctions in equipment caused by lightning strikes. One day of operational suspension would result in approximately ¥3.4 billion in lost sales (calculated based on the daily sales rates of services provided through our data centers). In reality, we would suffer further damages, such as a decline in trust, so this figure is actually the lowest value that could be expected. We have been taking various measures to avoid these risks, such as: (1) identifying data centers where basements present high flood risk based on municipal hazard maps and implementing flood prevention works; (2) establishing back-up data centers in multiple locations; and (3) upgrading lightning rods at 15 NTT DATA buildings nationwide. Furthermore, in preparation for a power outage, in fiscal 2016 we installed an additional oil tank to extend the available time for emergency standby power generation at the Mita Data Center in Tokyo from 24 hours to 72 hours. In fiscal 2017, we conducted drills in preparation for disasters on the same level as the 2016 Hakata road cave-in incident, including natural disasters caused by climate change or other factors. We also reconsidered required amounts for fuel and water and strengthened our procurement methods.

As average global temperatures rise, our increasing responsibility to provide air conditioning at our data centers also carries the risk of rising energy costs. These rises carry the risk of inviting increases in operational costs because the NTT DATA Group possesses data centers located in countries all over the world, including 17 inside Japan and others in the EU and United States, that are situated on middle latitudes in the northern hemisphere, where rises in average temperature are considerable.

We estimate that a temperature rise of 1°C in NTT DATA's data centers in Japan would increase electricity usage by 5.4 million kWh, hiking energy costs approximately ¥80 million. To respond to these types of risk, we are converting electrical and air-conditioning systems to high-efficiency equipment and are promoting improvements in the operation of both air-conditioning and lighting systems, as well as other common utilities.

At the NTT DATA Mitaka Building, for example, in addition to the above measures, we have reduced electricity consumption by approximately 30% compared to our conventional data centers by installing photovoltaic power generation systems and HVDC power supply systems. Furthermore, we completed construction on Mitaka Data Center EAST, which adopted an outside air-cooling system that uses natural energy other than photovoltaic power generation (outdoor air in the spring, fall, and winter), in March 2018. The costs of upgrading facilities and enhancing operations at all NTT DATA Group data centers in Japan totaled approximately ¥4.9 billion for the period between fiscal 2011 and fiscal 2017.

[Other Risks]

Risks driven by changes in other climate-related developments include increased investor requests for corporate information disclosure related to climate change, declines in share price associated with lower evaluation by investors, and deterioration in market-imposed financing conditions.

As of March 31, 2018, 16.31% of NTT DATA Group stock was held by overseas corporations, and lower evaluation by overseas investors actively engaged in ESG investment carries the risk of a decline in share price that would decrease corporate value. Financial institutions in Japan own 21.15% of our stock, and a portion of them have begun engaging in ESG investment. For this reason, according to speculations, if financial institutions in Japan were to lower their evaluations of our ESG moving forward, the impact from this would lead to falling stock prices, and would ultimately affect our corporate value negatively. If the price of shares held by overseas investors were to fall by 0.1%, the impact on the Company's market capitalization would amount to approximately ¥291 million*1.

Accordingly, we actively disclose information to investors, particularly concerning CDP*2, on which investors who request Company information regarding climate change place particular importance. We have been offering responses regarding CDP since 2009. From fiscal 2013 to fiscal 2017, we have been actively disclosing information on matters including climate change by participating in a Ministry of the Environment project to develop infrastructure for environmental information disclosure systems, which is intended to construct an information platform that enables institutional investors in Japan to utilize ESG data. Expenses related to investor requests for corporate information regarding climate change are about ¥20 million.

The NTT DATA Group's climate change response measures simultaneously carry both business risks and aspects of securing business opportunities. We are aiming for the realization of sustainable societies and our own growth as a company by providing IT services that offer solutions for societal issues related to climate change, such as impact alleviation and adaption.

*1: Calculated on the basis of 1,402,500,500 outstanding shares as of March 31, 2018
*2: CDP was launched in 2003 by a U.K.-based NGO to evaluate the climate change policies of businesses and enterprises. (Formerly the Carbon Disclosure Project)

[Opportunities Related to Products and Services]

As the Paris Agreement has taken effect, the strengthening of regulations in pursuit of realizing a zero CO_2 emissions society by 2050 is likely to accelerate. Due to this acceleration, we expect increases in demand for more efficient IT systems, which account for a significant proportion of corporate energy consumption. Specifically, we forecast growth in outsourcing demand for consolidated Kyodo Center with high energy efficiency, and streamlined and virtualized IT systems. Out of the NTT DATA Group's total sales of ¥2,117.1 billion, domestic and international local governments and central government agencies, including the Japanese Cabinet Secretariat and Ministry of the Environment, account for about 21%, while financial institutions, including those compliant with TCFD*1 recommendations, account for roughly 26%. As a company developing and operating so many large-scale and missioncritical systems, we are working to make our data centers greener, which will help us to realize large-scale reductions in energy consumption. We are accomplishing this by promoting Green Data Center services that are aimed at reducing environmental impact through integration of IT and facilities technologies. Data centers and their related services are an ¥82.9 billion business (as of March 31, 2018), and we believe that they will grow into an ¥83.0 billion business in fiscal 2019 due to demand for outsourcing to energy-efficient data centers.

As for HVDC power supply systems, we have also been implementing data centers that operate using the world's first DC power supply system, in terms of customer environment. In 2015, we introduced a data center that uses one of these systems at our Shinagawa TWINS Building. During the same year, we were awarded the Minister of the Environment Award for "Joint Technological Developments Related to Drastically Low-Carbon Data Centers and Waste Heat Utilization in Offices, etc." In March 2018, we completed construction on Mitaka Data Center EAST, a compilation of HVDC power supply systems, virtualization technologies, and air current control systems for cooling, which are the main elements of our Green Data Center services. This data center reduced air-conditioning equipment operation time by adopting an outside air-cooling system that utilizes natural energy. We are aiming to join Japan's top

class of energy-efficient companies by achieving an annual average PUE of 1.3 or less. Total fiscal 2017 research and development expenses for component technologies of Green Data Centers, including AI / IoT, deep learning, and virtualization technologies, are ¥14.569 billion.

In addition, the accelerating use of cloud-based data centers, which help prevent data loss due to abnormal weather phenomena such as typhoons or localized torrential rain by allowing for highly safe handling of corporate data, offers new business opportunities. For example, our joint-use enterprise systems, such as the Chigin Kyodo Center (BeSTA®) for regional banks, have gained a top market share of roughly 30% while more than 90% of credit associations across Japan are using our comprehensive online Shinkin Kyodo System. Furthermore, we are contributing to climate change countermeasures, such as the creation of tsunami hazard maps in Macau and the selection of wind power generator installation sites in nations across the world, by utilizing our own solution, the AW3D® Global Digital 3D Map, which is the first 3D mapping technology that can display global topography at a resolution and accuracy of five meters. These efforts are also conducted using cloud-based scalable platforms that are highly expandable, available, and flexible. Additionally, they are being used in more than 70 countries worldwide for more than 300 projects that stretch across a wide range of fields, including infrastructure maintenance, natural disaster countermeasures, and global warming response. We believe that accelerating demand for cloud computing services will enable us to further expand our business. The NTT DATA Group's cloud-related service sales were ¥356.0 billion in fiscal 2017.

The NTT DATA Group is creating business opportunities through its cloud-related services. We offer joint-use platform services tailored to customer requirements ranging from infrastructure services (data centers) to applications. Furthermore, we provide comprehensive construction and operation services for establishing private clouds with existing consolidated centers. For example, our "BIZXAAS Office" service, which provides systems required for an office environment via cloud computing, has been deployed in-house to promote telecommuting and set up satellite offices as part of BCPs. In 2017, we launched efforts to consolidate the NTT DATA Groupwide development environment in an "integrated development cloud" with the aim of expanding and deploying it in 100% of all new domestic development projects from March 2019. Between fiscal 2009 and fiscal 2016, we have invested more than ¥10.0 billion in cloud computing services.

Elsewhere, optimization of social infrastructure is picking up speed due to the sense of impending crisis associated with climate change and rising energy costs. The NTT DATA Group is distinguished by its ability to conduct complicated and large-scale project management, and demand and opportunity for efficient infrastructure construction utilizing IT, such as smart grids, to prevent transmission loss are increasing in the field of electricity. NTT DATA was chosen as a partner business in Tokyo Electric Power Company's Request for Proposals for a Smart Meter Operation Management System in May 2013. In 2014, we also received orders from The Chugoku Electric Power Company, Inc., for a smart meter operation management system and from the Organization for Cross-Regional Coordination of Transmission Operators, JAPAN for a wide-range switching support system. As of September 2017, our development system had produced 13 million smart meter operation management system units in Tokyo Electric's sales area. In 2020, we aim to increase that number to 27 million.

For the five years beginning in 2017, the NTT Group is aiming for cumulative sales of ¥10.0 billion for all electricity retail liberalization services.

In April 2016, we began offering our ECONO-CREA® cloud service to power companies along with the liberalization of the electricity retail industry. This, along with our customer management services and supply–demand management services, are currently utilized by more than 10 new power companies. While aiming for the same system's standardization across the industry, we are accumulating expertise regarding the construction of social infrastructure through the use of the smart meter operation management system, which possesses world-leading scale and speed, allowing 13 million meters to be read every 30 minutes.

For fiscal 2017, our total research and development expenses are ¥14.569 billion. They include costs associated with AI and IoT technology, such as the smart meter operation management system, and smart city-related costs used for technologies such as automatic vehicles and simulators that predict and mitigate traffic jams.

As of fiscal 2015, we had invested ¥0.17 billion in smart meter-related research and development.

*1: Task Force on Climate-Related Financial Disclosures: This privately led task force focuses on securing the disclosure of climate-related financial information and was established under the Financial Stability Board upon request of the G-20's ministers of finance and central bank governors.

[Opportunities Related to Resource Optimization]

Our promotion of flexible workstyles that are not limited to the workplace, including teleworking (working at home), is one example of the opportunities we create to reduce CO_2 emissions that occur during employee commuting.

NTT DATA is promoting Companywide utilization of teleworking, and a total of 42,600 employees participated in the five Telework Days in 2018. As a result, we received the Diversity Management Selection 100 Prime Commendation from METI. We also received the Chairman's Award, as well as others, from the Japan Telework Association.

Through teleworking and remote access from business trip destinations, we have reduced the necessary amount of commuting and movement between buildings, which has reduced our CO_2 emissions produced through commuting by 6,324 t-CO_2 (39 days of telework per year, or 16% of business days). We estimate that teleworking and related efforts have had a CO_2 emissions reduction effect worth about ¥63,240,000 (CO_2 reduction × transaction value: ¥10,000/t-CO_2).

As a strategy for fulfilling resource optimization opportunities, we plan to participate in future telework days. We also took charge of system development and engaged in related initiatives encouraging the use of telework, such as trials. Additionally, we collected system development environments on a cloud server and conducted initiatives aimed at implementing teleworking in system development that utilizes an integrated development cloud designed to improve production technology used in system development. By the end of fiscal 2018, we aim to have teleworking environments in place for more than 30,000 Group employees and collaborative workers in Japan. Moving forward, through teleworking and remote access from business trip destinations, we will work to reduce CO_2 emissions produced when commuting and moving between buildings.

Risks Related to Climate Change and Natural Disasters

Potential impact on business	With the adoption of the Paris Agreement, demand for compliance with regulations related to climate change is likely to grow stronger moving forward, raising the risk of costs associated with modifying equipment and adding operational functions. Abnormal weather phenomena have also been on the rise in recent years and could possibly cause tremendous damage or have enormously negative impacts on our large-scale systems, which support social infrastructure, by shutting down power supplies to our data centers in Japan and overseas or halting data centers through flooding. As a result of these effects, investor demand for information disclosure regarding climate change would grow, stock prices would fall as evaluations of the Company deteriorated, and terms of financing from the market would worsen.
Initiatives aimed at alleviating risk, etc.	• Response to Risk Driven by Regulations Upgrading electric and air-conditioning units to highly efficient equipment, and response to risks driven by physical impact, such as operational improvements related to air conditioning and lighting 1. Identifying data centers where basements present high flood risk based on municipal hazard maps and implementing flood prevention works 2. Establishing back-up data centers in multiple locations 3. Upgrading lightning rods at 15 NTT DATA buildings nationwide 4. Adding data centers equipped with the latest disaster countermeasures (Mitaka) 5. Ensuring that our emergency power generators can operate for 72 hours in case of power outages and maintaining emergency fuel procurement agreements 6. Enriching teleworking environments that enable continued operations when commuting is not possible (gateway enhancement) • Other Risk Response We are actively disclosing information related to our CDP to investors. In addition, we are participating in an information platform construction project sponsored by the Ministry of the Environment that will enable institutional investors in Japan to utilize ESG data.

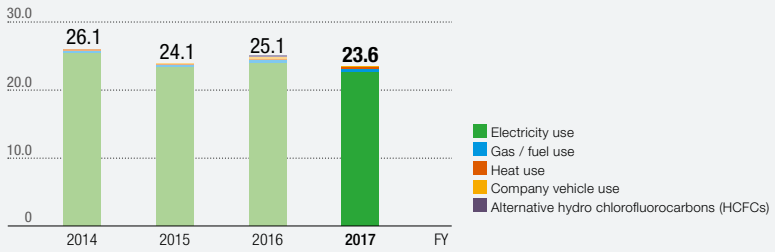
Reducing Greenhouse Gas Emissions

Initiatives of the NTT DATA Group

In fiscal 2017, we continued to promote power-saving measures that take into account diverse work-styles, including the use of telework owing to the rotating partial closure of office floors in major buildings in the Tokyo metropolitan area.

Data centers account for approximately two-thirds of the greenhouse gas emissions discharged by the NTT DATA Group's business activities. Since our data centers are entrusted with clients' systems, we strive to maximize reductions in power consumption to the extent that such reductions do not affect our services to clients. We are also increasing the use of renewable energy, and out of the 373,590 MWh in total electricity used at all of our data centers, 169 MWh is being generated by solar power and other renewable energy sources. As a result of our efforts to reduce total CO_2 emissions in fiscal 2017 by at least 16.0% compared to fiscal 2008, we were actually able to achieve a considerable reduction of 21% from the levels recorded in fiscal 2008.

Greenhouse Gases



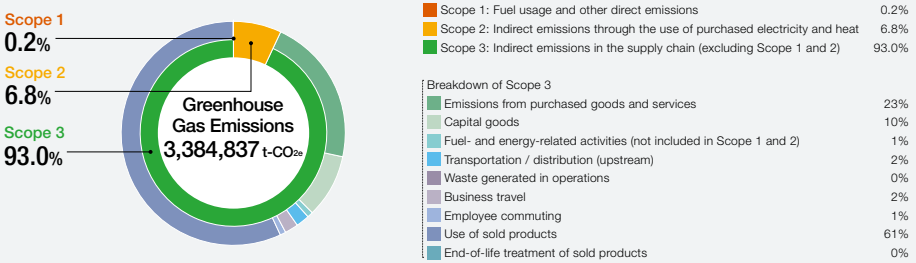
(Scope of data: All organizations of NTT DATA and 68 Group companies (Japan only))

Managing Greenhouse Gas Emissions across the Supply Chain

To realize a low-carbon society, it is important to engage in energy-saving measures not only for the Company's facilities but for society as a whole. The NTT DATA Group emphasizes "environmentally oriented management" that respects the environment in all aspects of corporate activities. To this end, from fiscal 2013 the NTT DATA Group broadened the scope of its aggregate calculation of greenhouse gas emissions and began management under Scope 3, which calculates the aggregate amount of these emissions by taking product and service lifecycles into account, from their procurement through their distribution and to their disposal. As a result, total greenhouse gas emissions of the NTT DATA Group, including overseas Group companies, was 3,384,837 t-CO_{2e}.

Moving forward, the entire NTT DATA Group will build on this result by seeking measures that are even more effective toward the creation of a low-carbon society and will confront challenges in conjunction with its clients and business partners.

Emission Rates by Scope for Fiscal 2017



Third-Party Certification Concerning Greenhouse Gas Emissions

We received third-party verification of Scope 1, 2, and 3 greenhouse gas emission volume results in fiscal 2017 from Lloyd's Register Quality Assurance Limited.

Verification of Scope 1 and 2 applies to all organizations of NTT DATA and 68 domestic Group companies, while Scope 3 verification applies to all organizations of NTT DATA and all 303 Group companies in Japan and overseas.

Details of this verification are as follows.

Fiscal 2017 Greenhouse Gas (GHG) Emissions Summary

Scope of GHG Emissions t-CO_{2e}	t-CO_{2e}
Indirect GHG emissions (Scope 1)	6,947
Energy source indirect GHG emissions (Scope 2 market basis)	229,494
Energy source indirect GHG emissions (Scope 2 location basis)	248,829
Other indirect GHG emissions (Scope 3)	3,148,396

Third-Party Verification

https://www.nttdata.com/global/en/-/media/nttdataglobal/files/sustainability/sus004_environment/third_party_veri_2018.pdf?la-en&hash=59BB68193BE62F86683DBA3E2BC27C9DB2EA38D0

Appropriate Use of Resources

Promoting Resource Saving and Recycling

Waste Reduction

In fiscal 2017, we continued our efforts from the previous fiscal year to improve our recycling ratios and reduce the final amount of waste disposal. As a result, we significantly exceeded our targets by achieving a 95% reduction in the final amount of waste disposal compared to fiscal 2008 and a final waste disposal rate of 0.5%.

Final amount of waste disposal and final waste disposal rate are based on material confirmed as Scope 3 Category 5 “scrap waste from business” through third-party verifications of greenhouse gas emissions.

In fiscal 2018, we will strive to improve our recycling ratios through measures such as using disposal firms with high recycling ratios and changing the processing route while maintaining our efforts on the reuse and recycling of office equipment.

Reduction of Copy Paper Purchased

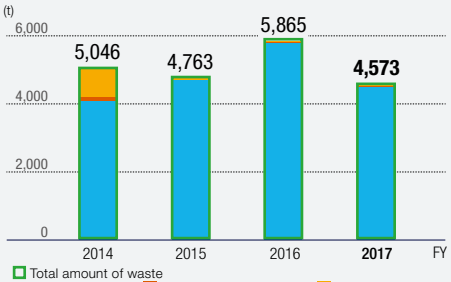
In fiscal 2017, we once again made a committed effort to reduce the unnecessary use of copy paper through measures such as controlling individual organizations’ usage and advancing paperless meetings. As a result, we significantly exceeded our target for fiscal 2017 of reducing usage by 54% compared to fiscal 2008.

In fiscal 2018, we will further reduce the use of copy paper as part of an overall revision of our operations, including improvements to our operational processes.

Proper Handling of Hazardous Materials

The NTT DATA Group stores manufactured goods containing PCB. Accordingly, the Group handles such items as waste PCB, which is designated as a specified toxic industrial waste material. Moreover, the Group disposes of materials including waste acid from batteries. In the handling of industrial waste materials requiring special storage and proper management, we carefully observe the Waste Management and Public Cleansing Law and all other relevant laws and regulations particularly with respect to disposal. We have promoted the systemic disposal of waste PCB since fiscal 2013 in line with the Law Concerning Special Measures against PCB Waste and guidance from relevant ministries and government agencies.

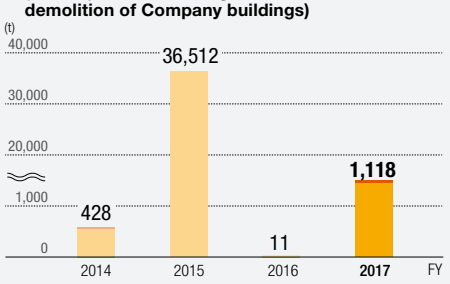
Office Waste
(Waste produced by offices and data centers)



Total amount of waste
Amount recycled Amount of final disposal Amount reduced
(Amount reduced through incineration, dehydration, and concentration)

(Scope of data: All organizations of NTT DATA and 68 Group companies (Japan only))

Construction Waste
(Waste produced through construction and demolition of Company buildings)



Amount recycled Amount of final disposal

* Data for fiscal 2015 reflects the demolition of a large-scale building.

(Scope of data: All organizations of NTT DATA and 68 Group companies (Japan only))

Reducing the Environmental Impact of the Value Chain

The Greening of Clients and Society

Reducing the Environmental Impact of Society through IT

The NTT DATA Group and the NTT Information Network Laboratory Group have jointly verified general-purpose evaluation and measurement methods*1 for quantitatively evaluating the effectiveness of environmental impact reduction for all development projects. We began conducting quantitative evaluation in 2014 with tools based on the results of this verification.

We recommend the Groupwide utilization of these methods, which are more suited to general-purpose applications and actual business conditions than to the environmental impact assessment system*2 used in the past.

*1: The results of our joint verification have been patented (Pat. No. 5785229 (2015)).
*2: A service for assessing the environmental impact of information systems developed by the NTT Information Network Laboratory Group. The service calculates environmental impact reductions that can be achieved through reduced consumption of materials and energy, transportation volume of people and goods, etc., resulting from system introduction.

Proactively Participating in Environmental Projects Promoted by Administrative and Industrial Organizations

The NTT DATA Group participates in environmental projects promoted by the government and other organizations, taking advantage of technologies and expertise honed from the construction of numerous public administration systems. We also actively join environmental working and other groups of a variety of organizations.

In recent years, we have been exchanging a wide range of opinions as a member of the Japan Smart Community Alliance (JSCA)*1 and the Green IT Promotion Council*2. These discussions include the creation of smart communities aimed at realizing next-generation sustainable societies, the development of methods for estimating and measuring the energy-saving of and with IT, and research involving the introduction of energy management systems to buildings and stores. NTT DATA also works in a study group under the business platform of the Life Cycle Assessment Society of Japan (JLCA)*3 on building a common framework at the corporate level to reduce CO_2 emissions via the use of IT and has participated in formulating common guidelines for estimating reductions in CO_2 emissions in ICT businesses.

Also, as a Ministry of the Environment project, we will continue to develop systems for demonstration experiments on ESG information disclosure and dialogue platforms for the purpose of promoting ESG investment ongoing since fiscal 2013 and aim for practical application in 2020. We support the promotion of ESG investment through the development and provision of platforms that realize the disclosure of non-financial information according to financial information formats as well as opportunities for dialogue with investment institutions and companies.

*1: An organization comprised of members of both the public and private segments that was established to promote the spread of smart communities within Japan as well as their global expansion
*2: Sponsored by the Japan Electronics and Information Technology Industries Association (JEITA), the Green IT Promotion Council is responsible for promoting Green IT and helping build a smart society through various activities. These include developing methods for estimating and measuring the energy-saving of and with IT devices, formulating an energy-saving technology roadmap, developing public awareness about Green IT in Japan and overseas, and bolstering cooperation with countries in Asia and elsewhere.
*3: Sponsored by a working group of the JLCA, the group’s objectives are to establish a shared method for estimating the effect that ICT has on reducing environmental impact and devise key performance indicators (KPIs) to measure energy savings achieved via environmental management in companies that supply ICT as well as companies that adopt ICT.

Promoting Green Purchasing

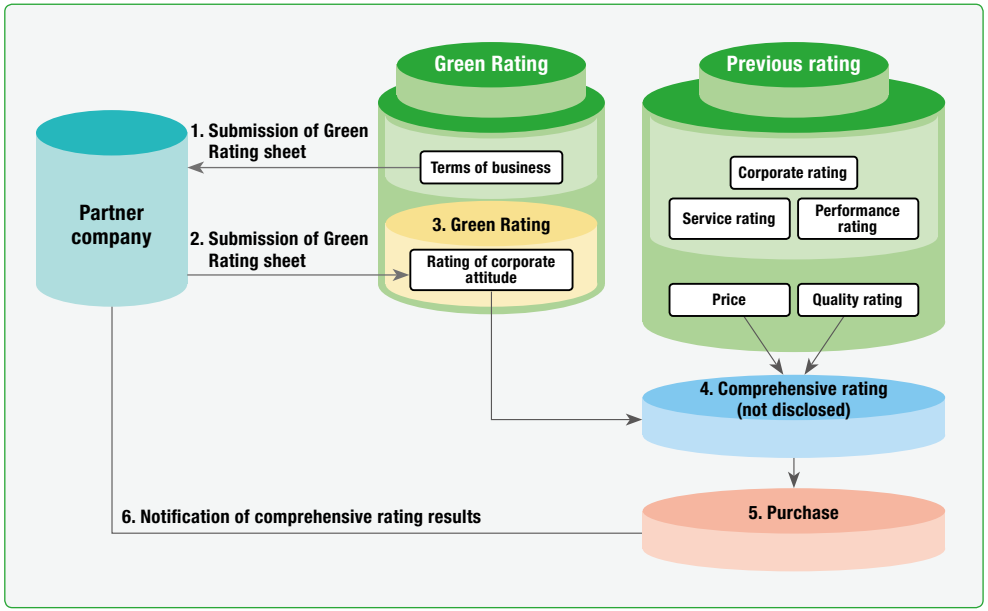
Promoting Green Purchasing through an Assessment of a Company's Corporate Stance and Products

The NTT DATA Group has established an assessment criterion with respect to environmental preservation and protection of products and services as factors in procuring items and selecting business partners. This criterion complements such traditional criteria as price and quality assessment. Collectively, this evaluation criteria sets out specific standards for selecting suppliers.

Emphasized Assessment Items

At present, assessments conducted with the aim of promoting green purchasing centered on evaluating the approach a company takes with regard to environmental issues. While this naturally includes compliance with environmental laws and regulations, considerable weight is also attached to whether or not ISO 14001 certification and other environmental management standards have been acquired. Furthermore, we assess the operating effectiveness of environmentally oriented management in place at suppliers that have not attained environmental certification. We do this by asking specific questions based on a checklist, such as whether or not they have environmental guidelines, targets for reducing the environmental impact of their activities, or an environmental management structure.

Mechanism of Green Purchasing



Environmental Data

Fiscal 2017 Environmental Impact Data

Environmental Data		Units	Amount
Paper resources	Paper resources Total volume used (including paper from virgin pulp and recycled paper)	t	766
	Office paper	t	746
	Client services (leaflets, pamphlets, instruction manuals, etc.)	t	19
	Amount of total paper from virgin pulp	t	712
	Office paper	t	694
	Client services (leaflets, pamphlets, instruction manuals, etc.)	t	18
Global warming	Greenhouse gas emissions (CO_2) conversion*1	t-CO_{2e}	236,441
	Carbon dioxide (CO_2 emissions)	t-CO_{2e}	235,869
	Electricity use	t-CO_{2e}	226,746
	Gas / fuel use	t-CO_{2e}	4,760
	Heat use	t-CO_{2e}	2,749
	Company vehicle use	t-CO_{2e}	1,615
	Methane (CH_4) emissions	t-CO_{2e}	4
	Furnaces	t-CO_{2e}	1
	Shipping (automobiles, ships)	t-CO_{2e}	3
	Dinitrogen monoxide (N_2O) emissions	t-CO_{2e}	69
	Furnaces	t-CO_{2e}	2
	Shipping (automobiles, ships)	t-CO_{2e}	67
	Hydrofluorocarbon (HFC) emissions*2	t-CO_{2e}	488
	Perfluorocarbon (PFC) emissions	t-CO_{2e}	0
	Sulfur hexafluoride (SF_6) emissions	t-CO_{2e}	12
	Low-pollution vehicles owned	Vehicles	778
	Hybrid vehicles	Vehicles	126
	Certified fuel-saving or low-emission vehicles (gasoline-powered vehicles)	Vehicles	618
	Electric vehicles	Vehicles	4
	Others	Vehicles	30
	Low-pollution vehicles introduced during the period	Vehicles	11
	Hybrid vehicles	Vehicles	10
	Certified fuel-saving or low-emission vehicles (gasoline-powered vehicles)	Vehicles	0
	Electric vehicle	Vehicles	0
	Others	Vehicles	1
	Sustainable / new energy systems installed	Units	3
	Solar power systems	Units	3
	Hybrid (solar and wind power) systems	Units	0
	Cogeneration systems (CGS)	Units	0
	Sustainable / new energy systems introduced during the period	Units	1
	Solar power systems	Units	1
	Hybrid (solar and wind power) systems	Units	0
	Cogeneration systems (CGS)	Units	0
	Electric power generated by sustainable / new energy systems	kWh	168,910
	Solar power systems	kWh	168,910
	Electric power generated by sustainable / new energy systems introduced during the period	kWh	0
	Solar power systems	kWh	0

Environmental Data			Units	Amount
Waste countermeasures	Industrial waste requiring special management, etc.			
		Asbestos removed (from buildings) during the period	Instances	6
		Asbestos emissions (from buildings) during the period	t	0
		Waste batteries	t	0
		Other waste (acidic ash, alkali, oil, etc.)	t	0
	Use of products containing PCBs		Units	1
		Transformers	Units	1
	PCB-containing products renewed (removed, stored) during the period		Units	0
		Transformers	Units	0
		Stabilizers	Units	0
	Disposal of PCB-containing products during the period		Units	0
		Transformers	Units	0
		Stabilizers	Units	0
	Disposal of PCB-containing products during the period		Units	177
		Transformers	Units	0
		High-voltage condenser	Units	0
		Low-voltage condenser	Units	0
		Stabilizers	Units	177
Ozone layer protection	Removal of air-conditioning system units using chlorofluorocarbons (CFCs) during the period			
		Removal of air-conditioning system units using specified CFCs	Units	2
		Removal of air-conditioning system units using alternative hydrochlorofluorocarbons (HCFCs)	Units	0
		Removal of air-conditioning system units using alternative hydrofluorocarbons (HFCs)	Units	56
		Recovery and destruction of specified CFCs used for air-conditioning systems	kg	7
		Recovery and destruction of alternative HCFCs used for air-conditioning systems	kg	0
		Recovery and destruction of alternative HFCs used for air-conditioning systems	kg	2,319
	Use of air-conditioning system units using CFCs			
		Air-conditioning system units using specified CFCs	Units	83
		Air-conditioning system units using alternative HCFCs	Units	628
		Air-conditioning system units using alternative HFCs	Units	2,030
		Specified CFCs used for air-conditioning systems	kg	9,916
		Alternative HCFCs used for air-conditioning systems	kg	21,914
		Alternative HFCs used for air-conditioning systems	kg	37,660
	Storage of air-conditioning system units using CFCs			
		Storage of air-conditioning system units using specified CFCs	Units	0
		Storage of air-conditioning system units using alternative HCFCs	Units	4
		Storage of air-conditioning system units using alternative HFCs	Units	1
		Stored amount of specified CFCs used for air-conditioning systems	kg	3,279
		Stored amount of alternative HCFCs used for air-conditioning systems	kg	1,317
		Stored amount of alternative HFCs used for air-conditioning systems	kg	305
	Use of vehicles using CFCs			
		Number of Company vehicles that employ CFCs in air-conditioner refrigerants	Vehicles	0
		Number of Company vehicles that employ HCFCs in air-conditioner refrigerants	Vehicles	0
		Number of Company vehicles that employ HFCs in air-conditioner refrigerants	Vehicles	781
		Use of CFCs in vehicle air-conditioners	kg	0
		Use of HCFCs in vehicle air-conditioners	kg	0
		Use of HFCs in vehicle air-conditioners	kg	1,822
	Elimination of specified-CFC fire prevention equipment			
		Buildings from which specified-CFC fire prevention equipment removed during the period	Buildings	0
		Amount of specified CFCs removed from fire prevention equipment during the period	kg	0
		Amount of specified CFC gas emitted by fire prevention equipment during the period	kg	0
		Remaining number of buildings employing specified-CFC fire prevention equipment	Buildings	11
		Remaining specified CFC gas emissions from fire prevention equipment	kg	36,793

Environmental Data			Units	Amount
Resource usage	Consumption of water resources		m^3	802,911
		Clean water consumption	m^3	320,992
		Sewerage water consumption	m^3	227,847
		Gray water consumption	m^3	0
		Rainwater consumption	m^3	0
		Consumption of clean, sewerage, and other water (Total water consumption)	m^3	254,072

(Scope of Environmental Impact Measurement: All NTT DATA organizations, 68 Group companies in Japan)
*1: CO_2 conversion factor uses CO_2 emission factor by electric power companies.
*2: Units and emissions from fiscal 2013 include individual free-standing air-conditioning units as well as central air-conditioning units.

Office Waste in Fiscal 2017

Primary Category		Subcategory	Emissions (kg)	Recycled Amount (kg)	Waste Disposal Amount (kg)			Final Disposal (kg)	Recycling Rate (%)	Final Disposal Rate (%)
					Disposal Method					
					Incineration	Landfill Amount	Unknown			
Recyclable waste, etc.* * "Recyclable waste" represents waste material that can be completely recycled.		Plain copying paper (photocopying and OA paper, etc.)	1,215,492	1,215,492	0	0	0	0	100	0
		Newspaper, magazines, cardboard, miscellaneous recyclable paper	51,786	51,786	0	0	0	0	100	0
		Glass (bottles, etc.)	0	0	0	0	0	0	0	0
		Scrap metal (cans, etc.)	616	616	0	0	0	0	100	0
		Plastic (PET) bottles, etc.	690	690	0	0	0	0	100	0
		Subtotal 1	1,268,584	1,268,584	0	0	0	0	— Average 100	— Average 0
Non-industrial waste		Plastics	11,169	10,984	0	185	0	185	98	2
		Combustible waste	694,912	680,958	13,955	0	0	1,395	98	0
		Incombustible waste	35,246	32,012	825	2,409	0	2,492	91	7
		Unsorted waste	4,570	0	4,570	0	0	457	0	10
		Subtotal 2	745,897	723,954	19,349	2,594	0	4,529	— Average 97	— Average 1
Industrial waste	**(From offices)**	Waste plastics	338,148	336,421	1,093	634	0	743	99	0
		Scrap metal	792,499	769,174	20,912	2,413	0	4,504	97	1
		Refuse glass, waste ceramics	550	550	0	0	0	0	100	0
		Discarded electric machinery and appliances	178,353	175,728	2,270	355	0	582	99	0
		Waste batteries	0	0	0	0	0	0	0	0
		Product waste containing mercury	2,933	2,792	0	141	0	141	95	5
		Stable mixed waste	134,363	131,913	1,140	1,310	0	1,424	98	1
		Other	16,260	15,290	600	370	0	430	94	3
		Subtotal 3	1,463,105	1,431,867	26,015	5,223	0	7,824	— Average 98	— Average 1

Primary Category		Subcategory	Emissions (kg)	Recycled Amount (kg)	Waste Disposal Amount (kg)			Final Disposal (kg)	Recycling Rate (%)	Final Disposal Rate (%)
					Disposal Method					
					Incineration	Landfill Amount	Unknown			
Industrial waste	(Produced through operations)	Waste plastic	392,339	387,337	2,428	2,575	0	2,817	99	1
		Scrap metal	379,390	372,443	257	6,690	0	6,716	98	2
		Refuse glass, ceramic waste	32,522	32,400	0	122	0	122	100	0
		Wastepaper (only includes paper from the printing business)	390	390	0	0	0	0	100	0
		Waste wood (only includes wood from the warehouse and distribution businesses)	630	630	0	0	0	0	100	0
		Discarded electric machinery and appliances	89,562	88,973	220	369	0	391	99	0
		Medical measuring equipment	0	0	0	0	0	0	0	0
		Waste batteries	505	505	0	0	0	0	100	0
		Product waste containing mercury	51,797	51,795	0	2	0	2	100	0
		Stable mixed waste	105,368	105,068	0	300	0	300	100	0
		Controlled mixed waste	27,926	26,766	0	1,160	0	1,160	96	4
		Waste oil	300	0	300	0	0	30	0	10
		Waste acid	200	200	0	0	0	0	100	0
		Waste alkali	0	0	0	0	0	0	0	0
		Sludge	14,090	14,090	0	0	0	0	100	0
		Waste containing asbestos	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0
		Subtotal 4	1,095,018	1,080,596	3,205	11,217	0	11,538	— Average 99	— Average 1
Industrial waste requiring special treatment		Flammable waste oil	0	0	0	0	0	0	0	0
		Waste acid with a Ph of 2.0 or less	0	0	0	0	0	0	0	0
		Waste alkali with a Ph of 12.5 or higher	0	0	0	0	0	0	0	0
		Infectious waste	30	20	10	0	0	1	67	3
		Specified hazardous industrial waste (Discarded mercury)	0	0	0	0	0	0	0	0
		Specified hazardous industrial waste (Other)	303	303	0	0	0	0	100	0
		Subtotal 5	333	323	10	0	0	1	— Average 97	— Average 0
Grand total (Subtotals 1–5 combined)			4,572,936	4,505,324	48,578	19,034	0	23,892	— Average 98.5	— Average 0.5

(Scope of Aggregate Data: All NTT DATA organizations, 68 Group companies in Japan)

Fiscal 2017 Recycling Amounts

Primary Category	Subcategory	Recycled Amount
Company computers	Recycled amount (Number of units)	4,718
	Reused amount (Number of units)	1,430
Thermal recycling	Recycled non-industrial waste (kg)	461,685
	Recycled industrial waste (kg)	312,337
	Recycling of industrial waste requiring special treatment (kg)	2

(Scope of Aggregate Data: All NTT DATA organizations, 68 Group companies in Japan)

Environmental Impact Data and Amount of Office Waste

		Units	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017
Scope 1	Emissions	t-CO_{2e}	6,073	6,073	10,547	8,802
	Coverage rate of data	%: sales	71	76	70	62
Scope 2	Emissions	t-CO_{2e}	256,764	238,679	248,591	309,063
	Coverage rate of data	%: sales	71	76	72	67
Energy	Total consumption of non-renewable energy	MWh	491,686	476,607	504,867	666,261
	Total amount of renewable energy either purchased or used by the Company (biomass, photovoltaic, wind power, etc.)	MWh	195	185	248	103,342
	Total cost of energy consumption	¥1.0 billion	9	7	8	9
	Coverage rate of data	%: sales	71	69	72	67
Water	Total water usage	million m^3	0.61	0.34	0.55	0.58
	Coverage rate of data	%: sales	71	69	66	57
Waste	Total final disposal of waste	t	122	13	24	24
	Coverage rate of data	%: sales	71	69	66	57

(Scope of Aggregate Data: All NTT DATA organizations, 68 Group companies in Japan)

Governance

We engage in sound and transparent corporate management in a bid to secure sustainable growth while endeavoring to earn the trust of stakeholders.

Approach

While practicing sound and transparent management, the NTT DATA Group contributes to the ongoing growth and development of clients and society by creating new paradigms and values. We also work toward promoting a prosperous, well-balanced, safe and secure society as we endeavor to grow in our own right. We strongly believe that these aspirations and endeavors encapsulate our mission and responsibilities as a company.

With this understanding, we have constructed an effective system of corporate governance and adhere strictly to all statutory and regulatory requirements while ensuring that frontline employees carry out their duties in an ethical manner. In conjunction with efforts aimed at ensuring our approach toward management takes root across the entire Group, we place the utmost emphasis on management efficiency and discipline. Through these means, we continue to build a robust foundation for CSR management that responds to the expectations of the global community.

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Corporate Governance

Policies

NTT DATA is working on the following basic policies in accordance with the purpose of each principle of Japan's Corporate Governance Code to ensure that corporate governance will effectively function: (1) to ensure transparency and soundness in business management; (2) to achieve appropriate and swift decision-making and business execution; and (3) to implement compliance thoroughly.

(1) Ensuring Transparency and Soundness in Business Management

NTT DATA strives to disclose information in a just, fair, and timely manner in accordance with the Disclosure Policy, based on the Disclosure Guidelines. Information disclosure is important in that it enables the market to appraise NTT DATA appropriately. For this reason, NTT DATA holds a meeting for explanation of financial results when financial results are announced quarterly, and often holds other meetings for domestic and international investors and analysts, in order to ensure transparency in business management. To reinforce the function of supervising and auditing the fairness in business execution, NTT DATA places outside directors and outside auditors to supervise and audit the Board of Directors and the Audit & Supervisory Board and to ensure soundness in its business management. NTT DATA also pays attention to maximize the profit of its shareholders when transacting business with NTT, the holding company of NTT DATA, and the companies in the NTT Group.

(2) Achievement of Appropriate and Swift Decision-Making and Business Execution

Decision-making at NTT DATA is carried out under the supervision of the Board of Directors in accordance with Authority Rules, which stipulate the responsibility and authority of the president and CEO, the senior executive vice president, the officers in charge of each segment and region, and the heads of each section or group. For smooth and swift decision-making and supervision in its business operations, NTT DATA has established the Corporate Management Committee, which is made up of the president and CEO, the senior executive vice president, officers in charge of each segment and region, and other heads of important sections or groups. The Corporate Management Committee holds preliminary discussions about the items to be resolved at the Board of Directors' meetings in order to enrich discussions held at that level. In addition, NTT DATA pursues appropriate and swift decision-making and business execution by placing senior vice presidents in charge of business execution, assigning most of the authority relating to business execution to such senior vice presidents from directors, with each section or group executing business operations independently and responsibly in accordance with the Organizational Regulations.

(3) Thorough Implementation of Compliance

NTT DATA is determined to operate its business in accordance with high ethical standards as well as compliance by establishing its Global Compliance Policy, targeted at all officers and employees of the NTT DATA Group, in order to clarify its basic policy and specific behavior guidelines relating to corporate ethics. To make such business operation effective, NTT DATA considers it necessary to implement a continuous educational campaign to promote the awareness of such ethics and compliance. Therefore, it has been holding training sessions on compliance targeted at employees and conducting employees' attitude surveys. Furthermore, in pursuit of more openness in its corporate culture, NTT DATA has placed reception desks for "the Whistle Line," which is cross-sectional in the Group, as an internal and external point to receive any declaration, whether anonymous or named. NTT DATA ensures that any declarer to the reception desk through "the Whistle Line" is not unfavorably treated because of his or her declaration.

Structure

Improving Management Quality Based on a Governance Structure by Enhancing Business Execution, Oversight, and Auditing Functions

As a company with corporate auditors, NTT DATA has a Board of Directors and an Audit & Supervisory Board, as well as a Corporate Management Committee.

The Board of Directors meets monthly, holds extraordinary meetings as necessary, and is responsible for decision-making and supervision regarding legal and important management matters.

In addition to introducing both business segments and department systems, we have also appointed regular executive officers, whose responsibility is to focus on business execution. By having directors delegate significant executive authority to executive officers, NTT DATA aims to accelerate the decision-making process.

The Audit & Supervisory Board meets, in principle, once a month to decide on audit policies, plans, methods, and various other important audit-related matters.

The Corporate Management Committee includes the CEO and the heads of major organizational sections. The committee meets, in principle, once a week, to ensure smooth and timely decision-making and the supervision of day-to-day operations.

Regarding self-assessments and analyses in fiscal 2017, the following methods were conducted on the advice of an external organization.

- Implementation period: October 2017
- Assessment method: A survey was implemented targeting all directors who are members of the Board of Directors and Audit & Supervisory Board members
- Response method: Responses were provided to an external organization to ensure anonymity

In light of the aggregate results of a report from the external organization, analysis, discussions, and assessments conducted December 2017 and February 2018 resulted in a generally positive assessment of the Board of Director composition and operation, recognizing the ongoing efficacy of the entire Board of Directors.

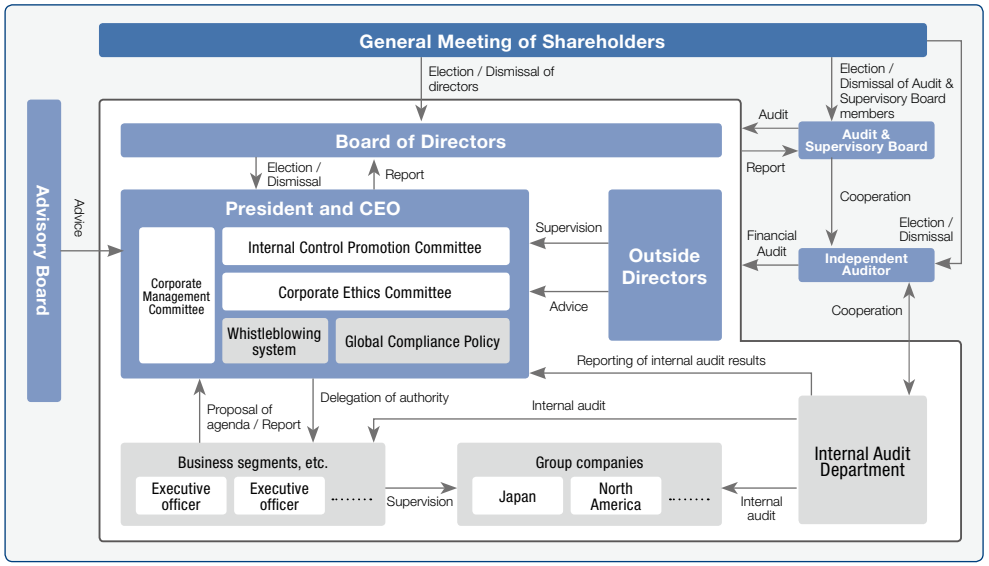
In response to issues that came to light as a result of fiscal 2016 self-assessments and analyses, we conducted response measures aimed at increasing the relative importance of management strategy discussions held by the Board of Directors. The measures involved reviewing agenda criteria for the Board and setting opportunities for discussion. These moves were evaluated as definite steps toward improvement.

Overall, we are sure of the improvements we have achieved since fiscal 2016. However, we have established and are implementing an operating policy aimed at improving issues that require attention moving forward. This policy encompasses management plans for the Board of Directors and the initiatives listed below:

- Further enrich discussions regarding management strategies and enhance discussions regarding management strategies and plans at their formulation stages
- Review matters from a risk management point of view so that even when they do not meet agenda criteria for the Board of Directors they can be revised into matters for report at the Board if their level of importance or risk so warrants.
- Further enrich the contents of reports from the Board of Directors in response to investor demand for the provision of more detailed information.

Moving forward, we will continue to evaluate the effectiveness of our Board of Directors and proceed with initiatives aimed at raising its functionality.

Corporate Governance Structure



Initiatives That Add Varied Perspectives to Management

NTT DATA continues to strengthen functions that oversee fairness in business execution by inviting directors and Audit & Supervisory Board members from outside the Company. As of July 2018, NTT DATA had two outside directors and four outside Audit & Supervisory Board members. In appointing outside officers, the Company provides selection criteria that anticipate that they will bring to management opinions from broad perspectives that draw on their respective experiences. NTT DATA has two outside directors and two outside auditors registered as independent directors who meet the requirements of Tokyo Stock Exchange regulations as well as its own in-house requirements. In addition, we established an Advisory Board in July 2012 that has since obtained advice from outside experts used to expand our multifaceted field of vision regarding management, achieve further growth, and ensure the sound management of our operations.

Group Governance

Strengthening Group Governance by Establishing a Liaison Department for Group Companies

For important matters such as business planning, internal control, and compliance, NTT DATA's basic policy is to ensure appropriate business operations throughout the Group by instituting rules for consultation and reporting within each Group company. Based on this policy, the Company has established a cooperative system through the establishment of a liaison department in NTT DATA that connects to each Group company.

In particular, Group governance has been reinforced in response to the rapid expansion of overseas operations through M&A activities and other measures. Specifically, the Company is establishing a system centered around five operating regions — North America, EMEA (Europe, the Middle East, and Africa), APAC (Asia–Pacific), China, and Spain and Latin America — as well as business solutions. NTT DATA has instituted rules for consultation and reporting between the Company and Group companies in relation to such important matters as business plans, large-scale projects, internal control, and compliance.

Furthermore, NTT DATA is building a governance system that enables the unified management of the Group while delegating responsibility for business management to each regional integrated company.

As part of this initiative, NTT DATA is establishing nomination and compensation committees and audit committees within regional integrated companies' boards of directors. Meanwhile, the Group is establishing a system that facilitates the appropriate and timely sharing of information about risks and other important matters of concern by building a comprehensive internal control system that includes overseas organizations.

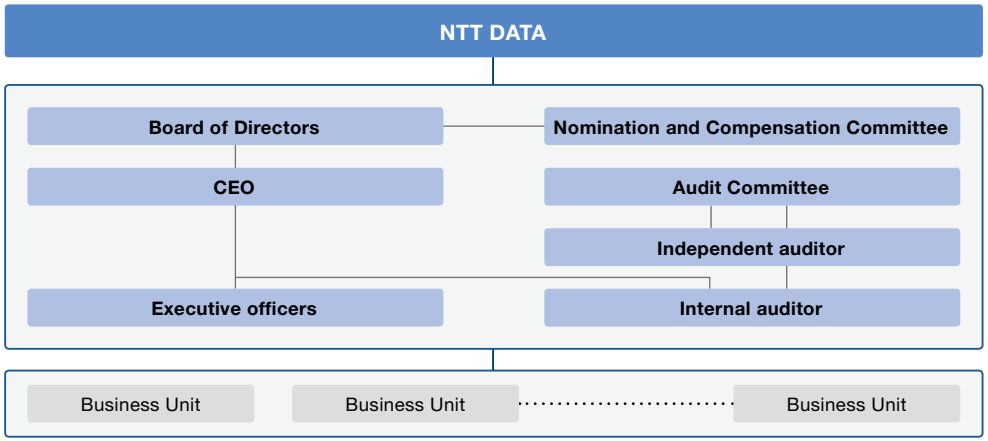
In Japan, in fiscal 2014 NTT DATA increased management efficiency by beginning to operate the common accounting system that domestic Group companies use. As of March 31, 2018, NTT DATA extended the introduction of this system, which is used by approximately 70 major domestic Group companies. As a result, many domestic Group companies use a common accounting system. This enables centralized management of accounting information and the securing of internal control. Furthermore, the use of this system significantly reduces maintenance and operational burdens.

Moreover, aiming to increase the efficiency of Group management, NTT DATA introduced an in-house Group Management Infrastructure system that visualizes domestic Group companies' management information (in the financial and personnel fields). Through this new system NTT DATA aims to optimize management resource allocation to reflect project characteristics, expedite business management, enhance the precision of information used for decision-making, and realize Group synergies.

Ensuring Robust Group Governance Based on Group Management Policies and Group Management Rules

To optimize the Group as a whole, the NTT DATA Group established Group Management Policies to define the basic approach to Group management. In addition, NTT DATA has established rules concerning consultation and reporting between Group companies. We have combined these rules with the aforementioned Group Management Policies and are working to secure sound operation of Group Governance.

Governance Structure of Regional Integrated Companies



Initiatives to Spread Our Vision

At the NTT DATA Group, we are working to spread the Values we hold to be important and achieve the Group Vision we have for ourselves ten years from now.

To act with these values in mind, we must have an idea of how to apply them in our work duties. For this reason, we established a meeting to engage in dialogue with our co-workers. Since 2014, we have been holding Values Week on the week of the anniversary of our founding (May 23). Values Week is a series of events to spread the word about our values among the people with whom we work. During Values Week 2017, approximately 15,000 employees in more than 100 cities and nearly 30 countries took part in workshops and talked about our values, with passionate discussions being held in each region.

NTT DATA CHINA

NTT DATA Italy

everis

Internal Control

Maintaining and Continuously Strengthening Internal Control Systems

The NTT DATA Group promotes the creation and maintenance of internal control systems in accordance with a basic policy of always considering risks arising from business activities and taking various types of measures to realize efficient implementation of equitable, transparent business activities.

Twice a year, we convene meetings of the Internal Control Promotion Committee, which is tasked with assessing the effectiveness of internal control systems and managing and furthering overall internal control. In addition, NTT DATA actively conducts internal audits that focus on a range of different risks.

Given continued global business expansion going forward, the Company will maintain efforts to strengthen the Group's overall internal control capabilities by further advancing efforts to establish global internal audit capabilities while introducing efficient methods of auditing.

Implementation Status of Internal Audits

NTT DATA's Internal Audit Department conducts audits from a standpoint that is independent from operational divisions. In fiscal 2017, the Company audited in-house organizations, 25 domestic Group companies, and 9 overseas Group companies. This audit primarily focused on risks specific to the Company. These risks include business process compliance, long working hours, proper contracting, and delegation agreements and information security. Also, the Company monitored the internal auditing activities of 27 Group companies. In addition, to expand and improve internal auditing of the Group as a whole, 79 domestic and overseas Group companies conducted autonomous inspections based on unified audit items.

Furthermore, in terms of IT initiatives, we have also introduced a monitoring indicator system to detect indications of fraud before it occurs, and we are expanding the functions of the system using its computer-assisted audit techniques (CAAT) tools to analyze data extracted from various in-house information systems. This system is already being applied to some of our internal organizations and Group companies, and we are considering the possibility of expanding its implementation into further Group companies.

Going forward, NTT DATA will continue to aim to realize coordination with the internal audit divisions of domestic and overseas Group companies and to advance measures to establish a global internal auditing system while increasing the quality and quantity of internal audits.

Education and Training Related to Internal Control Systems

As an annual exercise, NTT DATA provides an e-learning course on internal control in order to emphasize the importance of internal controls and promote understanding among employees about its policies and views.

Directors, Audit & Supervisory Board Members, and Senior Vice Presidents

Executive Officers (As of June 20, 2018)

14 men and 1 woman (Female executive officer ratio of 6.67%)
Board of Directors (Average attendance rate of 98.90% in fiscal 2017)

Position	Name	Outside / Independent	Term	Areas of Responsibility	Concurrent Position	Meeting Attendance	Shares Owned*5
Representative Director, President and Chief Executive Officer	Yo Honma	—	*3			16/16	5,800
Representative Director and Senior Executive Vice President	Keiichiro Yanagi	—	*1	Head of HR Headquarters, Responsible for Corporate Strategy*5, Human Resource, Management, Finance (CFO), Investor Relations, Risk Management (CRO), and Public Relations		16/16	5,200
Representative Director and Senior Executive Vice President	Shigeki Yamaguchi	—	*3	Responsible for Public & Social Infrastructure Segment, Enterprise & Solutions Segment, and China & APAC Segment		12/12	1,800
Representative Director and Senior Executive Vice President	Toshi Fujiwara	—	*3	Responsible for Financial Segment, Americas & Europe Segment, and Global Marketing		12/12	2,400
Director and Executive Vice President	Tsuyoshi Kitani	—	*1	Head of Technology and Innovation General Headquarters, Responsible for Technology Strategy (CTO) and Information Security (CISO)*6		16/16	4,100
Director and Executive Vice President	Shunichi Takeuchi	—	*2	Deputy responsible for Public & Social Infrastructure Segment		—	7,600
Director and Executive Vice President	Koji Ito	—	*2	Head of North American Segment and EMEA & LATAM Segment, Deputy responsible for Americas & Europe Segment		—	5,100
Director	Yukio Okamoto	Outside Director, Independent Director*3	*1		Representative Director of Okamoto Associates, Inc. (present post), Director of Nippon Yusen Kabushiki Kaisha (NYK LINE) (present post)	16/16	600
Director	Eiji Hirano	Outside Director, Independent Director*3	*3		Vice Chairman and Director of MetLife Insurance K.K. (present post), Director of RIKEN CORPORATION (present post)	15/16	100
Director	Takashi Ebihara	—	*1			12/12	0
Director	John McCain	—	*3			—	0
Standing Audit & Supervisory Board Member	Tetsuro Yamaguchi	Outside Audit & Supervisory Board Member*4	*4			16/16	300
Standing Audit & Supervisory Board Member	Tetsuya Obata	Outside Audit & Supervisory Board Member*3	*3			—	0
Standing Audit & Supervisory Board Member	Katsura Sakurada	Outside Audit & Supervisory Board Member, Independent Director*3	*3			—	0
Audit & Supervisory Board Member	Rieko Sato	Outside Audit & Supervisory Board Member, Independent Director*4	*4		Partner of Ishii Law Office (present post), Corporate Auditor of GignoSystem Japan, Incorporated (present post), Director (audit and supervisory committee member) of Dai-ichi Life Holdings, Inc. (present post) Director of J. FRONT RETAILING, Co., Ltd. (present post)	16/16	1,300

*1: Director's term ends with the closing of the Ordinary General Meeting of Shareholders for the last fiscal year that ends within two years from appointment at the Ordinary General Meeting of Shareholders held on June 20, 2017
*2: Director's term ends with the closing of the Ordinary General Meeting of Shareholders for the last fiscal year that ends within one year from appointment at the Ordinary General Meeting of Shareholders held on June 19, 2018
*3: Audit & Supervisory Board member's term ends with the closing of the Ordinary General Meeting of Shareholders for the last fiscal year that ends within two years from appointment at the Ordinary General Meeting of Shareholders held on June 19, 2018
*4: Audit & Supervisory Board member's term ends with the closing of the Ordinary General Meeting of Shareholders for the last fiscal year that ends within four years from appointment at the Ordinary General Meeting of Shareholders held on June 22, 2016
*5: Allocation that collectivizes the strategy formulation and implementation related to the Group's technology development and R&D, as well as the formulation and implementation of security strategies
*6: The President and CEO, as well as all other members of the Board of Directors, must own stock in the Company equivalent in value to at least 10% of his or her annual basic remuneration

Total Remuneration of Directors and Audit & Supervisory Board Members (Fiscal 2017)

Executive Classification	Number of Persons	Basic Remuneration	Directors' Bonuses	Remuneration Amount
Directors (excluding outside directors)	10 members	¥307 million	¥84 million	¥391 million
Audit & Supervisory Board members (excluding outside Audit & Supervisory Board members)	—	—	—	—
Total	10 members	¥307 million	¥84 million	¥391 million

* The above includes one director who retired as of the conclusion of the 29th Ordinary General Meeting of Shareholders held on June 20, 2017.
* Regarding the remuneration for directors and Audit & Supervisory Board members, by resolution at the 18th Ordinary General Meeting of Shareholders held on June 22, 2006, the amount of remuneration for directors shall be ¥580 million or less and remuneration for Audit & Supervisory Board members shall be ¥150 million or less, annually.

Total Remuneration of Outside Corporate Officers (Fiscal 2017)

	Number of Persons	Basic Remuneration
Total remuneration of outside corporate officers	6 members	¥126 million

Policy Determining Director Remuneration

NTT DATA explains the policy for determining the remuneration for directors to the parent company and independent outside directors and, upon receiving appropriate advice from them, determines the amount of remuneration to such extent as resolved at a shareholders' meeting at the Board of Directors.

- The remuneration for directors (excluding outside directors) is composed of monthly remunerations and bonuses. The amount of monthly remuneration is determined and provided in accordance with the responsibility and extent of the role of each director's position. Bonuses are determined and provided with the Company's performance for a relevant period. To reflect the medium- to long-term performance, each director is required to purchase the Company's stock through the officers' shareholding association by paying a certain amount of money from each of his or her own monthly remuneration and bonus. Each director is also required to retain all the shares purchased by himself or herself during his or her term of office.
- Outside directors are paid only monthly remuneration, unrelated to business performance in order to ensure a high degree of independence.
- Audit & Supervisory Board member remuneration is determined through consultation with Audit & Supervisory Board members, who are paid only monthly remuneration, unrelated to business performance in order to ensure a high degree of independence.

Compliance

We share our guidelines on ethical conduct beyond legal compliance across the entire Group.

Policy and Structure

NTT DATA positions the Global Compliance Policy, which serves as the foundation of its approach to corporate ethics, as a part of Our Way, and is striving to establish the policy throughout the Group.

Reinforcing the Compliance Promotion System

The NTT DATA Group is diligently spreading its Global Compliance Policy to all related parties, including executives and employees. Within the Company, we are fostering a culture of compliance with legal regulations and ethical rules as well as promoting the establishment of related internal structures and mechanisms.

Each year, our Corporate Ethics Committee, with our Chief Risk Officer (CRO) as chairperson, discusses and reports on details of compliance-related initiatives.

Implementation of Compliance Assessments

The NTT DATA Group conducts compliance assessments of all employees in order to verify the engagement status of its compliance systems and raise awareness.

Under these compliance assessments, recipients answer 30 questions about such matters as bribery, information security, and overtime work, and the results are analyzed statistically. By comparing yearly changes, we can prioritize topics with many suggestions in the next year's compliance training sessions. Accordingly, we ensure more thorough corporate ethical awareness and reinforce legal compliance.

Maintaining "the Whistle Line" for the Early Detection of Problems

The NTT DATA Group seeks to maintain sound management through the detection and correction of behavior that contravenes laws and corporate ethics at an early stage. For this reason, we operate a harassment hotline and a whistleblower line to receive reports from and provide consultation to all NTT DATA Group personnel, including employees and temporary staff, as well as suppliers.

In operating this service, we place the utmost importance on the protection of privacy, prohibitions against unfair treatment, and the obligation to uphold confidentiality. We accept consultation requests and respond to inquiries at all times and have set up a Human Rights Promotion Office within the ESG Promotion Department to address general human rights issues. Survey results and corrective actions are reported to the Executive Committee, corporate auditors, and other authorities and are used to increase the soundness of business management. We disclose the number of reports and annual changes to Group companies and, as necessary, we analyze the likelihood of similar compliance cases and take Groupwide measures on prominent cases to draw attention and prevent recurrence.

In fiscal 2017, we received 88 reports. As initiatives aimed at encouraging the use of internal reporting systems, we have overhauled our Human Rights Promotion Office and our risk management promotion homepage for employees. We are also working to ensure early detection of issues by innovating the ways in which we provide guidance for our internal reporting systems and by introducing examples of previous reports made through them.

When the NTT DATA Group receives information internally, it works to protect the privacy and guarantee the status of the information provider, conduct an impartial investigation, and treat the matter fairly. The information provider will not receive disadvantageous treatment from the Company (from either a personnel or compensation perspective) on the grounds of having provided information.

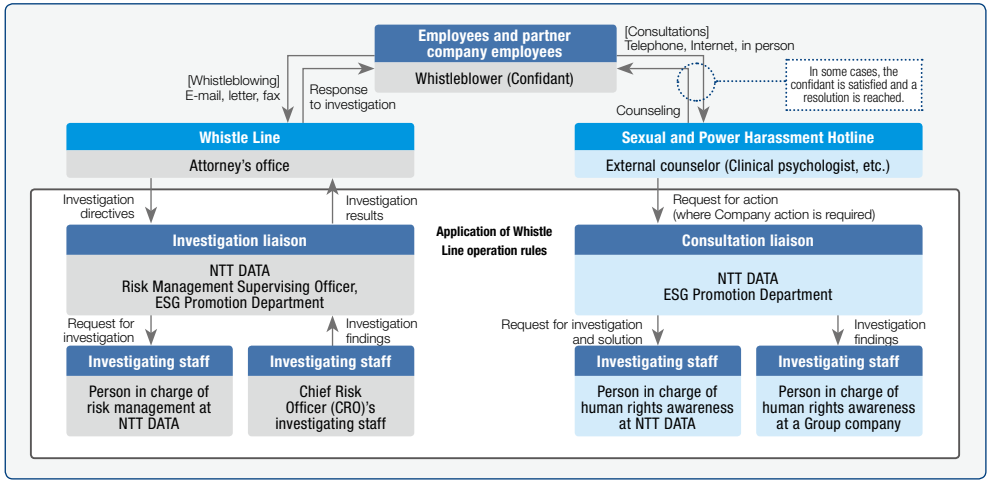
In addition, we have established rules ensuring that employees who are the subject of the information received will not be subjected to disadvantageous treatment from the Company solely on the grounds of having had information provided to the internal reporting desk.

Moving forward, we will continue to encourage the use of internal reporting systems and strengthen response initiatives to help prevent the recurrence of reported incidents.

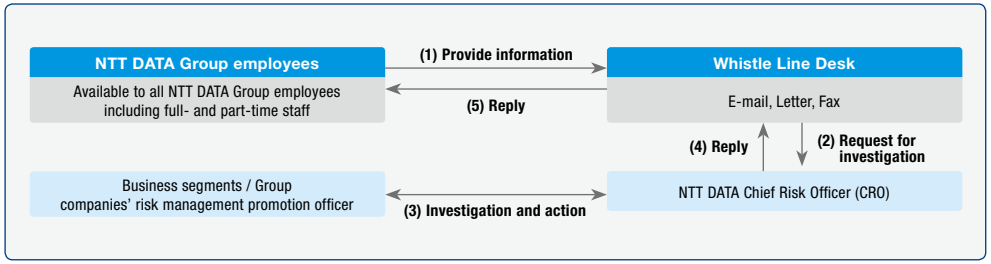
Compliance Consultations over the Last Three Years (Number of incidents)

	Fiscal 2015	Fiscal 2016	Fiscal 2017
Number of compliance consultations	68	85	88
Number of compliance-related violations	53	79	59
Misuse of Company expenses	3	5	8
Harassment	41	56	39
Other compliance-related violations	9	18	12
No violations	15	6	29

Flow Diagram of the Whistleblowing System



The Whistle Line



Compliance Training and Awareness

The NTT DATA Group is making an effort to steadily improve compliance awareness among employees through various types of training. To improve issues in the workplace, we will enhance educational material content and implement thorough training sessions for all employees.

Initiatives Aimed at Spreading Employee Understanding

The NTT DATA Group conducts compliance training (including e-learning) for approximately 36,000 employees at domestic Group companies and approximately 74,000 employees at overseas Group companies. The Company also arranges lectures on corporate ethics at position-based training sessions conducted as part of promotional milestones. Our compliance-related training is tailored to the business characteristics of each organization and Group company.

Also, given the growing global reach of our business activities, we enrich our training content to foster greater awareness about stricter anti-bribery and anticorruption regulations in the global business community and draw attention to outsourcing contracts in view of regulatory revisions.

Furthermore, we created and provided employees with the “NTT DATA Group Ethics Guide: Learning About Compliance through Familiar Cases” to explain case studies and other examples of situations where decisions are difficult to make with regard to everyday duties with the aim of promoting further understanding of our Global Compliance Policy. This information is posted on our in-house website so that it can be referred to and used anytime.

Major Compliance Initiatives Undertaken in Fiscal 2017

Name of Training Session	Number of Attendees	Ratio
Compliance IBT training (e-learning)	Approx. 36,000 (Domestic employees)	99.3%
Global Compliance Policy Training	Approx. 74,000 (Overseas employees)	97.5%
Position-based group training sessions (Lectures on corporate ethics, risk management, etc.)	Approx. 3,100	96.9%

Response to Remonstrance Received Regarding a Compliance Incident

In December 2017, the Company received a remonstrance disclosed by the Securities and Exchange Surveillance Commission for an incident in which a former employee purchased shares of the NJK Corporation despite having prior knowledge of the Company’s pending tender offer, which was officially announced in May 2016. After the announcement, the former employee had secured a profit by forcing a sale of the purchased shares.

We take this remonstrance seriously and are working to prevent recurrences by conducting more thorough employee compliance training and establishing and enforcing stringent internal regulations.

For more information regarding the remonstrance from the Securities and Exchange Surveillance Commission, please visit:

http://www.nttdata.com/jp/ja/news/information/2017/2017121501.html
(In Japanese only)

Initiatives on Human Rights

Respect for Human Rights

As a member of the NTT Group, the NTT DATA Group is engaged in an organizational effort in line with the NTT Group's Human Rights Charter, established in June 2014, which incorporates the concepts of the ISO 26000 international standards on social responsibility and the UN Guiding Principles on Business and Human Rights. Our Global Compliance Policy stipulates the Group's fundamental principle of respect for human rights. We pledge not to carry out or tolerate discrimination and take a firm stand against discrimination by others, aiming to pursue a comfortable work environment free from any form of discrimination. We place a great importance on resolving human rights issues as we are promoting human rights awareness activities organizationally throughout the Group. In fiscal 2016, we distributed an English-language version overseas to broaden understanding of respect for human rights.

The NTT Group's Human Rights Charter

June 16, 2014

We* recognize that the respect for human rights is a corporate responsibility and aim to create a safe, secure and rich social environment by fulfilling its responsibility.

1. We* respect internationally recognized human rights, including the Universal Declaration of Human Rights in all company activities.
2. We* responsibly respect for human rights by efforts to reduce any negative impacts on human rights holders. We* respond appropriately when negative impacts on human rights occur.
3. We* aim to not be complicit in infringing human rights, including being involved in discrimination, directly or indirectly.
4. When negative impacts on human rights are done by a business partner and are linked to a product or service of the NTT group, we* will expect them to respect human rights and not to infringe on them.

*1: "We" means the NTT Group and its officers and employees.
*2: "Internationally recognized human rights" are rights included in declarations and rules that form the basis for international standards of universal human rights throughout the world and specifically refer to the following:
United Nations (the Universal Declaration of Human Rights and the two Covenants on human rights):
- The Universal Declaration of Human Rights (adopted by the United Nations General Assembly in 1948)
- International Covenant on Economic, Social and Cultural Rights and the International Covenant on Civil and Political Rights (adopted by the United Nations General Assembly in 1966, in force from 1977)

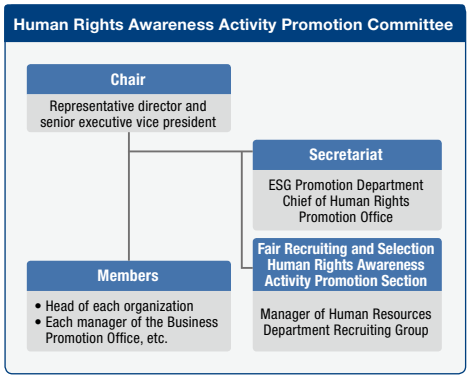
Eight Basic Principles of the Core Conventions of the International Labour Organization (ILO) Declaration
Forced or Compulsory Labor; Freedom of Association and Right to Organize; Right to Organize and Right to Collective Bargaining; Equal Compensation for Work of Equal Value; Abolition of Forced or Compulsory Labor; Discriminatory Treatment Related to Employment or Occupation; Minimum Age of Employment; and Worst Forms of Child Labor
*3: When enforcing clauses 2–4, we apply the philosophies of ISO 26000 and the UN Guiding Principles on Business and Human Rights in accordance with the procedures indicated here.

Establishing a System to Promote Human Rights Awareness Activities

With the aim of realizing cheerful and comfortable workplaces by raising awareness and understanding of human rights, NTT DATA convenes a meeting of the Human Rights Awareness Activity Promotion Committee at the beginning of each fiscal year. It includes leaders of each organizational unit and is headed by the representative director and senior executive vice president.

Those in charge of promoting human rights awareness activities have been assigned in each of our organizations and Group companies. They promote relevant employee training and measures in cooperation with the Human Rights Promotion Office in the ESG Promotion Department and also address human rights issues within our respective organizations. In addition, we develop these human rights awareness experts by having them participate in internal and external training sessions.

System to Promote Human Rights Awareness Activities



Promoting Human Rights Awareness Activities

To further deepen understanding and heighten awareness of human rights, awareness-raising activities are important for all employees. Following this concept, we have been holding Human Rights Awareness Workplace Seminars at the workplace level for domestic NTT DATA Group employees since fiscal 2010. With these seminars, we aim to raise awareness and promote understanding regarding human rights issues.

Additionally, in 2017 we continued to conduct sessions on human rights in position-based training, recruiters' training, and other programs to inculcate even deeper awareness. In response to the increasing number of employees assigned to overseas posts, we conducted pre-overseas assignment training to ensure their proper understanding of the religions, cultures, and customs of the countries and regions to which they have been assigned. In fiscal 2017, a total of 60 employees assigned to one of 18 overseas posts took part in the program. Also, in October 2017 we held a human respect slogan contest for NTT DATA Group employees, partner company employees, and family members from whom we solicited slogans on the theme of human rights awareness. As a result, we received 211 phrases and presented awards for outstanding entries at an event during the United Nations-designated Human Rights Week in December.

Major Initiatives on Human Rights Awareness

Example Initiatives	Participation in Fiscal 2017
Human rights awareness workplace seminars	26,579 people
Position-based training course	2,500 people
Recruiters' training course	500 people
Training experts (in charge of promoting human rights awareness activities and the HR section in the ESG Promotion Department)	18 (6 sessions)
Pre-overseas assignment training	60 (18 countries)
Human respect slogan contest (Number of applicants)	211 phrases

Construction of Due Diligence for Human Rights and Related Initiatives

As an NTT Group company, we are incrementally implementing our human rights due diligence process in accordance with the policies set forth in the NTT Group's Human Rights Charter established in fiscal 2014.

Construction of a Human Rights Management System

From fiscal 2014 to fiscal 2016, we conducted risk assessments regarding actual and potential human rights issues in countries where we are expanding our operations. These assessments focused on specific businesses (BPO, data centers) and regions (China, India). Based on the results of these assessments, we created a human rights management questionnaire as part of our efforts to create mechanisms for preventing human rights violations.

In fiscal 2017, we enlisted the assistance of outside specialist agencies in implementing management of potential human rights risks upon verifying information we gained through in-house questionnaires. As a member company of the NTT Group, we specified human rights issues that we should address while considering the degree of negative impact the Group's business could potentially have on the human rights of its shareholders. When determining these specific issues, we examined the likelihood in which future human rights risks could occur in certain countries and the seriousness of human rights risks facing different businesses.

Moving forward, we will conduct interviews to determine if our operations are having negative human rights impacts on local areas, and, in the event that they are, we will investigate the degrees of these impacts, determine priority issues, and discuss possible remedies.

Measures in Response to the UK Modern Slavery Act

NTT DATA UK established compliance policies based on the United Kingdom's Modern Slavery Act (MSA), which was passed in March 2015. Listed below are ways in which we have implemented these policies:

- Recruitment and checks against the MSA for all activity.
- Our terms and conditions of purchase require all suppliers to comply with the MSA.
- Procurement checks of our top suppliers on a regular basis for compliance to a number of business and regulatory requirements including the MSA.
- Checks performed since 2015 confirmed compliance with the MSA. Other suppliers are checked dependent on due diligence and risk assessments undertaken. Swift action is taken for non-compliance which could include immediate order termination.
- We have an external whistleblowing service which can be used to register non-compliance.
- Training is performed on an as required basis.
- NTT DATA UK's obligation to comply with government regulations is communicated to staff on a regular basis and compliance is reviewed by the directors on an annual basis.

Risk Management

To continue fulfilling our responsibilities to clients and society, we identify and rigorously manage risks.

Policy and Structure

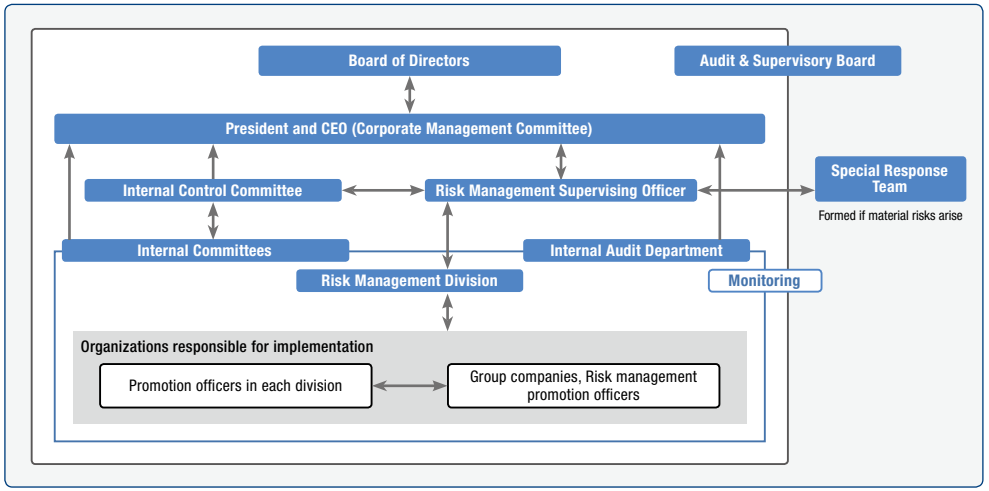
The NTT DATA Group seeks to ascertain all risks associated with its business activities to minimize the frequency of occurrence of these risks and limit their impact on operations should they materialize. To facilitate this effort, in 2002 we appointed an officer in charge of supervising and promoting risk management from a Companywide perspective.

In addition, risk management promotion officers were appointed to the Risk Management Division as well as other divisions and Group companies to enable them to respond proactively and independently to various risks.

NTT DATA defines material risks and reviews progress toward addressing these and achieving related targets with the results of such reviews being reflected in various measures. The Internal Control Committee convenes twice every year to discuss measures pertaining to the reduction of risks and evaluate their effectiveness. The results of these evaluations are reported to the Corporate Management Committee as well as the Board of Directors.

Furthermore, since the NTT DATA Group provides various services worldwide to a wide range of clients and industries, each business unit has its own unique business environment. Therefore, the Board of Directors has delegated considerable power to segment heads. This measure enables proper understanding of and prompt responses to risks relating to client relationships and market environments.

Risk Management Structure

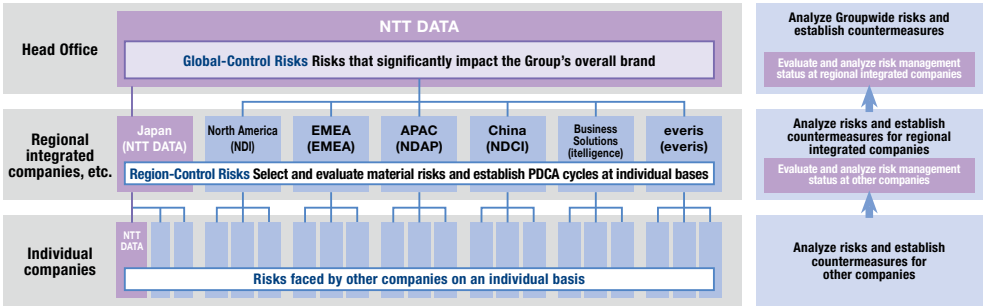


Risk Management Method

NTT DATA identifies risks that may impact its Head Office, regional integrated companies, and other companies on an individual basis and formulates countermeasures accordingly. High-level divisions effectively manage the measures in place at organizations under their jurisdiction by analyzing and evaluating their implementation status. Groupwide measure implementation status is analyzed, evaluated, and monitored by the Risk Management Division. In addition, risks determined to have the potential to impact the entire Group are defined as global control risks and are managed on a Groupwide basis. In this manner, NTT DATA is practicing stringent and comprehensive risk management.

Additionally, the Group considers material risks set by regional integrated companies and other entities to be “region-control risks” and maintains an evaluation and improvement cycle based on the implementation statuses of countermeasures and on risk occurrence incidents.

Risk Management Categories



Global-Control Risks

Global-control risks with the potential to impact the entire Group are identified by the Internal Control Committee by incorporating input from outside specialists and adopting a broad perspective that encompasses factors such as changes in social trends.

In fiscal 2017 we continued selecting the same risks as those in the previous fiscal year as a medium- to long-term effort spearheaded by NTT DATA’s Head Office to strengthen our response to auditing deficiencies and the auditing of alliances, among other initiatives.

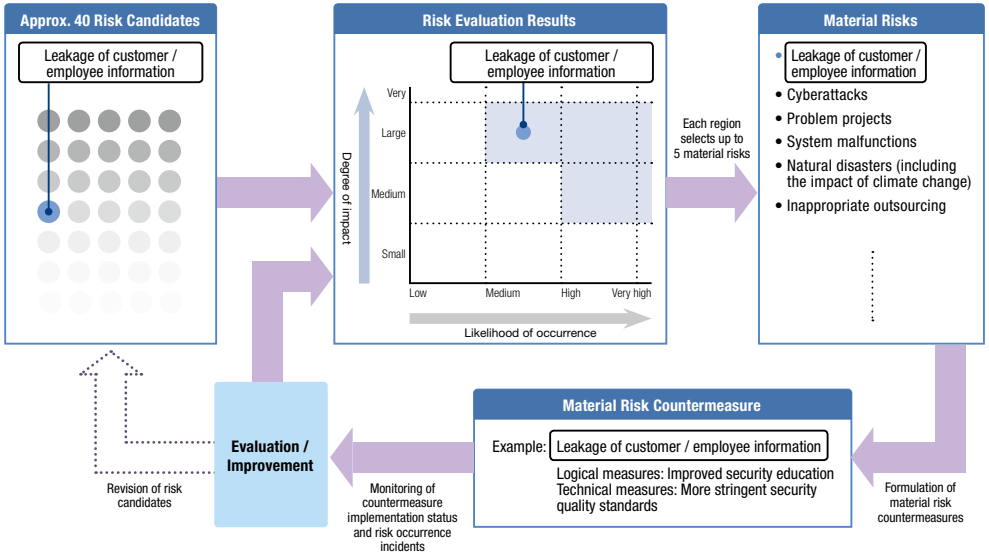
NTT DATA’s Global-Control Risks

Material Risks	Major Improvements, etc.	Initiatives
Information leakage, personal / confidential information, cyberattacks	● Continue enhancing countermeasures for ever-increasing security risks ● Strengthen preparedness for advanced cyberattacks focused on public institutions	● Stimulate awareness through training ● Formulate rules on security measures for internal systems, monitor implementation status, and promote implementation ● Consider and implement stronger overseas incident response measures ● Promote compliance with the EU’s General Data Protection Regulation (GDPR)
Accounting fraud, including window dressing	● Expand global unified auditing, connect to risk indication auditing	● Encourage introduction of unified rules related to accounting (Instruct and check preparation of financial statement comparisons with International Financial Reporting Standards [IFRS]) ● Stimulate awareness through training ● Conduct indication auditing (also roll out at Group companies in Japan and other parts of Asia)
Bribery	● Continue strengthening compliance education	● Stimulate awareness through training (Japan: Implement Internet-based testing (IBT) for compliance and position-based training, Overseas: Conduct training at individual locations)

Region-Control Risks

Region-control risks managed independently by regional integrated companies define material risks based on approximately 40 risk candidate items in each region that are evaluated and improved in light of material risk countermeasure implementation and risk occurrence status.

Process for Selecting Region-Control Risk



Risk Management Training

The NTT DATA Group conducts ongoing training regarding the legal and other roles of newly appointed directors and Audit & Supervisory Board members at NTT DATA and Group companies to ensure thorough risk management throughout the Group. During fiscal 2017, in July, we provided training to newly appointed directors concerning their professional duties and responsibilities with regard to corporate governance and under the Companies Act. Later, in August of the same year, we also provided training for Company executives at domestic Group companies. Going forward, we will promote increased risk management awareness and enhanced response capabilities by implementing various types of training on an ongoing basis.

Information Security

The NTT DATA Group is constantly engaged in technical development by keeping abreast of social, technological, and business trends as well as the latest trends in security, and these results are reflected in the Company's systems and client services.

Basic Policy

The more pervasive IT becomes in our lives, the more risks we face with regard to the safety of information and the greater the necessity for appropriate measures to safeguard that information. In the business world, however, focusing solely on ensuring information security hinders the active utilization and sharing of information and stymies the use of beneficial information and know-how.

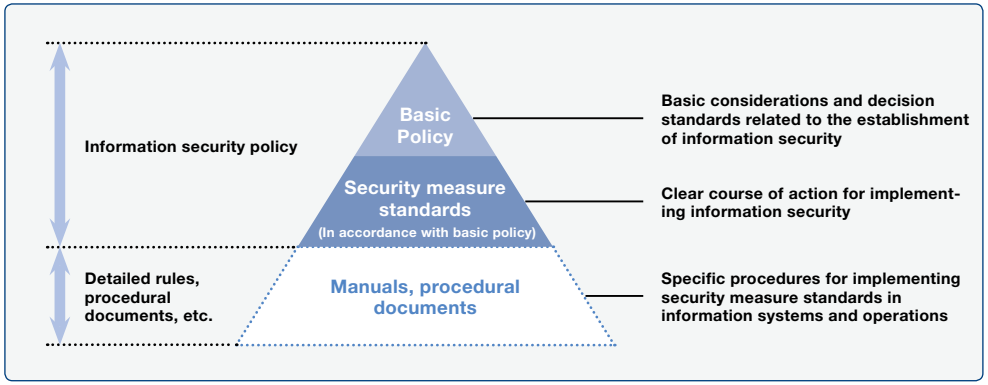
The NTT DATA Group recognizes the importance of achieving an appropriate balance between ensuring the safety of information and the active utilization and sharing of information. We implement a wide range of measures that cover both the logical and technological aspects of information security. Logical measures include formulating rules and providing education and training in information security, while technological measures involve solutions that prevent information leaks and the adoption of thin-client computing.

Our information security personnel come together in forums to facilitate Groupwide sharing of knowledge and know-how. Through this distribution of knowledge within the Group, we are working to establish unified information security governance.

NTT DATA Group's Unified Information Security Policy (GSP)

Information leaks stemming from security breaches and improper use of information have serious implications for the Group's credibility. We established the NTT DATA Group's Unified Information Security Policy (GSP) with the goal of achieving safe circulation of information throughout the entire Group. Based on this central policy, we are also formulating information security policies for each Group company. In addition, we established rules to prevent information security incidents at partner companies commissioned by NTT DATA to undertake operations, including software development.

Information Security Policy Configuration



In formulating our information security policies, we have established security measure standards that reflect our basic policies and indicate a clear course of action in accordance with our philosophy.

Furthermore, we have compiled the details of our security measure standard into manuals and procedural documents separate from our information security policy in order to enable their reliable application and performance in business operations.

Information Security Management System

In order to deal with information security risks and establish information security governance, NTT DATA has appointed executives who promote information security management from a Companywide point of view and has built an information security management system. The main organizations and their functions are listed below.

Main Organizations and Functions for Information Security Governance

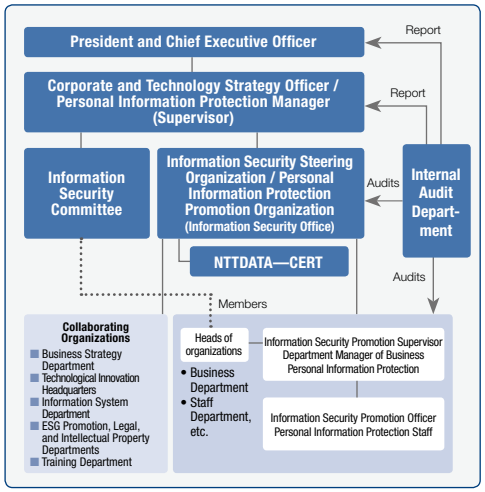
Organization	Functions
Information Security Committee (Assessment / Steering)	Chaired by the Corporate and Technology Strategy Officer and comprising managers of each segment, the committee is responsible for ascertaining and evaluating the status of activities and issues at all the companies and determining information security strategies for the Group.
Information Security Office (Promotion and monitoring)	Promotes the decisions of the Information Security Committee and confirms the status of progress. Designates information security promotion officers at each worksite.
NTTDATA-CERT (Backups)	Organization for preventing information security incidents*1 and responding to any incidents that might occur. Joined the Nippon CSIRT Association as well as the Forum of Incident Response and Security Teams (FIRST)*2, a global computer security incident response team (CSIRT) community to collect a wide range of information on security trends in Japan and overseas and utilize it toward improving the security of our own systems.

*1: Actualization of security threats related to information management and system operation, such as computer malware infection, unauthorized access, and information leakage
*2: A global community consisting of approximately 400 or more CSIRTs from government agencies, educational institutions, companies, and other organizations

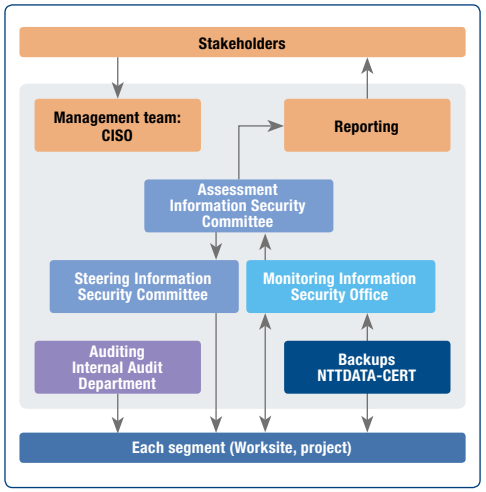
Furthermore, to reinforce information security on a global scale we operate a global security governance system centered on regional integrated companies that is similar to the system in place for business management. NTT DATA regularly reviews the information management conditions of each regional integrated company on a quarterly basis to maintain an understanding of management circumstances and provide support for maintaining and enhancing the level of control.

Since fiscal 2015, we have held workshops aimed at strengthening our initial response in the event of an incident.

Information Security Management System



Information Security Governance



Acquisition of Information Security Management Certification

At NTT DATA Group companies, each unit that handles confidential information and personal information acquires ISO/IEC 27001 certification—the international standard for information security management systems (ISMS)—as an organization, as necessary. As of March 31, 2018, 41 Group companies, including NTT DATA, have acquired this certification in Japan. Several overseas Group companies, for example in Europe, China, and India, have also obtained ISO/IEC 27001 certification.

In addition, 40 Group companies, including NTT DATA, have been granted the right to display the PrivacyMark of the Japan Institute for Promotion of Digital Economy and Community (JIPDEC).

Information Security Governance

Auditing and monitoring system

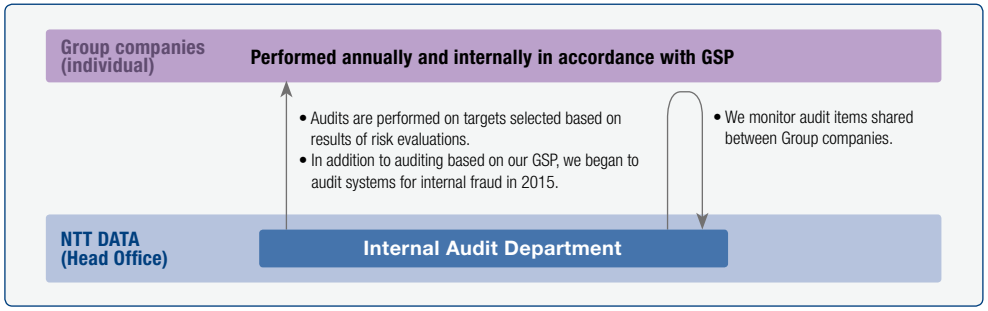
Since 2006, the NTT DATA Group has been diligently working to secure information security in accordance with its GSP. We are also establishing auditing and monitoring systems at domestic and overseas Group companies.

The Company has been pressing forward with initiatives related to security auditing while focusing on three points of view: thoroughness of basic operations, external fraud countermeasures, and response to internal fraud.

Moving forward, we will continue to pursue thoroughness of basic operations and pay particular attention to fraud response measures.

1. Thoroughness of basic operations	We verify the management statuses of internal organizations and systems that process personal information based on our GSP.
2. External fraud countermeasures	In order to respond to increasingly sophisticated and complicated cyberattacks, we check the statuses of system countermeasures at Group companies.
3. Response to internal fraud	We confirm the statuses of system response measures to ensure proper reaction to and prevention of internal fraud.

Internal Auditing System



Global Governance

Since fiscal 2012, the NTT DATA Group has been conducting business management centered on solutions at its overseas bases; North America (NDI), EMEA (EMEA), APAC (NDAP), China (NDCI), Business Solutions (itelligence), and everis (everis). In accordance with business management, we are reconstituting operational structures to ensure information security.

[Collaboration in Support of Global Security]

The information security governance structure comprises three levels of information security steering organizations located at the Head Office, regional integrated companies, and other companies on an individual basis to ensure thorough global information security governance.

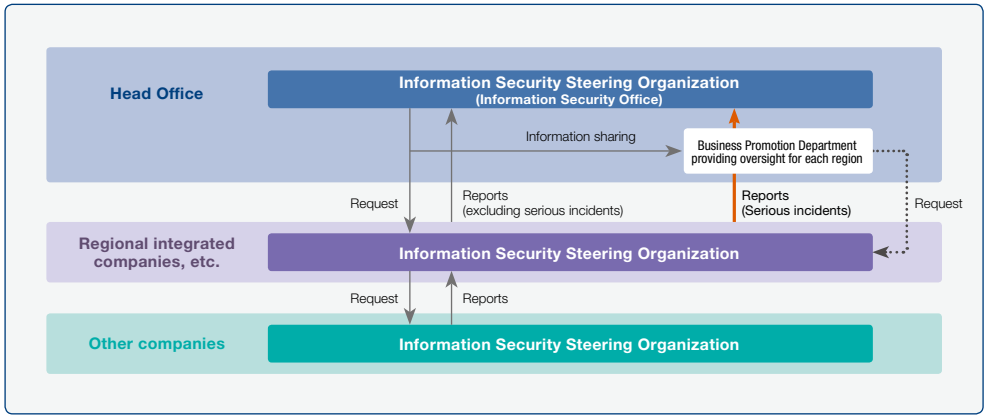
The information security steering organizations at each level cooperate closely to maintain and develop information security policies, monitor information security measures, respond to emergencies, and engage in preventive measure activities to prevent incidents.

[Incident Response Workshop]

In pursuit of stronger global governance, we are especially focused on enabling appropriate on-site incident response at the time of occurrence. We are conducting workshops in order to achieve this goal.

NTT DATA is conducting training based on its initial response guidelines at domestic and overseas Group companies worldwide. This training enables each member of staff to understand the goals of initial incident response and what he or she must do. These exercises also help enrich knowledge regarding the targets and methods of cyberattackers by providing examples of prior incidents that occurred within the NTT DATA Group.

Information Security Governance Structure



Information Security Strategies

Key Strategies in Fiscal 2017

Practicing and maintaining an appropriate balance between ensuring safety of information and actively utilizing and sharing information, both of which are objectives of the GSP, is essential if the NTT DATA Group is to continue to be a partner to customers that aids in their evolution.

In fiscal 2017, NTT DATA has made improving security governance a priority global management issue. We have engaged in initiatives to prepare our defenses against more sophisticated and complicated cyberattacks, including our “in-house IT platform for minimizing risks” and “CSIRT management within internal organizations.”

In-House IT Platform for Minimizing Risks

Disseminating and targeted e-mail cyberattacks are becoming a regular occurrence and are repeatedly causing harm to government agencies and private businesses. Many disseminating e-mail attacks use already-known vulnerabilities, so they can often be prevented through security patch management and other measures.

On the other hand, many of the more high-risk targeted e-mail cyberattacks exploit unknown vulnerabilities or do not take advantage of these weaknesses at all, making them more difficult to detect. For these reasons, early detection and response are important. The Company has intensified vulnerability checks on its main software programs and limited the extent to which unsecure terminals may utilize in-house networks. In addition, the Company is also taking measures such as malware detection using anti-malware software (entry measure) and blocking with URL filters (output measure).

Furthermore, we are building structures that allow for faster response to security incidents such as sophisticated attacks. These include security information and event management (SIEM) systems, which collect and observe various logs, and other mechanisms that enable quick preservation and analysis of evidence when machine damage occurs.

Security risk

Information leakage
Fake emails
Targeted e-mail attacks
Ransomware
Suspicious emails
⋮

Thin-client “BIZXAAS® Office” DaaS	Provides cloud services for employee PC environment, prevents information leaks from PC side, and realizes energy-efficient offices
Mobile Platform “MERMaides®”	Ensures safe business domains within mobile devices, offering strong protection of information by encrypting operational applications and data stored on devices
“NOSiDE®” quarantine system	A quarantine system that inspects devices that access the Internet and prevents information leaks on the Internet due to cyberattacks and malware targeting vulnerabilities
Information distribution infrastructure “ETRANPOT”	System for the secure forwarding of large files among NTT DATA, NTT DATA Group companies, and related clients

CSIRT management within internal organizations

The NTT DATA Group is managing NTTDATA-CERT as an organizational CSIRT to prevent the occurrence of security incidents through its day-to-day activities. NTTDATA-CERT works to detect incidents early and provide quick and appropriate emergency response.

2016 Information Security Report

https://www.nttdata.com/global/en/-/media/nttdataglobal/files/sustainability/sus001_home/sus001_information_security_report_2016.pdf

[Activities in Preparation for New Security Risks]

We established NTTDATA-CERT in July 2010, after collecting the CSIRT activities that had been implemented internally in each business segment since 2000. NTTDATA-CERT's primary activities include wide-ranging gathering, analysis and communication of information related to the newest attack methods and incident occurrences, communication monitoring, emergency response, research and development, and collaboration with external organizations. We are working to bolster our ability to respond to the most current risks as cyberattack targets and methods change with each year.

[Collaborative and Wide-Ranging Domestic and International Activities]

The scope of NTTDATA-CERT's activities extends beyond the limits of the NTT DATA Group. The team is widely collaborating with external security organizations, including the JPCERT Coordination Center (JPCERT/CC) and CSIRT teams from all member companies of the Nippon CSIRT Association (NCA).

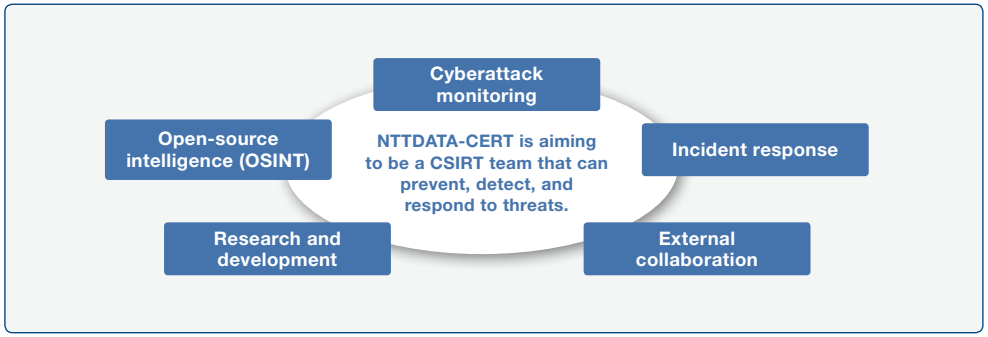
With these efforts, we are quickly sharing security-related information and enabling early detection and response to security concerns.

[Activities Utilizing OSINT]

We adopt an open-source intelligence (OSINT) approach when operating NTTDATA-CERT, which involves actively utilizing information obtained lawfully through mediums including official government announcements and mass media, such as reporting, academic articles, and technical data. Information collected daily is analyzed by NTTDATA-CERT's experts, who then predict future security trends and distribute their findings to all companies in the NTT DATA Group through quarterly reports and security-related news briefings.

Additionally, the NTT DATA Group uses this information in its security strategies and countermeasures, including cyberattack monitoring intensification and the selection of new research and development themes for the next fiscal year.

NTTDATA-CERT's Vision



Information Security Education and Training

Initiatives Aimed at Spreading Understanding among Employees and Others

The NTT DATA Group provides information security education for employees, business partners, and temporary workers. We have delivered this education and training via e-learning and classroom instruction to promote understanding of the Group's policy on the protection of personal information, the rules contained in the GSP, and the need to be constantly aware of the importance of information security in one's work.

In fiscal 2017, we continued implementing a broad range of measures with the primary aim of ensuring that every employee is aware of the basic actions required to maintain information security.

Information Security Training Offered in Fiscal 2017

Target	Content and Format	Participation	
All employees	Information Security and Personal Information Protection Training (e-learning; in three languages)	Target	100% employee completion (11,506 people)
		Achieved	100% employee completion (11,506 people)
By position	Information security lectures (Classroom instruction)	Incorporated in position-based training conducted by the Human Resource Department	
Business partners and temporary staff	Personal Information Protection Introduction Training / Information security education (e-learning)	Target	100% of all parties registered on our company system (27,685 people)
		Achieved	100% of all parties registered on our company system (27,685 people)
	Information Security Training Handbook	Booklets available to new business partners and temporary staff via download	

Information Security Training at Key Group Companies in Fiscal 2017

Target	Implementation Format	Participation
Group company employees, business partners, and temporary staff	GSP security training and personal information protection training (e-learning; in three languages)	Domestic Group companies 66 companies, 27,901 employees Overseas Group companies 26 companies, 4,176 employees
Group company security information security	Internal GSP auditor training (Offline studying at individual workstations)	Domestic and overseas Group companies 79 companies

Security Training for the Sales, Development, and Operation Phases

The NTT Group promotes security personnel training at domestic Group companies. The NTT DATA Group is also engaged in further enhancing the quality of security personnel, focused on the SI business. Additionally, in fiscal 2016 NTT DATA began planning and developing its own original training measures aimed at instilling the latest security knowledge and practical skills necessary for sales, development, and operation phases. In fiscal 2017, we developed and expanded the scope of these measures to include domestic NTT DATA Group companies. More than 1,200 employees participated in training in fiscal 2017.

In the future, we will continue to make efforts to develop personnel with a high degree of security knowledge and allocate them to key sales, development, and operational positions, thereby raising security levels for the entire NTT DATA Group.

Response to Security Incidents Involving the Leakage of Personal Information

NTT DATA maintains personal, confidential, and business information. When this information leaks, it poses the threat of damaging our social credibility and brand image. Leaks may also have negative impacts on the Group's operating results and financial conditions through, for example, payments for damages. We are engaging in the following initiatives aimed at predicting and alleviating these security risks:

Management system	We established a system led by the Corporate and Technology Strategy Officer, in which the Information Security Committee comprehensively evaluates activities conducted during the fiscal year under review.
Auditing and monitoring system	The Company established a governance monitoring system that covers domestic and international Group companies and operates from three points of view: thoroughness of basic operations, external fraud countermeasures, and response to internal fraud.
Incident response	We are operating an organizational CSIRT that works to detect incidents early on and provide quick and appropriate emergency response.
Human resource development	The Company is strengthening both e-learning and classroom-based training to develop human resources well-versed in security.

In January 2018, we confirmed that our in-house terminals were infected by ransomware* called "WannaCry." We formed a response team, led by NTTDATA-CERT, that identified the extent of damage caused by the virus and worked to destroy it. We later confirmed that the virus was completely removed from our internal networks.

Additionally, we worked to strengthen the security of our in-house IT platform and prevent similar occurrences of damage by enhancing terminal security settings and establishing a mechanism for continuous monitoring of the virus's behavioral characteristics as it spread.

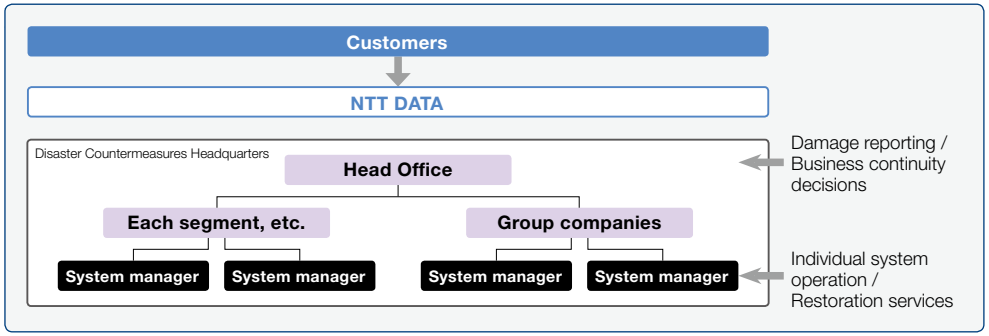
Moving forward, we will work on raising the sophistication of our response measures in preparation for the appearance of new threats, utilizing IT to increase our capacity for preventing infections and detecting risks early on, shortening response times, and minimizing overall damage.

* A type of computer virus

Disaster and System Failure Countermeasures

The NTT DATA Group provides many information systems and services that support social infrastructure. As a result, a system shutdown or interruption of services in the event of a disaster would have an enormous impact on society and people's lives. Therefore, we strive to constantly improve our disaster BCP as well as contingency plans for systems and services related to social infrastructure. Since the Great East Japan Earthquake, we have particularly sought opportunities where we can apply the lessons we learned from this difficult experience.

Structure for Responding to Earthquakes and Other Large-Scale Natural Disasters



Plans and Systems Responsive to Disaster-Related Risks

As in the case with the Great East Japan Earthquake, we face the risk of disasters of greater scale and diversity, which further raises the importance of plans and systems for response.

In addition to establishing a BCP in the event of a disaster and a contingency plan, NTT DATA is conducting drills to ensure that it swiftly responds for the continuation of its business after a disaster.

We hold Companywide drills for all employees, including drills for confirming personal safety and setting up the Disaster Countermeasures Headquarters at the Head Office. Furthermore, each organization conducts separate drills that reflect the nature of their respective operations in an effort to minimize disaster risks.

Protecting our buildings, electrical systems, air conditioners, security, and various functions of our data centers is vital for the operation of information systems. For this reason, we have obtained certification for ISO 22301:2012, an international standard for business continuity management, at all Group-owned buildings and have established a system able to respond in the event of a large earthquake, widespread power outage, or similar incidents.

* As of March 31, 2018

System Failure Countermeasures Focusing on Prevention and Response

Information systems have developed to the point where they have become infrastructure that supports people's daily lives and industry, so if there were some sort of system failure it could have an enormous impact on everyday tasks and business.

As an IT company that operates many large-scale systems that support society, the NTT DATA Group is advancing extensive system failure response measures based on the dual perspectives of prevention and response. These measures include inspections based on a comprehensive perspective in line with the Information Technology Infrastructure Library (ITIL), ISO 20000, and other standards, deployment of response know-how at the time of a failure, and development of IT service managers.

To ensure NTT DATA and NTT DATA Group business continuity when a disaster occurs, we formulated a BCP and regularly review education, training, and business continuity planning as each organization must be able to recover operations as quickly as possible and restore business to standard levels in a short period of time.

Meanwhile, the NTT DATA Group will continue overhauling and reinforcing measures for dealing with failures caused by security breaches, which have become a growing social problem in recent years.

Human Resource Development Targeting Stable System Management

NTT DATA's Quality Assurance Department is promoting IT-SM community activities as one of its human resource development policies. These activities are aimed at stabilizing system management and maintenance through the development of related personnel.

Our IT-SM community activities include IT service management improvement training, which involves learning through examples of system failure response and prevention, and IT-SM community seminars, which provide a venue for sharing and announcing these examples. Additionally, we are providing support through our IT-SM training (mentoring) school for IT service managers. At this school, two executive IT service managers serve as mentors, passing on skills and expertise, providing psychological support (discussion of concerns), and helping out with personal network building (vertical relationships between IT service managers).

Furthermore, we are supporting and developing personnel involved in system management and maintenance in a variety of ways. We determine standard inspection items that allow for active, on-site participation and stable system management. The portal site we established offers a stable management expertise list containing information related to IT-SM and stable management policies. We also provide a collection of case examples for failure recovery drills and a system development guide with a focus on services aimed at putting a stop to poorly managed manufacturing during the development phase.

Tax Strategy

The NTT DATA Group has established tax policies for ensuring compliance with tax-related laws and regulations throughout the Group, including overseas Group companies.

Tax Policy

We established our basic policy on tax affairs in view of the growing importance of adopting a global perspective on properly addressing and managing tax risks posed by the increasingly multinational nature of our Group companies, which include regional integrated companies, and the increase in international transactions brought about by the rapid globalization of our business.

Tax Payments and Reporting

The NTT DATA Group pays appropriate taxes related to business operations in accordance with tax-related laws and the regulations of each country and region. In fiscal 2017, corporate taxes amounted to ¥38,716 million, a tax burden of 38.68% on pretax profit.

Raising the Awareness of NTT DATA Group Employees

We have established internal regulations and provide guidance on appropriate tax treatment to employees with respect to tax affairs. The NTT DATA Group (consolidated subsidiaries) has established basic guidelines on taxation and strives to thoroughly observe laws and regulations and reduce tax risks through employee education, guidance, and operational improvements.

Relationship with Tax Authorities

We have established relationships of trust with tax authorities by providing appropriate and timely information and consulting on accounting procedures. In the event that issues are discovered by tax authorities, we immediately work to determine their causes, except in cases that involve litigation or formal protests made regarding the actions or viewpoints of the same authorities. We then prevent recurrences by adopting appropriate corrective and reform measures.

Brand Management

The strength of a corporate brand has major significance for business management. To develop its global business, the NTT DATA Group is conducting PR activities and surveys to attain appropriate recognition for its corporate brand.

Policy on Branding Activities

In view of our business history, we have formulated separate policies for corporate branding activities in Japan and overseas.

1. Overseas (Global Market)

Given that NTT DATA's recognition rate is still low, we will develop activities to promote the Company name and business activities with the aim of improving awareness.

2. Japan (Domestic Market)

We will further enhance understanding and affinity for NTT DATA and aim to enhance corporate value and improve our brand image by co-creating with customers through our latest technologies.

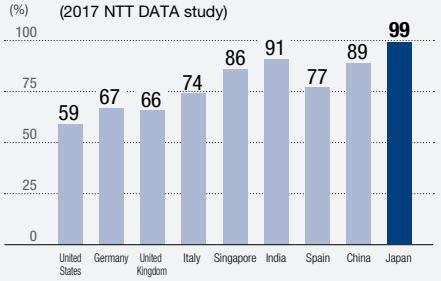
NTT DATA Brand Awareness Surveys

We conduct brand awareness surveys, including comparisons with competitors, in six key countries to monitor the state of awareness, understanding of business, and image cultivation with regard to NTT DATA.

These brand awareness surveys are conducted in countries that serve as the base of the four global regions in which we have integrated companies. The surveys take into account the characteristics of each market and provide important basic information for developing our business activities.

In conducting the surveys, we also monitor the gap between NTT DATA and local competitors to more effectively apply the results to business development. From the standpoint of corporate management, our criteria for brand measurement include market share, customer loyalty, stakeholder recognition, and reputation.

Brand Awareness from People Involved with IT from Countries with Major Markets*



* Percentage of people involved with IT who indicated, through survey responses, that they had seen or heard NTT DATA's company name before

Cases of Advertising or Marketing Offenses

NTT DATA was not involved in any offenses related to the Act against Unjustifiable Premiums and Misleading Representations in fiscal 2017.

Awareness and Permeation of CSR at the NTT Group

The NTT Group has been convening the NTT Group CSR Conference, which the NTT DATA Group participates in every year, since fiscal 2013 to raise employee awareness of CSR and encourage them to think about the future of CSR and social contribution by sharing superior CSR initiatives across the Group.

At the fifth conference, held in fiscal 2017, in addition to announcing superior CSR initiatives and social contribution ideas we invited Dai-ichi Life Holdings, Inc., a leading CSR company, to participate in panel discussions concerning CSR initiatives.

Representing the NTT DATA Group, everis presented its Digital Hub Construction Initiative as a superior CSR measure. More than 200 employees, including directors from each NTT Group company and the CSR administrator from NTT DATA Services, participated on the day of the conference. Participants actively exchanged opinions regarding each initiative, contributing to a conference that further raised CSR awareness.

everis' presentation

Panel discussion

Conference hall

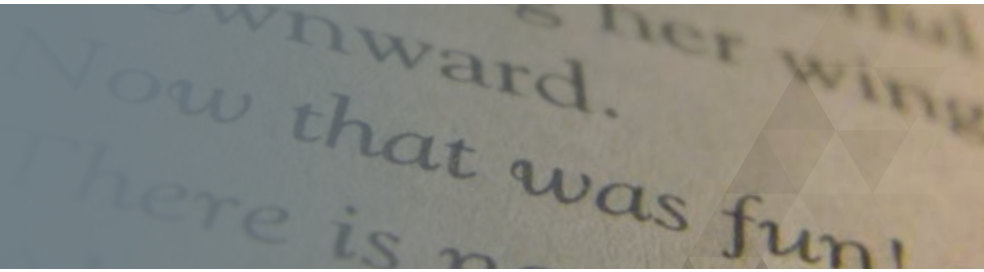
Digital Hub Construction Initiative

In 2008, everis built a digital hub in the city of Temuco, in southern Chile. With this construction project, everis has employed roughly 350 people including regional university graduates, contributing to both job creation and improvements in the wage gap.

The project also contributed to social inclusion, as about 30% of those employed were Mapuches, members of an indigenous tribe in Chile. In recognition of its achievements, the Chilean Association of Information Technology Companies (ACTI) granted this initiative the 2016 Award for Most Valuable Societal ICT Initiative. Over the next four years, we plan to create 900 more jobs and continue to help strengthen human resource development in the region.

GRI Standards

GRI Sustainability Reporting Standards Index



Universal Standards

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The information shown here is provided in reference to categories in the GRI Standards; it is not disclosed in conformance with the GRI Standards.