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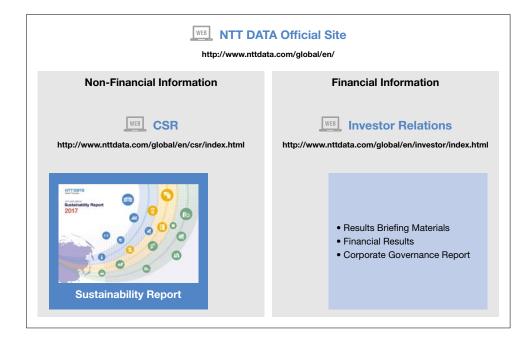
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# **Editorial Policy**

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 2017, we strive to more fully disclose easily understandable information, including material CSR issues for the NTT DATA Group, included as "topics," related to the Sustainable Development Goals (SDGs) adopted by the United Nations. We also improved readability with the addition of functions enabling easy access to information related to these initiatives. 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

http://www.nttdata.com/global/en/about/corporate/group/index.html

# Period of coverage

This report mainly covers initiatives undertaken in fiscal 2016 (April 1, 2016 to March 31, 2017). Details of certain activities that were conducted prior to fiscal 2017 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 2017 (Sustainability Report 2016 was published in October 2016; Sustainability Report 2018 is scheduled for publication in October 2018)

#### 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.

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http://www.nttdata.com/global/en/

# **Elevating Our Brand to be a Recognized Global Brand by Increasing Our Local Presence**



Tirelessly striving to elevate our brand globally by enhancing our local presence through business growth in each country and area

# Looking Back on Fiscal 2016 and Our Initiatives under the Medium-Term Management Plan

A moderate recovery has taken shape in the Japanese IT services market, supported by accelerated IT spending on the client side to enhance touchpoints with their end-users and to increase new services. At the same time, we continue to see ongoing demand to reduce costs of operation and maintenance as well as intensified price competition. On the international front, although a mild growth trajectory is projected, closer attention is required to the impact on IT investment in the face of growing uncertainty in the global economy. Against this backdrop, NTT DATA has built a business foundation by driving its business growth and coverage globally. In fiscal 2016, new orders received, net sales, and operating income outperformed the previous fiscal year, and our overseas sales ratio reached 34.8%. Consequently, our local presence increased in eight countries, including the United States, Germany, Italy, and China.

Based on our core strategies—"Game-Changing Approach" and "Breakthrough Technology"—we continually endeavor to create totally new value to contribute to clients' businesses by connecting the wealth of their ideas with cutting-edge technologies through which we can demonstrate our strength.



# Growing Sustainably as a Global IT Innovator

NTT DATA has engaged in activities in line with priority CSR subjects based on Our Way, while working on establishing a foundation for CSR-oriented business management such as corporate governance to meet the expectations of the global community. In fiscal 2016, the NTT Group announced its commitment to the United Nation's Sustainable Development Goals (SDGs), and we will enhance our efforts through business activities to contribute to addressing global societal issues. Following on from the previous fiscal year, we will continue to concentrate on three aspects: building stronger corporate governance, promoting diversity, and sharing the Group Vision.

As for the first aspect, of building stronger corporate governance, evaluation on the effectiveness of the Board of Directors was conducted in order to further enhance its function and corporate value. The evaluation results were broadly positive on the Board's composition and how it is operated, indicating the Board's overall effectiveness.

As to the second focus, on diversity, concrete progress has been made to create a structure to secure sustainability. For instance, concerning our efforts in reducing total work hours, an ongoing challenge faced by the IT industry, we are aiming to reduce total annual work hours to an average of 1,890 hours or less per employee by the end of fiscal 2018. To this end, we are encouraging colleagues to work flexibly through telecommuting regardless of their work locations and work hours and by providing secure environments to access internal servers while working outside the office. We also believe that advances in innovating production technology could further accelerate work style reform.

As to our third area, of sharing the Group Vision, Values Week has taken place every May since 2014 in order to provide an opportunity for all colleagues to discuss the Mission Statement, the Group Vision, and the three Values. In 2017, we will continue to make efforts in sharing our values with approximately 110,000 colleagues, including members of overseas Group companies that have newly joined our group.

# **Creating New Value through Innovation**

Our mission, I believe, is to think hard what we can do to help our clients as their veritable business partner, so that we can keep fulfilling growing needs of clients who face an environment undergoing dramatic change. Creating new value and contributing to solving issues in society through such efforts is the NTT DATA Group's business and social responsibility. In fiscal 2016, we contributed to addressing global-level challenges in the environment and disaster prevention fields with the AW3D® Global High-Resolution 3D Map, the world's most precise 3D map using satellite images that cover all land areas across the globe.

Also, NTT DATA and its subsidiary, the everis Group, are promoting an initiative to commercialize and offer ehCOS Smart ICU globally. This medical data analytics solution using artificial intelligence (Al) is expected to help prevent complications in initiative care units (ICUs) at healthcare sites.

Furthermore, since 2014 we have been promoting the Global Innovation Business Contest as a program to help people around the world to create solutions to societal problems regardless of national boundaries with advanced technologies and new business models. In 2016, over 400 proposals for innovation were submitted by start-ups around the world. Social Coin, which presented a proposal to help solve societal issues, was selected as the winner. Consideration is currently underway to turn this idea into a practical business application.

We continue to pursue value that can be realized only by NTT DATA through long-term relationships with stakeholders around the world, while collaborating with clients across the globe to use IT to address societal issues and make society sustainable and affluent.

# **Company Data**

# Basic Data Business Domain (As of March 31, 2017)

Company Name (Trade Name)

Head Office

Telephone

Date of Establishment

Common Stock

Fiscal Year

Independent Auditors

B to B

IT Service

NTT DATA Corporation (NTT DATA)

Toyosu Center Bldg., 3-3, Toyosu 3-chome, Koto-ku, Tokyo

135-6033, Japan

+81-3-5546-8202 (Main switchboard)

May 23, 1988 ¥142,520 million

April 1 to March 31 of the following year

KPMG AZSA LLC

NTT Group - One of the world's largest ICT companies

**NTT Group** 

Total Assets

¥21,250.3 billion

¥11,391.0 billion

Number of Employees

Consolidated Subsidiaries

247,850 (consolidated)

944

**NTT DATA Group** 

Total Assets

Net Sales

¥2,234.8 billion

¥1.732.4 billion

Number of Employees

111,664 (consolidated)

Financial Segment

¥518.0 billion

¥455.4 billion

Operating Income

¥44.1 billion

Operating Income

¥42.3 billion

Business that provides high-value-added IT services that support financial institutions to improve their business efficiency and offer good services.

Business that provides high-value-added IT services that play import-

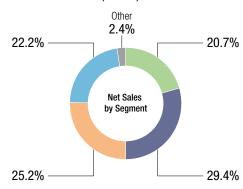
ant roles in social infrastructure, such as government, medical, com-

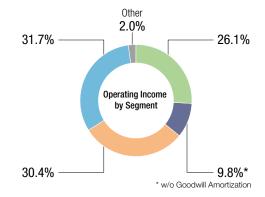
munication, and utility systems as well as in regional development.

# **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 (FY2016)





**Public & Social** 

Enterprise & Solutions

¥425.6 billion

Operating Income

¥36.3 billion

Business that provides high-value-added IT services that support manufacturers, distributors, and service providers as well as payment services such as credit cards and platform solutions services, provided in collaboration with other IT services.



¥603.3 billion

Operating Income
(Before Amortization of Goodwill)

¥13.6 billion

Global business that provides high-value-added IT services offered in each region and across regions.

Consolidated Subsidiaries

302

# A Growing Range of Business Fields

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



#### **Public Sector**

Big Data and cloud computing to support local communities



# Manufacturing

Greater efficiency for manufacturing process systems



#### **Healthcare and Life Sciences**

Activating databases for improved healthcare services



#### Automotive

Technologies and system driving the automotive industry



# **Banking and Financial Services**

Reliable and advanced systems are the foundation of client trust



# **Electronics and High Tech**

Optimizing technical development, manufacturing, and management operations



#### Insurance

Expertise and creativity for leading insurance management systems



# **Transportation and Logistics**

Improving organizations and processes to take transportation and logistics forward



### **Telecommunications**

Communications to create new opportunities and client connections



# Wholesale and Distribution

Services to support wholesale business evolution



## **Media and Entertainment**

IT solutions for new media business creation



## Retail

Improving efficiency and stimulating online sales



#### Education

Technology for new learning environments



#### **Service Providers**

Capturing opportunities in the rapidly changing service industry



#### **Energy and Utilities**

Generating dynamic environments while maintaining competitive advantage



# **Fundamental Technologies**

Cloud computing to transform data into a powerful business resource



# **Natural Resources**

Supply chain expertise to conquer new challenges

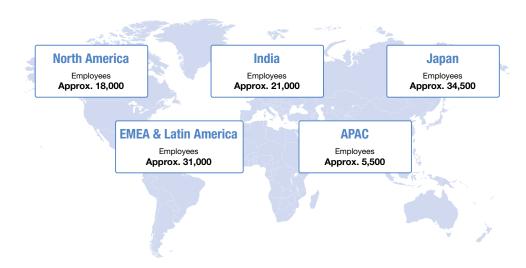


# **Consumer Products**

Online and mobile innovations for products development

# Increasing Geographic Coverage (As of March 31, 2017)

The NTT DATA Group, comprising an organization that encompasses 210 cities in 51 countries and regions and some 110,000 people, is reinforcing its ability to provide support for global companies.



51
countries and regions

210



# NTT DATA: ASCEND Rise and grow our global brand

# ■ Medium-Term Management Plan Overview

During the previous Medium-Term Management Plan, the Group established the Global 1st Stage and achieved expanded global coverage, but our ranking in many regions around the globe remained low. To be recognized by multinational corporations as a business partner, we must be within the top rank in net sales in the IT services industry of each country and region. Under the current Medium-Term Management Plan (fiscal 2016-2018), we are enhancing our local presence and targeting consolidated net sales of over ¥2 trillion and a 50% or higher increase in adjusted operating income (compared to fiscal 2015). We are executing the global strategies of "Game-Changing Approach" and "Breakthrough Technology."

 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 have never operated in the past.

# NTT DATA: ASCEND

Rise and grow our global brand

FY2016-FY2018

NTT Data FY2018 Financial Objectives

**Net Sales** 

Operating Income

Over ¥ 2 trillion

50% or higher\*

\* Compared to FY2015 (After adjustment for incremental investments in new fields)

# **Game-Changing Approach**

# **Outside Japan**

**Grow Revenue and Profitability** 

- 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

# Quickly and flexibly provide services and systems comprising the core of client competitiveness through production technology innovations

 Create new mechanisms and businesses with clients utilizing cutting-edge technologies by enhancing technological capabilities in the digital domain and engaging in business alliances with other companies that possess strong technological capabilities

# **Sound Financial Ground**

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

# **Breakthrough Technology**

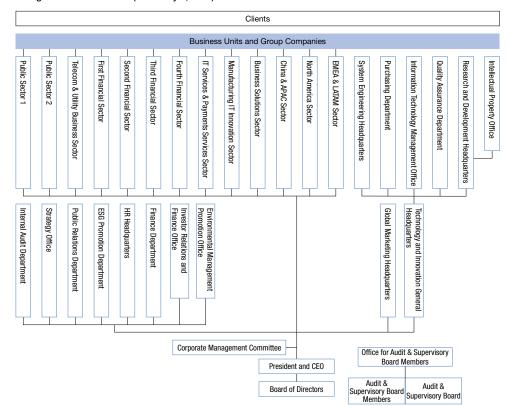
# **Organizational Structure**

Having established the Global 3<sup>rd</sup> 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.

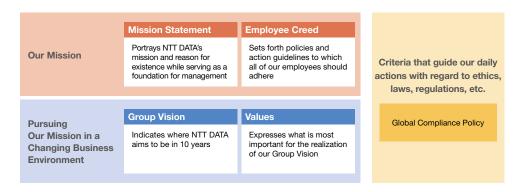
We also established the China & APAC Sector Division to operate an organization with four domains by linking the three existing domestic domains (Public & Social Infrastructure, Financial, and Enterprise & Solutions) to the newly added China & APAC region business.

# Organizational Structure (As of July 1, 2017)



# **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

In 2005, in response to accelerating globalization, NTT DATA instituted a new Group Vision, which we termed Global IT Innovator. With IT at the core of our business, we aimed to comprehensively expand our operations to markets around the world. Our vision embraced two beliefs: "we could change IT to make it better" and "through IT we could change the world." As a leading innovator in the field of IT, we set out to enable our clients to achieve their highest goals and aspirations.

Our Group Vision contains three messages: (1) we build long-term relationships with our clients and enable them to reach their highest goals and aspirations; (2) we create evolving ecosystems through advanced technology; and (3) we enhance our creativity through the respect and encouragement of diversity at every level of our company.

In 2017, NTT DATA expanded to over 110,000 employees and the Company itself continues to grow. We will further advance the classification of Global IT Innovator while taking on even more challenges and opportunities for greater progress.

# **Global IT 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 materialize more affluent and harmonious societies, and we aim to resolve the issues that the earth and societies are 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 corporate social responsibility, 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 conducts, 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 Government ]

### 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 businesses.
- 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:

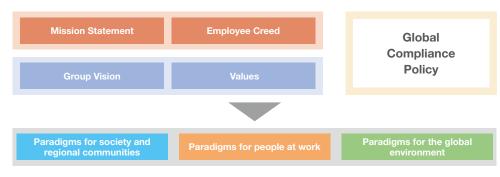
- Ensure that information security be maintained and not conduct any privacy infringement, unauthorized access, and other unlawful acts.
- Observe the Company policies and not engage in any act that conflicts with the interests of the Company or that provides personal gain to the detriment of the Company.
- 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 your 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 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.

# **Our Way**



# **CSR Management**

# ■ System for Promoting CSR

NTT DATA manages its CSR activities under the leadership of the director and executive vice president. 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 social 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 Sustainability Reporting Standards.

## Material CSR Issues of the NTT DATA Group

Society and regional communities			CSR infrastructure	
Contribute to the realization of a fair society	<ul> <li>Realize diversity in hiring and promotion</li> </ul>	Conservation of biodiversity (response to climate change)	Broadly establish safe and secure IT infrastructure	
Develop IT human resources	Eliminate illegal labor practices (child labor, forced labor, extended work hours)		Innovate advanced IT technologies	
	extended work nours)		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.
- We annually publish a report on our material issues and related initiatives. Also, we gather feed-back from our stakeholders through surveys, external reviews, and other means to improve our activities in the upcoming fiscal year.

# Materiality Analysis

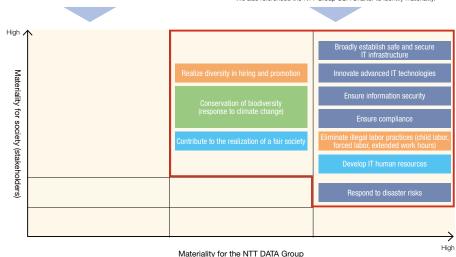
#### Identifying materiality for society

- 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**

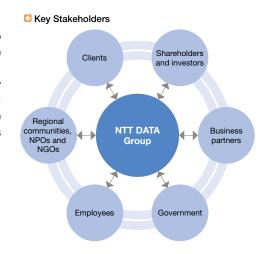
 Conduct an employee survey on the Sustainability Report
 Conduct the Employee Satisfaction Survey, Customer Satisfaction Survey, etc.

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 social issues.



Society and Regional Communities People at Work Global Environment CSR Infrastructure

# Overview of Stakeholder Engagement

	Stakeholders	Related Material CSR Issues	Main Approach
Clients	<ul> <li>All our clients, including corporations, that use services provided by the NTT DATA Group</li> </ul>	Broadly establish safe and secure IT infrastructure     Innovate advanced IT technologies     Ensure information security	Regular sales and proposal activities     Client satisfaction surveys (question-naires, interviews)
Shareholders and Investors	<ul> <li>Shareholders and creditors of the NTT DATA Group, and individual and institutional investors</li> </ul>	Respond to disaster risks     Ensure compliance	Annual Meeting of Shareholders     Annual reports     Investor relations website     Financial results briefings     Shareholder newsletters
Government	Central and local governments overseeing policies on the IT service industry, employment, the economy, and the environment      Broadly establish safi IT infrastructure     Innovate advanced IT ensure information seems information seems environment      Broadly establish safi IT infrastructure     Innovate advanced IT ensure compliance     Ensure compliance     Realize diversity in his 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 not-for-profit organization involved with NTT DATA Group companies through our core businesses	Contribute to the realization of a fair society     Develop IT human resources     Broadly establish 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	<ul> <li>Business partners that cooperate in providing NTT DATA Group services</li> </ul>	Ensure compliance	Regular business activities     Business Partner (BP) Presidents'     Meetings     Discussion meetings     Technological briefing sessions
Employees	<ul> <li>Employees of the NTT DATA Group and their families</li> </ul>	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 social networking service)     Helpline     Counseling

# [ Advisory Board Established to Incorporate Opinions and Proposals into Business Activities ]

In August 2016, NTT DATA 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 social issues, and we incorporate their opinions and proposals into business activities.

In fiscal 2016, the discussion mainly focused on our branding in the global market and on how to deal with future changes driven by our branding and technological advancements in global markets.

• Term	From October 2017 to September 2018 (tentative)	
Frequency of meetings:	Twice a year	
Advisory Board Members (as of September 2017)	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, Chairman of the Board, Yokogawa Electric Corporation Hirohide Yamaguchi, Chairman of the Advisory Board, Nikko Research Institute, Inc.	

# Response to the SDGs

At the United Nations Sustainable Development Summit in September 2015, the Sustainable Development Goals (SDGs) were adopted by unanimous decision of the 193 member nations. The SDGs is a set of 17 goals and 169 targets to be resolved on a global scale by 2030. Governments around the world are in agreement on these goals. Companies in all industries are positioned as important partners in attaining the SDGs and are being called on to engage in proactive activities to address the SDGs.

The IT services the NTT DATA Group provides, along with its CSR activities, are connected with many of the 17 goals outlined in the SDGs. Through our activities, we are contributing to the achievement of the SDGs.





(b)



8 DECENT WORK AND





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# Relationship between Our Material CSR Challenges and the SDGs

At the NTT DATA Group, we practice Our Way, the guiding principles of our CSR activities, by pursuing our Material CSR Challenges of developing paradigms for social and regional communities, people at work, and the global environment. Along with undertaking Material CSR Issues, we strive to create an infrastructure for CSR management, such as corporate governance, to meet the expectations of the global community.

In addition, we provide a variety of IT services and solutions and pursue CSR activities related to the SDGs. In particular, we contribute to the attainment of the SDGs by conducting business activities in accordance with our three Material CSR Challenges and Material CSR Issues.

# Material CSR Challenges

## Principal SDGs

# Paradigms for society and regional communities

- Contributing to society at large through highly reliable, easy-to-use systems and solutions
- Contributing to solving the problems that face the regions and countries in which the NTT DATA Group operates







# Paradigms for people at work

- Promoting work style innovations for the IT industry as a whole
- Striving to cultivate next-generation personnel, while respecting the diversity of human resources







# Paradigms for the global environment

- Contributing to the greening of customers and society as a whole through IT
- Contributing to solving environmental problems, including in the NTT DATA Group's activities







# **CSR Infrastructure**

- · Ensuring ethical behavior by adhering strictly to all statutory and regulatory requirements
- Continuing to build a robust foundation for CSR management that responds to the expectations of the global community







# **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 social issues and engage in discussions.

- Japan Data Communications Association (Member Company)
- Japan Electronic Payment Promotion Organization (Chair)
- KEIDANREN (Japan Business Federation)
- The Telecommunications Association
- Keizai Doyukai (Japan Association of Corporate Executives)

# **Third-Party Evaluations**

NTT DATA's CSR initiatives have been highly rated by a number of domestic and overseas research agencies (as of September 2017).

# Dow Jones Sustainability World Index / 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.











# Awards for the AW3D® Global Digital 3D Map Distribution Service

# Receipt of the Prime Minister's Award in the Second Space Development and Application Award

In March 2016, the service won the Cabinet Office Second Space Development and Application Award in recognition of its major support—the acceleration of the trend toward sophisticated and efficient social infrastructures including those of industries and administration around the globe—in contributing to the spread and promotion of Japanese space development and application.



http://www8.cao.go.jp/space/prize/prize.html (in Japanese only)

# Receipt of the Nikkei Business Daily Awards for Superiority at the 2016 Nikkei Superior Products and Services Awards

In January 2017, the service won an award at Nikkei Inc.'s 2016 Nikkei Superior Products and Services Awards. For this award, products and services are selected for technological and developmental capabilities, price effectiveness, the degree of contribution to the company's achievements, growth capabilities, originality, and the impacts on industries and society, with awards received by around 40 of the most outstanding out of some 20,000 new products and services.



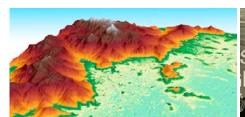
https://www.nikkei.com/edit/news/special/newpro/2016/ (in Japanese only)

# Receipt of the Asia Geospatial Technology Innovation Awards 2017

In August 2017, the service won this award, held by 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/







Award ceremony for the Asia Geospatial Technology Innovation Awards 2017

# Awards for the Active Participation of Diverse Human Resources

# Selected as One of the Top 100 Telework Pioneers

In November 2016, NTT DATA was selected as one of the Top 100 Telework Pioneers by the Ministry of Internal Affairs and Communications. For this award, 42 companies and other organizations were selected for their proactive initiatives in promoting the introduction and use of teleworking, as well as their implementation rate.





http://www.soumu.go.jp/menu\_news/s-news/01ryutsu02\_02000151.html (in Japanese only)

# Receipt of the Good Career Company Awards 2016 Grand Prize (Prize from the Minister of Health, Labour and Welfare)

In December 2016, we received the Grand Prize from the Minister of Health, Labour and Welfare in the Good Career Company Awards 2016, sponsored by the ministry. We were one of five companies selected for supporting self-directed career development among employees, following up on employees' long-term career development, as well as demonstrating outstanding results from comprehensive and ongoing promotion through specific other activities.



http://www.mhlw.go.jp/stf/seisakunitsuite/bunya/c\_award.html (in Japanese only)

# Selected as a Semi-Nadeshiko Brand

In March 2017, the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange jointly selected "Nade-shiko Brands"—companies that are outstanding in terms of encouraging the empowerment of women in the work-place—evaluating them on the basis of their management ability to utilize diverse human resources and ability to respond to environmental change. For fiscal 2016, NTT DATA was selected as a "Semi-Nadeshiko Brand," a newly established category.



http://www.meti.go.jp/press/2016/03/20170323005/20170323005.html (in Japanese only)

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

In September 2017, companies were certified as "Eruboshi" companies, based on the Act on the 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 its excellence in initiatives to promote the active involvement of women.





http://www.mhlw.go.jp/stf/houdou/0000123991.html (in Japanese only)

# Receipt of Gold in the PRIDE Index 2017

In October 2017, NTT DATA received a Gold in the PRIDE Index 2017. This index was formulated by private organization work with Pride, 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 for the organization's assessment of the Company's efforts to cultivate a workplace amenable to sexual minorities.





http://www.workwithpride.jp/pride.html (in Japanese only)

# Awards Received in Relation to IT Services

# Ranked Fifth in the IDC Financial Insights FinTech Rankings Top 100

In September 2016, NTT DATA ranked fifth in a ranking of finance-related IT services companies by U.S. research company IDC Financial Insights in broad recognition of the Company's track record in providing financial IT services at the global level.





https://www.idc.com/prodserv/insights/#financial-fintech rankings

# Ranked Sixth in the FinTech Forward Top 100 Companies

In October 2016, NTT DATA was ranked as number six on the FinTech Forward Top 100 Companies. Compiled each autumn by U.S. financial trade media American Banker and Bank Technology News, this ranking of finance-affiliated IT services firms recognizes companies with a track record of providing specialized and diverse financial IT services.



https://www.americanbanker.com/fintech-forward

# NTT DATA's "ANYSENSE®" IoT Cloud Platform Wins Grand Prix in IoT Division at the 10th ASPIC Cloud-IoT Award 2016

In October 2016, ANYSENSE®, NTT DATA's Internet of Things (IoT) cloud platform, won a Grand Prix from the ASP-SaaS-IoT Cloud Consortium in the public and social infrastructure category, the utility category, and the private-sector category. ANY-SENSE® was recognized as an excellent and socially beneficial IoT service.





http://aspicjapan.org/event/award/10/index.html (in Japanese only)

# Selected by the Ministry of Economy, Trade and Industry as a Noteworthy IT Strategy Company

In May 2017, the Ministry of Economy, Trade and Industry recognized NTT DATA as a Noteworthy IT Strategy Company. We were rated highly 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)

# Initiatives of 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 Sustainable Development Goals (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 the 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.

# ■ Raising Groupwide CSR Awareness through Conferences

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 encouraging them to think about the future of CSR and social contribution by sharing superior CSR initiatives across the Group.

At the fourth conference held in fiscal 2016, in addition to announcing superior CSR initiatives and social contribution activity ideas, other companies including Ajinomoto, Fujitsu, and LIXIL were invited to participate in a panel discussion and a photo contest under the theme of "Value Partner" was held. Also, everis, of the NTT DATA Group announced superior CSR initiatives and NTT DATA, Inc., participated via live web conference among other initiatives aimed at increasing awareness of CSR.



Announcement by the everis Group



Photo contest runner-up prize winner



Conference venue

# **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 social and regional		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.		
communities	<u></u>	Contribute to the realization of a fair society	We will contribute to the resolution of issues local communities face through the use of IT, to realize a fair and sustainable society.		
Paradigms for	5 CORRE 8 CONTRACTO 10 ROBOTIS	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 advancing diverse human resources and changing work styles.		
people at work		Eliminate illegal labor practices (child labor, forced labor, extended working hours)	We are working to create healthy workplaces across the Group that support high employee satisfaction while striving to achieve working style innovations for each employee in teams, placing importance on individual abilities that lead to organizational strength.		
Paradigms for the global environment	7 substant 9 neutrinose 13 cost  13 cost  10 cos	Conservation of biodiversity (response to climate change)	We aim to reduce environmental impact by working as a group to create and expand environmental solutions and promote environmental communications.		
	9 manager 11 manager 27 manager 28 manager 29 manager 20 manager 2	Broadly establish safe and secure IT infrastructure	In realizing a social infrastructure that people feel safe and secure to use, the entire the 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.		
CSR infrastructure		Ensure information security	We are constantly engaged in technical development by keeping abreast of social, technological, and business trends as well as the latest trends in security, and the results are reflected in the systems we develop for the Group and our clients.		
		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 plan (BCPs) as well as contingency plans for systems and services related to social infrastructure.		

# Case Studies

# CASE 1 Using Al Technology and Big Data to Prevent Disease Complications Smart Alert Solution

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# CASE 2

Innovative Business Creation

Global Open Innovation

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# CASE 3

Contributing to Higher Satisfaction of Foreign Visitors to Japan

Services Targeting Foreign Visitors to Japan

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# CASE 4

Helping to Cultivate IT Human Resource

Assisting in Career Design Befitting the

Modern Era and Offering Diverse Training to

P22

# CASE 5

Helping to Resolve Various Social Issues

**Cultivate Human Resources** 

The AW3D® Global High-Resolution 3D Map, with the World's Highest Accuracy

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## CASE 6

**Business Continuity Initiatives** 

Responding Swiftly to a Road Subsidence Accident in Front of Hakata Station P24

Initiatives Targeting Material CSR Issues Social and regional communities

# **Data Management and IT System Integration in Medical Settings**

Medical settings call for the use of IT services, such as the introduction of monitors and other devices that incorporate Internet of Things (IoT) technologies, in providing high-quality healthcare according to patient conditions.

The IT strategy that the Japanese government announced in 2013 also emphasizes the importance of using IT to share patient data, analyze and utilize data, and promote medical technologies. Centering on emergency medical care, this strategy points to the need to concentrate the deployment of human and physical resources in order to achieve early rehabilitation back into society, as well as to create networks for patient data and medical settings.

Intensive care units (ICUs), in particular, must monitor the vital data of critically ill patients to quickly detect any irregularities and address complications and other risks. In such situations, the integration of data management and IT systems are priorities. Sophisticated systems need to be put in place to enable more timely medical intervention that can keep critically ill patients' conditions from worsening and raise the survival rate.

# ☐ Global Number of IoT Devices: Trend and Forecasts



Although the advent of IoT is causing a dramatic increase in the number of items connected over the Internet, the overall use of IoT in healthcare is relatively low, presenting an issue in the creation of networks.

Source: 2016 Information and Communications in Japan White Paper, Ministry of Internal Affairs and Communications http://www.soumu.go.jp/johotsusintokei/whitepaper/ja/h28/pdf/28honpen.pdf

# Using Al Technology and Big Data to Prevent Disease Complications

# **Smart Alert Solution**





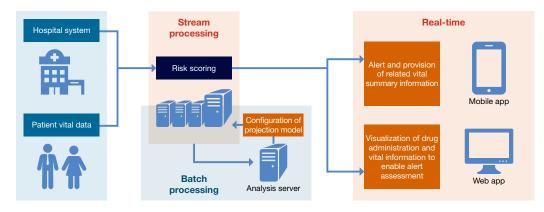
In addition to conventional monitoring, NTT DATA and the everis Group have developed the Smart Alert Solution, which uses accumulated vital data and Al technology to predict complications before they occur. The Smart Alert Solution's prediction model utilizes operations performed in ICU settings, amalgamating and consolidating data previously found on medical monitors and in paper documents. The solution also allows for the operation of a single integrated system for making predictions and alerting doctors and nurses to risks.

The Smart Alert Solution operates on NTT DATA's Big Data infrastructure based on open-source software, processing dispersed streams of patient vital data and predicting the risk of complications in real-time. When complications are predicted to occur, the system immediately provides alerts via bedside and mobile terminals. By providing related vital data, the system helps doctors diagnose situations swiftly.

In addition, in November 2016 NTT DATA commercialized ehCOS SmartICU and began rolling out the system with a focus on Spain. This expanded electronic medical record system for ICUs facilitates the accumulation and referencing of ICU data. On January 30, 2017, Spain's Virgen del Rocío University Hospital installed the Smart Alert Solution at 27 beds in a new effort to verify its effectiveness. Based on the results, we plan to equip the ehCOS SmartICU with additional functions. By the end of 2017, we aim to commercialize the new version and roll it out around the world, beginning with Spain, Latin America, and North America.



Spain's Virgen del Rocío University Hospital, which has introduced the Smart Alert Solution



Achieving Causal Analysis, Visualization, and Early Medical Intervention

Initiatives Targeting Material CSR Issues Social and regional communities

# The Spread of Digital Technology and the Need for Open Innovation

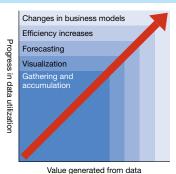
The development of new technologies such as IoT, which connects everything via the Internet, promises to spark major innovation around the world. Against this backdrop, conventional development methods based on individual companies limit the scope of technology and the speed of development. Demand is growing for open innovation, in which a company combines its own technological services with the technologies and services of other companies, regional government bodies, research institutions, and social entrepreneurs to develop innovative services.

# ◆ Corporate Data Utilization Model and the Status of Utilization

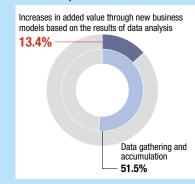
Utilizing corporate data starts by gathering and accumulating that data. Current conditions then need to be ascertained and visualized in order to predict future activity and facilitate changes in business models.

According to a survey of Japanese companies, 51.5% engage in data gathering and accumulation, but only 13.4% have realized the greater added value available through changes in business models. The results suggest that many companies are stuck at the phase of gathering and accumulating data.

# Corporate Data Utilization Model



## Status of Utilization of Data at Japanese Companies



In addition to gathering and accumulating data, also calls for the analysis of data and increases in added value through changes in business models.

Source: 2016 Information and Communications in Japan White Paper, Ministry of Internal Affairs and Communications http://www.soumu.go.jp/johotsusintokei/whitepaper/ja/h28/pdf/28honpen.pdf

# **Innovative Business Creation**

# **Global Open Innovation**





NTT DATA is pursuing a global open innovation initiative, which aims to create innovative businesses that will resolve a variety of issues around the world, connect innovators around the planet, facilitate the creation of global ecosystems via innovative marketing, and raise the overall capabilities of the NTT DATA Group around the world.

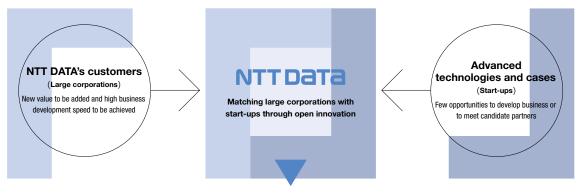
Under this initiative, twice each year the major companies that are NTT DATA's clients, venture companies with advanced business models and technologies, and NTT DATA come together with the aim of accelerating innovative business creation that results in win-win-win outcomes. NTT DATA poses more than 30 categories of specific challenges. The collaborators work together to formulate innovative business proposals that are likely to lead to next-generation social infrastructure and generate business on the scale of tens of billions of yen.

Since this initiative got under way in 2013, numerous contest winners have formed businesses, collaborating in such areas as FinTech which is attracting a great deal of attention—and the energy management field. In fiscal 2016, business contests were held in 10 cities across nine countries. Some 400 entries were received, and more than 1,000 people participated. The Social Coin, the Barcelona-based Grand Finale winner. has worked with NTT DATA on its proof of concept (POC), and we have begun considering business collaboration. In 2017, the Global Open Innovation Contest will be held in 15 cities around the world.



Grand Finale winner: The Social Coin

# Concept Map



A new business is created

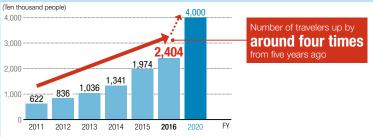
Initiatives Targeting Material CSR Issues Social and regional communities

# **Creating an Environment to Facilitate Stress-Free Comfortable Tourism for All Travelers**

With the Japanese government introducing measures aimed at turning Japan into a tourism-oriented Country and against the backdrop of the Tokyo 2020 Olympic and Paralympic Games, the number of foreign visitors to Japan has been increasing steadily, from 6.22 million in 2011 to 24.04 million in 2016 (average annual growth of 25.9%). By 2020, the government aims for the number of foreign visitors to Japan to reach 40 million. To this end, in March 2016 the government launched the Tourism ICT Promotion Program as part of an effort to create a more welcoming environment for foreign visitors to Japan.

The NTT DATA Group is also providing a variety of ICT systems aimed at welcoming foreign visitors to Japan, creating environments that break down barriers for these visitors, and helping to enhance their level of satisfaction.

# □ Foreign Travelers Visiting Japan



Demand for resolving issues to the creation of sustainable tourist destinations

## Enhancement of tourism resources

• Enhancement of regional tourism resources to make tourism spots more attractive

Creation of environments to enable full enjoyment of stress-free, comfortable tourism and shopping

- Improvement of cashless environments (such as allowing payment by cards issued overseas)
- Use of leading-edge technology to enable more innovative immigration screening

Source: Japan Tourism Agency 2017 White Paper on Tourism http://www.mlit.go.jp/kankocho/news01 000261.html

# Contributing to Higher Satisfaction of Foreign Visitors to Japan

# **Services Targeting Foreign Visitors to Japan**









**Use of Social Networks to Anticipate Social Buzz Services Targeting Domestic** and Inbound Tourism

# **Analyze the Social Buzz of Tourist Spots**

Ascertain popularity among foreign visitors to Japan, and provide more detailed tourism plans using preference analysis based on social network postings



**Digital Archive Service** for Tax-Free

# **Enhancement of Duty-Free Procedures**

Make system multilingual and reduce operational mistakes, such as mistaken entries and forgetting to obtain signatures



**Cross-Border EC Local Payment** in Taiwan

# **Enable Local Settlement**

Enable the use of local settlement in a highly secure environment, ensuring safety and security



# Use of Social Networks to Anticipate Social Buzz Services Targeting Domestic and Inbound Tourism

With much of the general populace now connected via social media, more people are finding their way to formerly "hidden" tourism spots. Within the tourism industry, demand is growing for ways to consistently benchmark and measure the appeal of tourism spots in countries all over the world.

As an official partner of Twitter, NTT DATA is combining all Twitter data with deep learning technology\* and providing a service that measures the social buzz surrounding more than 300,000 tourism spots across Japan. Comprehensively measuring the social buzz surrounding individual spots should enable us to obtain more detailed information about the user attributes (country, age, gender, preferences) associated with these spots, making it possible to offer more extensive tourism plans. By analyzing information on a broad range of users in 78 countries and regions, we aim to analyze in further detail data on the increasing number of foreign tourists to Japan. We expect these efforts to also lead to the discovery of "hidden" tourism resources around the country and foster regional revitalization and invigoration.

\* A machine learning algorithm constructed of multilayered neural networks, which mimic the neural circuitry in human brains

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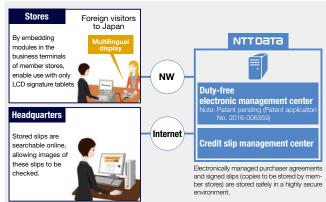
# **Digital Archive Service for Duty-Free**

Revisions to Japan's tax exemption system in May 2016 are expected to bolster consumption by foreign visitors to Japan and further boost the number of duty-free transactions. New tax exemption procedures require foreign visitors to Japan to sign a purchaser's pledge. Signing paper documents can lead to problems, such as forgetting to have purchasers sign the document, the mishandling of forms, or not having the appropriate forms available. Hence, the demand for storing data electronically is growing as a way to prevent such problems.

To resolve this issue, NTT DATA provides the Digital Archive Services for Duty-Free. This service provides pledge content in 16 languages, covering those spoken by more than 96% of foreign visitors to Japan. Signature information is obtained and stored electronically, using liquid crystal display (LCD) signature tablets. With this service, foreign visitors to Japan only need to sign once in order to complete the taxexemption process. In this way, the service shortens the amount of time needed to purchase duty-free items, greatly reduces the workload at duty-free shops, and eliminates the need for tax processing when forms are not available, minimizing economic loss. Electronically stored purchaser's pledges can be browsed on a specialized website, which allows historical forms to be checked and referenced by the tax authorities.

By providing this high-value-added service that alleviates issues for duty-free shops, NTT DATA is helping to raise the level of satisfaction and boost consumption by the increasing number of foreign visitors to Japan.

# Service Concept





# **Cross-Border EC Local Payment in Taiwan**

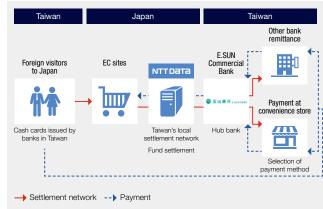
More than 4 million people from Taiwan visit Japan each year, and that number is expected to increase. Taiwan's EC market is also expanding at around 10% each year. Of this figure, more than 50% of shoppers who utilize EC for overseas purchases have experience using Japanese EC sites. Many of these shoppers wish to pay with bank-issued cash cards that utilize Taiwan's local settlement service\*. However, most Japanese EC sites only accept payment from overseas via internationally branded credit cards, which limits the ability of Taiwanese people to utilize Japanese EC sites.

NTT DATA and Taiwan's E.SUN Commercial Bank signed an alliance agreement in February 2017. Under this agreement, we will begin providing the "Cross-Border EC Local Payment in Taiwan" facilitating the use of Taiwan's local settlement service by companies and stores that operate EC sites in Japan.

With this service, shoppers on Japanese EC sites can use the cash cards issued by their usual banks to make purchases in Taiwan's currency. Alternatively, they can elect to settle purchases at convenience stores in Taiwan. The service takes advantage of NTT DATA's ability to provide a safe and secure system.

\* In addition to settlement methods for cash cards issued by banks in Taiwan, this service allows cash payments at specified convenience stores.

# Service Concept



**Initiatives Targeting Material CSR Issues** 

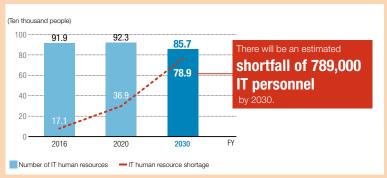
People at work

# IT Human Resource Development Requirements in a Digital Age

The arrival of the digital age, with the impact of IoT and Al being added to social, mobile, analytics, and cloud (SMAC) technologies, is transforming industries and the social structure. People's work styles are also expected to change substantially.

Japan is expected to experience a shortage of IT human resources, as a falling birth rate and an aging society cause the working population to shrink. IT human resource development that is suited to this digital age will be a key priority. Through greater capacity to foster self-directed career development, we can support the transformation of companies that underpin the social infrastructure.

#### Projected IT Human Resource\* Supply and Demand



\* Total number of personnel at IT companies and in the information system departments of user companies

The issue is expected to grow increasingly serious, with a shortfall of 789,000 IT human resources by 2030.

Source: Outlook for the Supply and Demand of IT Human Resource, Ministry of Economy, Trade and Industry http://www.meti.go.jp/english/press/2016/0610 01.html

# **Helping to Cultivate IT Human Resource**

# 4 QUALITY EDUCATION







# Assisting in Career Design Befitting the Modern Era and Offering Diverse Training to Cultivate Human Resources

With client companies' IT needs growing more diverse and the business landscape changing due to the spread of such new technologies as Al and IoT, NTT DATA is focusing on cultivating professional human resources with advanced specializations and the ability to embrace change, as well as fostering human resources who can thrive in the global marketplace.

To support employee career development over the long term, we have established the Professional Career Development Program (CDP). This program indicates targeted human resource characteristics and describes a long-term path. The program also illustrates in an easy-to-understand manner an employee's current level and what steps they can take to develop their skills, thereby supporting each employee's efforts toward long-term, self-directed growth.

We also offer a variety of human resource training programs. We provide business training, aimed at honing employees' skills as businesspeople, and highly specialized technical training. Employees are free to select courses attuned to their position and job assignment. We also provide group training. Under this system, all employees can step away from their regular duties to gain a set level of expertise and learn skills.

# Selected to Receive the Grand Prize at the Good Career Company Awards 2016

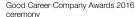
NTT DATA received the Grand Prize from the Minister of Health, Labour and Welfare in the Good Career Company Awards 2016, being highly evaluated for "support for career development in response to a changing era and human resource development through diverse training." Good Career Company Awards are bestowed on companies that proactively support employees' self-directed career development. The awards are aimed at broadly disseminating this philosophy, the content of initiatives and their effectiveness, encouraging more companies to support career development by highlighting its importance. NTT DATA was selected from among the 68 companies around Japan that applied. We were one of the five companies selected for the Grand Prize, which is awarded to companies that support self-directed career development among their employees, as well as demonstrating outstanding results from comprehensive and ongoing promotion through specific other activities.

# **Evaluation Points**

- The Company follows up on employees' long-term career development in two ways: the Professional CDP, which indicates target paths for employees by type of Human Resource (type of specialization), and position-based training according to age and position.
- The Company conducts activities outside the organizational framework to cultivate younger employees.
- The Company provides numerous training programs attuned to diverse human resources.

etc.







http://www.mhlw.go.jp/stf/seisakunitsuite/bunya/c\_award.html (in Japanese only)

Initiatives Targeting Material CSR Issues

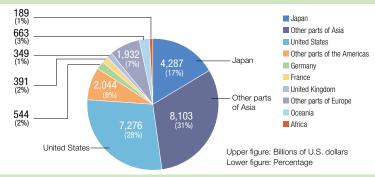
Global environment

# Responding to the Need to Set Up and Maintain Infrastructure in Preparation for Natural Disasters, Resource Development, and Disaster Prevention and Mitigation

In recent years, the world has experienced a number of natural disasters thought to be triggered by climate change, as well as earthquakes. Such disasters, concentrated on parts of Asia and Africa where infrastructure development is lagging, wreak economic and environmental damage and can impair sustainable development in developing countries. Around the world, some 200 million people are affected each year, with average annual economic losses due to natural disasters estimated at US\$100 billion. This situation highlights the need to build societies that are resilient in the face of disaster.

Major natural disasters that we face increasingly severe levels of climate change and threaten the health of people around the world are occurring with greater frequency. This situation highlights the need to put in place infrastructure and disaster prevention and mitigation measures, as well as effective plans to counter the spread of epidemics. Against this backdrop, no highly accurate topographical data covering all land is available, making it difficult in some cases to predict and respond to issues and enact measures to put infrastructure in place.

#### ☐ Global Damage Due to Natural Disasters and Percentage of Damage



<sup>\*</sup> Figures indicate the total amount of damage due to natural disasters between 1985 and 2015.

There is a need to set up and maintain key infrastructure that can help reduce the risk of natural disasters and curtail economic loss.

Source: 2016 White Paper on Small and Medium Enterprises in Japan, The Small and Medium Enterprise Agency http://www.chusho.meti.go.jp/pamflet/hakusyo/H28/PDF/chusho/04Hakusyo\_part2\_chap4\_web.pdf (in Japanese only)

# **Helping to Resolve Various Social Issues**

# The AW3D® Global High-Resolution 3D Map, with the World's Highest Accuracy















NTT DATA has jointly developed and launched AW3D® with the Remote Sensing Technology Center of Japan (RESTEC). AW3D® creates digital 3D maps displaying global topography at a resolution and accuracy of five meters.

Using approximately 3 million satellite images taken by "DAICHI (ALOS)," the land-area observation technology satellite of the Japan Aerospace Exploration Agency (JAXA), we finished mapping topographical data for the entire world at the end of March 2016. This map allows consistently high-resolution analysis of terrain throughout the world, including mountainous regions where local surveys are problematic, which greatly increases business opportunities. In addition, NTT DATA has entered an agreement with DigitalGlobe, a U.S. company operating some of the world's most high-performance satellites, to provide 3D data at a resolution as high as 0.5 meters in urban areas.

We have provided AW3D® for use in more than 70 countries around the world, centering on emerging countries. The map is being used in more than 300 projects to resolve issues in a variety of fields: for mapping, disaster prevention measures, and in the area of hygiene to stop the spread of epidemics.

As one example, when creating a hazard map of Macau, AW3D® elevation data enabled the accurate simulation of tsunami movements. The hazard map thus demonstrates what areas of reclaimed land would hypothetically be flooded by a tsunami.

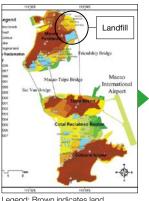
#### Experience Example

Category	Area of Activity (Country)	Contribution
	Vietnam	Identification of locations in danger of landslide disasters along trunk roads
Disaster prevention Disaster mitigation		Creation of hazard map for long-term recovery planning following large earthquake
	Indonesia	Disaster mitigation by forecasting products of volcanic eruption
Infrastructure	Countries around the world	In the electricity field, more efficient research into wind power generation locations
Resources	Tanzania	In the water resources field, planning the use of underground water
Hygiene	Nigeria, Niger	In the field of hygiene, measures to address epidemics
Urban planning	Countries around the world	In the urban planning field, selecting locations for wireless base stations

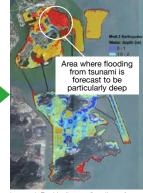
# ☐ Tsunami Hazard Map Using Flood Simulation (Macau)

# [ Redevelopment Progress ]

# [ Tsunami Hazard Map ]



Legend: Brown indicates land Source: Reclamation evolution of Macau [Jiang et al., 2011]



Legend: Red indicates flooding of 6.0–8.0m Source: Dr. Linlin Li of Earth Observatory of Singapore

**Initiatives Targeting Material CSR Issues** 

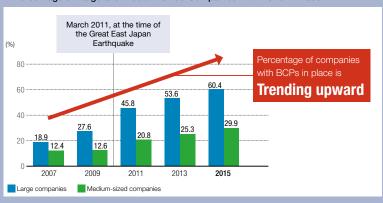
**CSR Structure** 

# Responding to the Risk of Disaster

In recent years, numerous earthquakes, large-scale typhoons, and other natural disasters have occurred. No sooner have the traces of devastation by one disaster been cleared away than the next one seems to occur. The risks of such disasters affecting the ability of companies to continue operating and providing services has grown commensurately. If companies are unprepared for disaster, power outages can cause corporate activity to grind to a halt. The losses can be particularly severe for companies whose businesses center on the use of public systems, such as those involved in finance, insurance, and telecommunications. Under these social circumstances, the need to formulate business continuity plans (BCPs) to prepare for disaster has increased. The percentage of companies introducing such plans is growing; 60.4% of large companies had done so as of 2015, while the figure for medium-sized companies was 29.9%.

Along with formulating BCPs, companies need to establish emergency response headquarters, communicate among departments, and boost internal awareness, putting in place a host of measures to protect systems on an ongoing basis.

#### Percentage of Large and Medium-Sized Companies with BCPs in Place



All companies are being called on to formulate BCPs and respond sufficiently to the risk of disaster.

Source: Based on a fiscal 2015 survey related to business continuity and disaster-prevention measures by the Cabinet Office, Government of Japan

http://www.bousai.go.jp/kyoiku/kigyou/topics/index.html (in Japanese only)

# **Business Continuity Initiatives**

# 9 MUSTRY PRODUITER AND REPASTRUCTURE





# Responding Swiftly to a Road Subsidence Accident in Front of Hakata Station

On November 8, 2016, underground construction to extend a subway line in the city of Fukuoka led to a road subsidence accident that caused the local electric company to halt its provision of electricity to the NTT DATA Hakata Ekimae Building (the "Hakata Ekimae Building"). This situation presented a business continuity crisis, but the building's private power generation equipment automatically came on line when the accident occurred, restoring power to the building without incident.

As this accident occurred near the building and was large in scale, power to the building was unavailable for longer than we had anticipated. The Hakata Ekimae Building is a focal point for the operation of core systems, centered on customers in the financial and public sectors, so being without power was not an option. To respond to this longer-than-expected outage, employees were dispatched from individual departments to form countermeasure teams. By working together, we were able to implement a host of measures, such as sourcing alternative power sources and security fuel.

# Contributing to Business Continuity without Having a Major Impact on Building Occupants or Clients' Systems

NTT DATA's practice is to protect clients' systems by employing a variety of methods. We have in place the following three measures to ensure long-term power supply.

- (1) We have in place private power generation equipment to serve as an alternate source of power during maintenance and in the event of unforeseen trouble.
- (2) We maintain fuel supplies and perform rotational refueling.
- (3) We prevent temperature rises on coolant for private power generation equipment.

For the first measure, using private power generation equipment to provide an alternate power source, we employ mobile power-supply vehicles. We have also drafted plans for accurately determining the amount of power supplied from nearby electricity poles, so they can provide electricity directly to the building. Through this combination, we have a three-stage power backup system in place.

Through these three simultaneous measures, we are able to use private power generation equipment to supply enough power to ensure stable operation for 22 hours until service from the power company resumes. This arrangement contributes to business continuity without having any major impact on building occupants and clients' systems.

# COMMENT

# **Applying Our Lessons from This Experience at Company Buildings throughout Japan**



Masahiro Ishizuka
Facility Management Division
Business Solutions Sector
NTT DATA

I think our ability to respond to this incident was the result of the routine training we undergo to ensure stable operation, having appropriate systems in place, and teamwork. Learning from our experience with the Great East Japan Earthquake, which struck in 2011, we quickly set up a disaster countermeasures office at our head office building in Toyosu and provided the necessary number of personnel and support needed for a long-term power outage. As only a limited number of people were available at the site in Hakata, we responded quickly by communicating with employees at our head office and in Dojima, our location in Western Japan.

Some occupants of the Hakata Ekimae building commented that they were not even aware that power to the Hakata Ekimae building had been interrupted. Even though the incident was more severe than we had anticipated, we were able to maintain normal operations to the extent that occupants did not even know a power outage had occurred. This was a moment when the success of our everyday efforts became apparent. I will strive to apply my experience in responding to the incident to our buildings and continue working to contribute to the business continuity of our clients.

# **Contribution Activities by Overseas Group Companies**

As a corporate group operating across the globe, the NTT DATA Group seeks to contribute to the creation of a better society by continuously engaging in diverse activities around the world.



# **EMEA and Latin America**



# everis (Spain, Chile)





- Uncovering and cultivation of talent in regions around the world, and fostering of innovation ▶P26
- Contribution to the resolution of local issues by establishing the Digital Hub in Temuco, Chile ▶ P26
- Support for nurturing the next generation (support of educational activities for local students)



# NTT DATA Deutschland GmbH (Germany) 2

- Contribution to environmental protection by promoting car sharing and bicycle sharing ▶P26
- Support for nurturing the next generation (support for sports)
- Provision of Christmas presents to children in orphanages
- Support for the social participation of people with mental disabilities through employment



# **NTT DATA Romania (Romania)**

- Support for the creation of opportunities to make a career change into in the IT Industry by providing programs to university students
- Support for nurturing the next generation (support for sports, assistance to orphanages)
- Activities for vitalizing local communities (support for culture, collaboration with NGOs)



# NTT DATA UK (United Kingdom)

- Support for the employment of female students
  (The Girls' Network)
   P.
  - Contribution to local community vitalization through verification tests for developing technology aimed at mitigating congestion



# **NTT DATA Italia (Italy)**

- Contribution toward the resolution of environmental problems by promoting sustainable means of commuting

  ▶P27
- Support for nurturing the next generation (IT education, support for the employment of refugees)
- Activities for vitalizing local communities (sponsorship of sporting events, donation activities targeting schools affected by earthquakes)

# North America



# NTT DATA, Inc. (United States, India)



 Continuation of Global Volunteer Week (donation of goods and money, cleaning and other voluntary activities at branch offices worldwide)

# China



# NTT DATA China (China)



- Improvement of the quality of information security management
- Environmentally sound in-house initiatives

# APAC



# itelligence (Malaysia)



• Career support for women



# **NTT DATA APAC (India)**

9

 Contribution to vitalizing local communities through support for farms using IT



# **NTT DATA Vietnam (Vietnam)**

U

Welcoming Japanese high school students to conduct fieldwork

# **Principal Activities in Each Region**

**Uncovering and Cultivation of Talent in** Regions around the World, and **Fostering of Innovation** 



everis Foundation (Spain)











Contribution to the Resolution of Local Issues by Establishing the Digital Hub in Temuco. Chile



everis (Chile)











# Contribution to Environmental **Protection by Promoting Car Sharing** and Bicycle Sharing



NTT DATA Deutschland GmbH (Germany)











In 2001, everis established the everis Foundation, which undertakes a variety of initiatives aimed at uncovering and cultivating talent in regions around the world.

One of the foundation's largest-scale activities is holding the EVERIS AWARDS (awards to cultivate a spirit of entrepreneurship). By uncovering and offering awards for novel projects with the potential to change society in three categories-new business models, industry and energy technologies, and biotechnology and health-the organization helps to drive the projects toward success.

In 2016, more than 600 projects from 13 countries entered the EVERIS AWARDS. Winning the top Global Award was a project from Portugal related to regenerative medicine. As a prize, the organization contributed funds toward future development expenses and turning the project into a business.

The organization also takes part in various other activities, such as operating a crowdfunding platform; helping children develop skills in science, technology, engineering, and the arts; and providing a network of people to help reduce the gender gap for girls and women aged 10–19.

Going forward, the organization plans to further strengthen its base of operations in Europe, as well as reinforcing activities in Latin America.

In 2008, everis created the Digital Hub in the city of Temuco, the capital of the Cautin Province in southern Chile, to create employment in the local community and resolve social issues through innovative technology solutions. The project involved recruiting numerous graduates from a local university specializing in information science, creating employment opportunities, helping to alleviate wage gaps, and promoting economic and scientific development.

In 2015, everis entered into an agreement to promote development in Chile with the Chilean government and the Production Development Corporation, a government organization that promotes the Chilean economy.

The company also won the Social ICT Top Initiative Award 2016 from the Chilean Association of Information Technology Companies (ACTI) in recognition of its successful efforts to form partnerships with the local government, the private sector, and universities and develop an ecosystem for public-private partnerships. Over the next four years, everis expects to create jobs for 900 people. In addition to proactively pursuing ongoing research into the realization of smart cities, the company is investing in local start-up companies and stepping up its contribution to the development of local human resources.

In an effort to reduce CO<sub>2</sub> emissions, NTT DATA Deutschland has introduced car and bicycle sharing initiatives for employees in cities with particularly severe traffic congestion, such as Frankfurt, Munich, and

By registering for free using a dedicated link, employees can make use of the DriveNow (provided by BMW) and Car2Go (provided by Daimler) car-sharing services to travel within cities and to the airport. Since introduction in 2014, 400 employees have registered for the services. Younger employees, in particular, seem to welcome this innovative service. In cooperation with Car2Go, an electric vehicle (EV) stand has been erected in front of the company's office in Munich.

NTT DATA Deutschland introduced bicycle sharing in June 2016. This system has found particular favor among employees as a healthy and ecological mode of travel, as well as convenient when visiting business partners without parking lots. The company plans to set up a bicycle sharing station in front of its Munich office, thereby providing employees with bicycles as an alternate means of transportation and contributing to environmental protection.

Support for the Creation of Opportunities to make a career change into the IT Industry by Providing Programs to University Students



# NTT DATA Romania (Romania)









# Support for the Employment of Female Students (The Girls' Network)



NTT DATA UK (United Kingdom)











# Contribution toward the Resolution of Environmental Problems by Promoting Sustainable Means of Commuting



NTT DATA Italia (Italy)











In collaboration with Babeş-Bolyai University, NTT DATA Romania is conducting a computer science training program at the university's graduate school.

The program, which begins every November, is certified by the Romanian Ministry of Education and Scientific Research. The program provides students in every field with the opportunity to begin specialized training in computer science, earn certifications, and live new lives in the IT and software field. The program hosted 52 students in 2016, and so far 49 second-year students have taken part.

In addition to the higher education provided by the mathematics and computer science departments, NTT DATA Romania provides students with the opportunity to come into direct contact with a practical business environment. This experience helps expand students' career horizons as they pursue opportunities in the IT industry.

In recognition of these efforts, NTT DATA Romania was selected to win fourth prize in the Best Education CSR Activity Award division of awards sponsored by CSR Media Look Advising SRL.

In 2016, NTT DATA UK began a mentoring program in cooperation with The Girls' Network. With a mission to "inspire and empower girls from the least advantaged communities by connecting them with a mentor and a network of professional female role models," The Girls' Network is a charity organization that introduces girls aged 14 to 19 from economically disadvantaged areas to professional female mentors of various backgrounds.

Currently, 18 of NTT DATA UK's employees are undergoing mentoring training, taking part in a one-on-one 12-month mentoring course for female students in London and Birmingham. Through the program, employees help their wards design their own futures in many ways, such as providing a place to gain work experience, helping draft resumes and cover letters, submitting application forms to universities and prospective employers, and helping them to find their desired type of work.

Feedback from employees participating in the mentoring program has been extremely positive. After evaluating the 12-month mentoring cycle, the company plans to increase its participation in the program.

Since 2013, NTT DATA Italia has been recommending that its employees help protect the environment by commuting to work on public transportation. When employees purchase a bicycle or use public transportation, they can simply email an administrative staff to get the company to foot some of the costs. Employees give high marks to this system, which is encouraging a steady shift to the use of sustainable mobility instead of private vehicles.

In Rome, where traffic and pollution are major problems, the company has appointed mobility managers to help alleviate the problem by encouraging sustainable methods of commuting. The company has created a travel policy that recommends using public transportation wherever possible and has introduced car sharing and bicycle sharing. In addition to setting up a bicycle parking area, the company supports employee participation in events that promote bicycling, such as the European Cycling Challenge and Love to Ride.

NTT DATA Italia is currently developing an app that enables employees to carpool to work with colleagues and is promoting a project that encourages employees to voluntarily distribute the app.

# 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 of the NTT DATA GROUP

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 social issues. Looking ahead, we will bring innovation to fruition in cooperation with our clients and use IT to provide paradigms that are beneficial to both larger society and regional communities.

# With Clients

Management Approach **Developing Safe and Secure Systems Initiatives for Improving Client Satisfaction** 

# **With Shareholders and Investors**

Management Approach | Approach to Information Disclosure | System for Ensuring a Constructive Dialogue Returning Profit to Shareholders Communication with Shareholders and Investors

# **With Business Partners**

Management Approach **Building Strong Relationships with Business Partners** 

# With Employees

Management Approach | Hiring and Promoting Human Resources | Nurturing Human Resources | Advancing Diverse Human Resources | **Creating Comfortable Working Environments** 

# With Regional Communities and Society as a Whole

Group Sustainability Report 2

Contributing to Regional Communities and Society as a Whole

Management Approach | Initiatives for Improving Accessibility

# **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 recognizes the critical importance of providing its clients with safe and secure services and provides 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.

# **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 ]

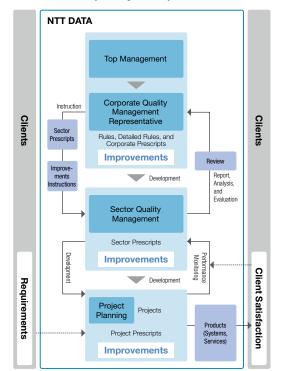
NTT DATA obtained ISO 9001 certification – the international standard for quality management – on a Groupwide basis in 1998 and subsequently adopted a systematic approach for quality management system across the entire organization. Since fiscal 2007, NTT DATA has created unified Companywide rules governing system development and management methods and has clarified procedures for applying the rules to bolster the system on a Groupwide basis. 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 we incorporated Capability

Maturity Model Integration (CMMI)\* to formulate development and operational standards. In recent years, we have particularly 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, including at Group Companies overseas, we have deployed a quality assurance system in the Asia-Pacific region and have obtained ISO 9001 certification in Vietnam and Australia while providing support and information for process improvement utilizing CMMI to offshore locations in China.

\* 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



# [ 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 integrated our R&D organization for production technologies, which includes project management, with our project support organization to establish the Project Management Solution Center within the Technology and Innovation General Headquarters. We also opened the Agile Professional Center as an entity that applies the agile development method to collaborate with clients in creating new businesses and services.

# 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 is also responsible for establishing the NTT DATA Global Standards, which integrate standard procedures for system development around the world, and for developing next-generation management tools that raise the execution rate of progress management and quality management, thereby enhancing the competitiveness of the NTT DATA Group and limiting problematic projects.

# 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. We are actively developing human resources in the area of agile development and building an on-demand development structure by setting up agile development locations around the world.

# Quality Management Portal Site

Since fiscal 2010, NTT DATA launched and operates 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 provides all employees with information that is easy to use, offering responses to industry standards related to quality and consolidating internal rules and expertise. 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 ascertain the cause of the incident and consider measures for preventing reoccurrance. We report to the competent authorities, as necessary, according to the law. We also notify customers by disclosing appropriate information on our website.

# **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 that can be made to society through business operations. In line with its client-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 2016, we listened to the opinions and requests of 55 organizations in interviews and obtained feedback in questionnaires received from 396 people in 175 client companies and organizations. In this questionnaire survey, the result of responses to two questions were organized and classified into three categories: "I would like to continue the relationship going forward and be the first choice for consultation," "I would like to continue the relationship going forward or be the first choice for consultation," and "I do not intend to continue the relationship going forward or be the first choice for consultation." As a result, 74% of responded that "I would like to continue the relationship going forward" and "be the first choice for consultation."

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

No intention of maintaining current relationship and selecting as primary candidate

5%

Intention of maintaining current relationship and selecting as primary candidate

Customer responses current relationship and selecting as primary candidate

21%

74%

(396 people)

# With Shareholders and Investors

NTT DATA endeavors 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 by 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 return.

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

# **Approach to Information Disclosure**

# **■ 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 pursue fair disclosure of information that is not deemed to be of material importance, if we consider the information to be useful to shareholders and investors.

# System for Ensuring a Constructive Dialogue

# System

NTT DATA has appointed a director to be responsible for IR and set up an office specializing in IR (Investor Relations and Finance 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 the Representative Director, the head of the Finance Department, and heads of other critical organizations whose participation is requested by the Head of the Finance Department. This committee deliberates on the formulation of the disclosure guidelines for management information as well as its ongoing disclosure.

# ■ Mechanism for Reflecting Shareholder Opinions

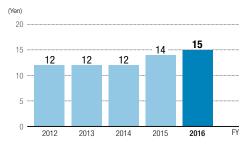
We ensure that shareholder opinions and concerns gathered each quarter are effectively incorporated into the Board of Directors' meetings, regular meetings attended by representative directors, Disclosure Committee meetings, and other meetings. The feedback collected in the fourth quarter of fiscal 2016 was positive overall in terms of the Company's financial soundness and direction of our corporate strategy, while also indicating expectations for additional disclosure of information to clarify earnings improvement measures in our overseas business and merger and acquisition (M&A) investment evaluation criteria and results. In addition, we seek 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

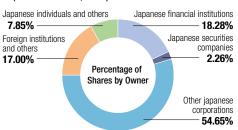
NTT DATA is guided by its fundamental policy of appropriately distributing profits while working to increase corporate value over the medium to long term by achieving sustained growth for the Group by means such as investing in new and other business activities and ensuring efficient management of business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

# Annual Dividends per Share\*1



\*1 A 1:5 stock split was implemented with an effective date of July 1, 2017. Figures for fiscal 2016 and before, 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, 2017)



We intend to pay a stable dividend based on a comprehensive assessment for balancing dividend payments with business investments and technology development for achieving sustainable growth in the future and expenditures for maintaining and reinforcing financial strength, in light of our consolidated operating results and financial position. Furthermore, when determining dividend amounts, we focus on maintaining the consolidated cash flow payout ratio\*2 over the medium- to long-term plan to allocate retained earnings to investments in new businesses, technology development and capital investments to maintain continuous stable growth well into the future.

\*2: Cash flow payout ratio: Total dividends / (Net income attributable to owners of parent + Depreciation + Loss on retirement of fixed assets + goodwill amortization - Capital expeditures).

# Communication with Shareholders and Investors

# ■ Promoting Opportunities for Communication

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 in which top management offers an overview of financial results and explains the business environment, strategies, and its outlook. We also organize individual and small gatherings with investors in Japan and overseas.

In fiscal 2016, we responded to about 330 inquiries from investors and analysts and held briefings for individual investors as part of our communication activities targeting individual investors. We intend to continue our efforts to promote two-way communication with shareholders and investors.

# Reinforcing Information Dissemination through IR Tools

From fiscal 2016, NTT DATA publishes 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 continue to print the Notice of Convocation in color and disclose the content on our website and 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.

Our RSS feed for press release updates and video streaming on earnings presentations have added vigor to the two-way communication, as we provide the latest information on NTT DATA in a timely manner and in return receive inquiries and opinions from shareholders and investors.

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 is pursuing initiatives for constructing a sustainable supply chain by promoting open and fair transactions toward a mutually successful future with business partners.

# **Management Approach**

The NTT DATA Group believes that developing mutual understanding and forging relationships of trust with 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 are working toward building a sustainable supply chain by establishing our supply chain CSR procurement guidelines to disseminate NTT DATA's CSR Policy among suppliers and conducting a survey on CSR procurement to monitor the status of compliance with the guidelines and suggest future improvements in a bid to work together on CSR activities.

# **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 we can move forward together.

# **■** Thoroughgoing Fair Transactions

Amid the widening acceptance of CSR these days, 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 since then to reflect changes in laws and regulations.

# **Procurement Policy**

- 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 business partners by appropriately monitoring and managing the supply chain. It also performs a spend analysis for transactions with all of its approximately 1,800 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, 2017, spending on transactions with key business partners accounted for approximately 46% of total transactions. Within this amount, for software outsourcing, we have established a business partner system for conducting evaluations based on transaction volume, quality, security, management conditions and performance. Every two years, we accredit subcontracted suppliers displaying excellence as business partners (BPs) or associate partners (APs).

In view of the growing requirements of CSR over the past few years, we are promoting CSR procurement with due consideration for ESG criteria. NTT DATA objectively evaluates its business partners in terms of quality, financial health, and contractual obligations in its pursuit of fair transactions with an eye on the legitimacy of partner companies. 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 factors are included in the articles of the basic agreement. We also established our supply chain CSR procurement guidelines to disseminate NTT DATA's CSR Policy and conduct CSR procurement surveys and evaluations to monitor the status of compliance with the guidelines and ongoing initiatives undertaken by suppliers in order to suggest future improvements in a bid to work together on CSR activities.

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 2016, approximately 34% 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 Core BP and BP Presidents' Meetings, in which people in the top position at companies participate.

In October 2016, we held a Core BP Presidents' Meeting attended by representatives of Core BP Companies. Active discussions took place on the current state of NTT DATA, the Medium-Term Management Plan, and major topics related to NTT DATA's businesses.

Representatives from a total of 37 companies, including the five Core BP Companies, attended the BP Presidents' Meeting in December 2016, where they shared information and discussed topics including NTT DATA technological innovations, recent trends in technology, 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 suppliers, including issues related to ESG factors, 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. Maintaining good relationships, particularly with specific suppliers, has allowed us to retain highly competitive development capabilities by improving the efficiency of various procedures and sharing expertise on similar operations.

# **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 working 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 advancing diverse human resources and changing work styles. 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 more 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 working 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 changing environment.

# ■ Hiring Human Resources

# [ Hiring Diverse Human Resources ]

In our hiring practices we prioritize aptitude, motivation, and ability over academic record, age, gender, and nationality. 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 beyond Japan to overseas countries, 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 in and outside of Japan.

NTT DATA will continue to undertake broad-based hiring as it works toward becoming a Global IT Innovator, the Group's vision.

## Data on Employees in Japan

		FY2	013	FY2014		FY2015		FY2016	
		Non- consolidated	Group companies	Non- consolidated	Group companies	Non- consolidated	Group companies	Non- consolidated	Group companies
Nur	nber of employees	11,000	21,779	11,110	21,751	11,213	21,772	11,227	23,314
	Male	9,086	17,977	9,117	17,871	9,134	17,267	9,065	18,613
	Female	1,914	3,802	1,993	3,880	2,079	4,505	2,162	4,701
	nber of women in management itions [Ratio]	106 [4.8%]	189 [5.0%]	112 [4.9%]	196 [5.0%]	120 [5.1%]	233 [5.9%]	135 [5.6%]	314 [7.5%]
Ave	rage age	36.7	-	37.1	-	37.6	-	38	-
Ave	rage years of service	12.9	-	13.4	ı	13.9	-	14.3	-
Tun	nover rate	2.3	-	2.4	-	2.4	-	2.9	-

<sup>\*</sup> Figures as of March 31 of each fiscal year.

		FY2013	FY2014	FY2015	FY2016	FY2017
Number of newly recruited graduates*1 (non-consolidated)		475	379	379	378	385
	Male	334	262	255	247	245
	Female	141	117	124	131	140
Nun	nber of mid-career hires	23	20	8	15	-
	Male	18	15	7	12	
	Female	5	5	1	3	-
	nber of employees with disabilities*2 ployment ratio] (non-consolidated)	245 [2.05%]	254 [2.10%]	260 [2.13%]	280 [2.27%]	287 [2.32%]
wor	nber of reemployed retired kers*1 [Utilization ratio of the NTT 'A Reemployment System]	105 [59.09%]	130 [74.14%]	120 [72.22%]	105 [78.26%]	102 [77.42%]
	New recruitment	26	43	26	18	24
	Continued recruitment	79	87	94	87	78

<sup>\*1</sup> 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.

# Starting Salary (Actual Results for April 2016) and Average Salary

	Doctoral degree		Bachelor's degree	College of technology graduate	
Starting salary	¥291,870	¥243,320	¥216,820	¥187,610	

X Average salary for fiscal 2016: ¥8,124,768

<sup>\*2</sup> 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.)

# ■ 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's 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 each employee sets his or her own annual education plan as a means for raising motivation to learn by systematically addressing both the workplace and the employee.

Moreover, 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

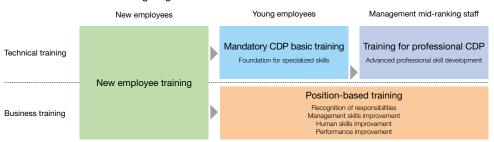


# [ Framework for Various Training Programs ]

NTT DATA offers business training to facilitate business skill improvement and technical training to boost specialist expertise, with employees free to select courses attuned to their position and job assignment when needed. Moreover, we have established a system where 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 mindset and ability necessary for developing into a disciplined human resource.

#### Framework for Various Training Programs



#### Participants and Training Costs in Fiscal 2016

Training Program	Participants and Other Data	Training Cost
Professional CDP (non-consolidated)	Number certified: Approx. 1,200 Aggregate number certified: Approx. 9,200	-
Position-based training (period covered, people undertaking training, by position), professional CDP training, mandatory CDP Basic training)	Aggregate number of days: Approx. 47,000	Approx. ¥740 million
New employee training	Number of participants: 378 Days of training: 36	¥544,160 per person

# [ Human Resource Cultivation System Based on Professional CDP ]

As clients' IT needs diversify in this 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 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 push forward efforts aimed at cultivating professional human resources in the NTT DATA Group.

## [ Policy and Current Status of Global Human Resource Development ]

To provide a greater number of employees with international business opportunities, the NTT DATA Group is strengthening ties among the human resource departments of major group companies in the Americas, EMEA, APAC, and China, as well Business Solutions and everis, centering around the head office in Japan.

In specific terms, we conduct the Global Leadership Program, which was launched in fiscal 2009. Executive trainees from overseas Group companies come together to hold discussions, and from fiscal 2012 we have continued to send employees from our headquarters in Japan to an EMEA-organized program as part of an initiative aimed at bolstering cooperation with regional companies. Not only do we send employees abroad from Japan but we also transfer overseas personnel to our headquarters in Japan and EMEA employees to China. These initiatives help to provide opportunities for interaction and international work exchange to as many employees as possible.

In fiscal 2013, we started the Regional Leadership Program-JAC, aimed at providing leadership training to Japanese, APAC, and Chinese employees to develop business leaders who will lead Asia in the future.







Regional Leadership Program-JAC

## Advancing Diverse Human Resources

## ■ Promotion of Diversity

## [ Promoting Activities by Diverse Human Resources ]

Diversity management is crucial for a company seeking to achieve sustainable growth by generating innovation in response to the diversifying needs of society. With this in mind, NTT DATA promotes diversity and inclusion as one of its management strategies to succeed against global competition. Our aim is to create new corporate value based on the two core concepts of advancing diverse human resources and changing work styles.

Since fiscal 2012, we have concentrated on advancing women in the workplace and reducing annual work hours by changing the way we work, in a bid to create a work environment where each individual employee can thrive. In March 2013, NTT DATA was selected as one of the Diversity Management Selection 100 sponsored by Japan's Ministry of Economy, Trade and Industry. In March

2014, NTT DATA was awarded the 2014 J-Win Diversity Award's Corporate Award for Basic Achievement from the NPO Japan Women's Innovative Network (J-Win). In March 2017, NTT DATA was selected as a "Semi-Nadeshiko Brand" by the Ministry of Economy, Trade and Industry as an outstanding public company in terms of encouraging the empowerment of women. In September 2017, NTT DATA received Level 3 "Eruboshi" certification—the highest ranking—by the Minister of Health, Labour and Welfare as an excellent company based on the Act on the Promotion of Women's Participation and Advancement in the Workplace.

At the May 2017 Global Summit of Women held in Japan, the Managing Director and CFO from NTT DATA Germany gave a speech. As this summit was an opportunity for female leaders from NTT DATA Group companies throughout the world to gather together, we held the 1st Global Meeting of Women's Initiative @ NTT DATA, a workshop promoting the active participation of women.

#### Major Initiatives Aimed at Promoting Diversity

	Major Initiatives			
Advancing women in the workplace	Career development training for female candidates for leadership positions and their supervisors Training held outside the Company for female candidates for leadership positions Forum in which senior management offers their views on diversity Transmission of messages from senior management via the in-house website Lectures by outside experts Training for managers on overseeing the development of female employees Formulation of development plans and monitoring activities for promoting women into management positions Planning and implementation of 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			
Supporting continued employment	<ul> <li>Operation of the Egg Garden in-house day-care center</li> <li>Seminar for promoting career development for employees on or about to take childcare leave</li> <li>Rental thin-client terminals for employees taking childcare leave, distribution of a handbook with information on the childcare leave system and support for employees seeking to balance work and childcare</li> <li>Nursing care support services provided by Umi wo Koeru Care no Te, a remote family care service NPO</li> <li>Seminar for supporting employees seeking to balance work and nursing care</li> </ul>			
Changing work styles	<ul> <li>Ongoing implementation of the "changing work styles" seminars for newly appointed department and section managers</li> <li>Ongoing effort to maintain workplace environments that allow employees to review their working styles according to each organization, including a trial of free address office, a workspace sharing model among employees, discretionary work system, and teleworking</li> <li>Introduction of "impressive worksites" as successful examples of changing work styles via the in-house website</li> <li>Efforts to encourage employees to take paid leave (including refreshment leave and anniversary leave)</li> <li>Expansion of scope of employees eligible to use the flextime system, greater flexibility of hours</li> <li>Flexible operation of system ensuring break time</li> </ul>			

#### [ 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 review our past initiatives, and we intend to consistently and steadily work toward achieving our goals through a Companywide effort.

#### Goals for Advancing Women's Careers

Plan Period	From April 1, 2016 to March 31, 2021				
NTT DATA issues	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.     Optimization of total working hours     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				
	Continue raising the percentage of female recruits to above 30% by the end of fiscal 2020  Maintained at above 30% for the past 10 years  Target 2  Achieve average total working hours of 1,890 hours per employee by the end of fiscal 2018  Enhanced efforts since 2013 have resulted in a reduction to an average of 1,910 hours per year in fiscal 2016				
Quantitative targets	Increase the number of women in management positions to at least 200 by the end of fiscal 2020 Increased by 19 women in the previous year to current total of 143 women (Target number of employed managers. Excludes Target 4.)				
	Increase women in senior management positions (directors, heads of organizations, etc.) to at least 10 by the end of fiscal 2020  Seven women currently serve in senior management positions				

#### [ LGBT and Sexual Minority Initiatives ]

NTT DATA is promoting initiatives on LGBT and sexual minorities from the standpoint of further improving a working environment in which diverse human resources can thrive. In addition to messages communicated by senior management, we provide in-house education to encourage understanding, operate a contact point for consultation, and conduct basic knowledge training for employees engaged in personnel, ESG promotion, and recruiting. We also apply various programs related to life events to same sex partners. In 2017, we received a Gold in the Pride Index 2017, administered by private organization work with Pride.

Looking ahead, we also plan to consider expanding the scope of programs related to spouses to include same sex partners as long as there are no legal restrictions.

## [ 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

#### 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

business operations, we continue to maintain hiring activities in collaboration with vocational training schools for persons with disabilities.

## [ 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 work style options that can be adopted to the requirements of participants, including full-time employment, reduced working hours, and three- and four-day working weeks.

In response to the revision of the Law Concerning Stabilization of Employment of Older Persons, the NTT DATA Group introduced the Maester/Platinum Maester System in fiscal 2014. This system allows employees to remain in full-time employment on a monthly salary, using the skills they have amassed over the years, nurturing successors and passing on their skills. We are promoting improved working conditions for senior employees so they can continue working comfortably.

As of April 1, 2017, 102 employees (24 of whom were new) were taking advantage of these systems at various Group workplaces.

## **Creating Comfortable Working Environments**

Healthy, stimulating work environments are essential to create high value by maximizing the abilities of each and every employee as they work with enthusiasm.

We are working to create healthy workplaces across the Group that support high employee satisfaction while striving to achieve working style innovations for each employee in teams, placing importance on individual abilities that lead to organizational strength.

## ■ Reducing Long Working Hours

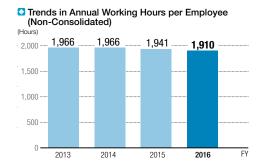
## [ Promoting Initiatives toward Addressing the IT Company Issue of Long Working Hours ]

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 2017, we will continue to set reduction targets for each organization and seek to achieve them by making continuous improvements through the use of the PDCA cycle.



#### ■ Work-Life Balance

The ongoing decline in the country's workforce due to a falling birth rate and aging population is an issue that must be addressed for the sustainable growth of corporations.

The NTT DATA Group is actively hiring skilled, motivated personnel, irrespective of gender, nationality, age, or disability, while also ensuring that a broad range of personnel with diverse values can demonstrate their talents and that all employees can lead healthy and prosperous lives.

#### [ 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 2016

Age Group	Age Group Content of Training	
Two years after joining Company	<ul> <li>Social insurance and taxes</li> <li>Asset formation via asset-building savings plans</li> <li>Turning points in life (marriage, childbirth, buying a home)</li> </ul>	291 employees participated in five sessions
Age 35	Metabolic syndrome and self-care     Public pension system and Company pension system     Revisions in insurance and housing costs, savings and investment	
Age 50	Public and corporate pension systems  Review of insurance and housing expenses, as well as savings and investment  Nursing care and inheritance	
Mandatory retirement age	<ul> <li>Retirement benefits, corporate pensions, public pensions</li> <li>Work options after retirement (internal system)</li> <li>Financial planning</li> </ul>	116 employees participated in four sessions

#### [ Encouraging Employees to Take Paid Vacation ]

To promote work-life balance among employees, NTT DATA encourages employees to take advantage of its refreshment leave\*1 and anniversary leave\*2 systems.

As a company participating in the Ministry of Land, Infrastructure and Transport's Positive Off initiative, NTT DATA asks its employees to plan and take long vacations during the summer break and year-end holidays and use the refreshment leave system. We have promoted activities to conserve electricity during the summer months since 2011, such as designating certain office floors off limits for a day in each organization, while encouraging flexible working styles with time off, common spaces, and teleworking. As we aim to achieve the targeted reduction in overall working hours, efforts encouraging the proactive utilization of paid leave led to an average of 18.2 days of paid leave taken per employee in fiscal 2016.

Going forward, we will continue combining various initiatives encouraging employees to take paid leave.

#### [ Opening the Way for Work Styles that Are Not Location Dependent ]

NTT DATA has operated a teleworking program since February 2008 as one specific example of work style innovation.

In addition, our IT system enables employees to access the Company's servers via their PCs, smartphones and, mobile phones (feature phones) when they are out of the office or on a business trip. About 70% of our employees take advantage of this system.

In addition to promoting work styles that are not location dependent, we are actively adopting the use of the discretionary work system with respect to working hours so as to accelerate flexible work styles, and in fiscal 2016 we expanded the flextime system to staff departments. More than half of our employees take advantage of both systems.

Amid globalization, we have put in place the infrastructure for teleconferencing and conference calls to offer flexible working styles without regard to time or location.

## Participation in Telework Day as a Special Cooperating Organization

The Tokyo metropolitan government and municipal authorities have designated July 24 as "Telework Day," as this date coincides with the opening ceremony of the Tokyo 2020 Olympic and Paralympic Games. Companies, organizations, and government bodies are being encouraged to view the event as an opportunity to participate in a national campaign targeting work style reform.

For Telework Day in 2017, NTT DATA participated as a "special cooperating organization"—an organization cooperating in measuring the impact of large-scale teleworking by 100 or more people. Some 8,750 employees working in the Tokyo metropolitan area took part in this 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 2,950 people), encouraged them to shift commuting times by taking advantage of discretionary work and flextime systems (approximately 3,300 people), and recommended taking time off for annual paid leave and summer vacations (approximately 2,500 people).

NTT DATA continues to promote measures related to work style reform. As a company that broadly deploys IT services that support corporate work style reform, we are also contributing to changing work styles in Japan.

## [ Upgrading Childcare and Nursing Care Systems ]

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.

Regarding systems supporting employees with children, NTT DATA earned the Kurumin Next-Generation Certification Mark in June 2008 from the Ministry of Health, Labour and Welfare in recognition of our various efforts. Following the revision to the Act on Advancement of Measures to Support Raising Next-Generation Children, we acquired the new Kurumin Mark in August 2015.

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.

<sup>\*1</sup> Employees can take more than four consecutive days of vacation when a work milestone is achieved.

<sup>\*2</sup> Employees decide their own anniversary date and plan to take vacations every year on this anniversary.

#### Principal Systems

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)

	FY2013		FY2014		FY2015		FY2016	
	Female	Male	Female	Male	Female	Male	Female	Male
Childcare leave (People)	124	11	129	17	149	12	160	20
Shorter working hours for childcare (People)	180	3	208	2	240	2	278	7
Nursing care leave (People)	4	1	1	4	3	3	4	4
Shorter working hours for nursing care (People)	0	0	0	0	1	0	0	1
Average paid leave taken (Days)		16.6		17.4		17.0		18.2
Average rate of paid leave taken (%)		82.9		86.8		85.0		91.0
Teleworking (People)	-		453	1,227	383	1,055	520	1,528

#### [In-House Day-Care Center, 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 child-care 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.

Fifteen children were registered for the monthly childcare service, and 93 children were registered for the temporary childcare program in fiscal 2016. We will continue promoting use of the facility.

## [ Career Development Support Seminars Targeting Employees on Childcare Leave ]

Since fiscal 2010, we have held seminars on considering careers after returning to work targeting employees on maternity leave or childcare leave. These seminars attempt to cultivate career awareness and dismiss uncertainties after returning to work through workshops that consider future careers, lectures by female managers with experience raising children, and other activities.

## **■ Employee Health Maintenance and Promotion**

NTT DATA promotes employee health and mental healthcare in cooperation with its various work-places 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 building awareness regarding self-care among employees.

#### [ Implementation of Mental Health Management Exams ]

NTT DATA has conducted mental health management examinations for all people in management positions annually from fiscal 2009 to serve as the basis for looking after their subordinates (reporting line care).

A total of 217 people, primarily newly appointed managers and their peers, took the exam, and 138 passed it (the pass rate was 63.6%) in fiscal 2016.

Looking ahead, we will continue to strive to build awareness among managers by administering the exam in conjunction with the implementation of reporting line care training led by industrial physicians.

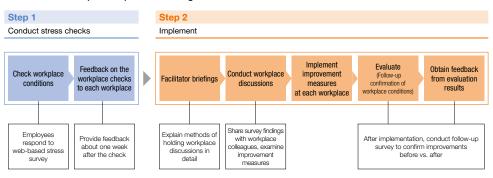
## [ Creating Safe Workplace Environments through Health and Safety Committees at Worksites ]

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.

The number of occupational accidents during fiscal 2016 stood at four, two less than in fiscal 2015. 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.

#### 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 dialogue between labor and management in addressing various issues.

## Pursuing Employee Satisfaction

## [ Ongoing Employee Satisfaction Surveys ]

The NTT DATA Group strives to improve workplace environment 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 2016 survey, NTT DATA Head Office employee satisfaction was ranked 3.70 points out of a total of five points, indicating continued satisfaction.

Moreover, in fiscal 2015 we began conducting the "One Voice" employee engagement survey for all employees working at our Group companies overseas.

We will continue striving to create rewarding workplace environments through these initiatives.

#### 



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 level at the NTT DATA Group lies within the "satisfied" domain.

## **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 social issues.

## **Management Approach**

The NTT DATA Group contributes to the advancement of society as a whole by developing and providing IT solutions for global social 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 Sustainable Development Goals (SDGs) adopted at a United Nations summit in 2015.

## **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 widerange of initiatives, from applying UD in the systems and services we deliver to clients to training and enhancing the awareness of employees.

Furthermore, in recent years 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



### [ Universal Design Initiatives ]

The International Association for Universal Design (IAUD) was established in Japan in 2003 to promote the widespread adoption of UD. NTT DATA has been a full member of the IAUD—the largest organization of its kind in Japan—since its inception.

In fiscal 2016, NTT DATA employees continued to participate in the UD Project for Media and the Mobile Space Project, engaging in the spread and awareness of color universal design.

## [ Initiatives for the Promotion of Universal Experience ]

NTT DATA conducts UX seminars with the aim of promoting in-house UX initiatives. The first seminar, held in May 2017, introduced examples and services incorporating UX methods in the Financial, Public & Social Infrastructure, and Enterprise & Solutions segments.

The seminar covered UX improvement project initiatives within the AnserBizSOL Internet banking service for corporations, UX support in the new development of customer response support system Madomado, and drone flight application systems and UX approach to the upcoming Eki-Net release and consideration of new services, as well as explanations regarding the backgrounds of these initiatives and issues surrounding their introduction. We also announced UX realized by combining a variety of processes, including not only workshops and the creation of prototypes (storyboards) but also user interviews, field work, and the introduction of design concepts.

To analyze user emotions and actions and create services meeting their needs, we will continue to promote department collaborations through seminars, providing services that begin with users and enhancing the value of services.



I IX seminar



Initiative case study announcements

## 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

(Million of ven)

	FY2013	FY2014	FY2015	FY2016
Expenditures for social contribution activities	368.00	326.42	271.07	299.36
Donations (funding for matching gifts: amount extended by the Company)	101.00	85.73	93.10	138.40
Expenditures for various other social contribution projects	267.00	240.69	177.97	160.96

## [ 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

http://www.nttdata.com/global/en/csr/social-contribution/index.html

## [ 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 Global IT 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.

In 2017, the spring program took place on March 11 and 12 and the summer program on August 11,12 and 13 at the NTT DATA Komaba Training Center, with about 430 children in attendance.

Programming offers a tool for realizing ideas for the future. We plan to consistently provide children with opportunities to familiarize themselves with IT, stimulate their interest through fun courses, and encourage them to create their own future.

## 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 2016, a total of 86 students participated from eight 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 youngsters 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.

## 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 overall support for the Innovation Management College of Japan (IMCJ)\*, a Chief Information Officer and innovation leadership training program targeting 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.

In fiscal 2016, we conducted surveys and research on leading case studies related to "mechanisms" for bringing out creativity in Company employees. Through these efforts, we invigorate initiatives aimed at strengthening corporate product and service development using IT, creating new value through business model innovations, and enhancing competitiveness.

<sup>\*</sup> 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.

# 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 of the NTT DATA GROUP

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 environmental issues.

tally 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 conjunction with this promotion of "environmental contributions and communication," the Group is working to reinforce environmental management to achieve significant results toward the improvement of environmental issues. Looking ahead, the NTT DATA Group will utilize IT as it aims to create paradigms that benefit the global environment.

# Environmental Management

| Environmentally Oriented Management Policy and Long-Term Goals | Environmental Management System | Internal Environmental Audits | Compliance with Laws and Regulations | Environmental Education | Environmental Contributions and Communication | Environmental Impact |

## Addressing Climate Change

| Climate Change Strategy | Reducing Greenhouse Gas Emissions |

## Appropriate Use of Resources

Promoting Resource Saving and Recycling

## Reducing the Environmental Impact of the Value Chain

The Greening of Clients and Society | Promoting Green Purchasing

### **Environmental Data**

| Environmental Impact Data of the NTT DATA Group in Fiscal 2016 | | Office Waste of the NTT DATA Group in Fiscal 2016 |

## **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 Activities and remains committed to promoting environmental management based on a PDCA cycle.

## **Environmentally Oriented Management Policy 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 2012 Toshio Iwamoto, President and Chief Executive Officer

## **■ Environmental Messages**

# Earth Solutions Using IT to Solve Environmental Problems

The NTT DATA Group is applying IT to create new ways and means of resolving the environmental problems facing the world and society.

#### [ 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

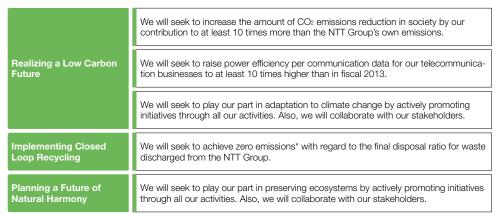
- Steadily reduce CO<sub>2</sub> emissions by the Group by raising the efficiency of and implementing operational improvements to its data centers and by such work-style innovations as hot-desking
- Implement systematic cuts to paper usage and waste volumes

## 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.



<sup>\*</sup> Zero emissions: The NTT Group considers a final disposal rate of 1% or less to satisfy zero emissions conditions.

## **Environmental Management System**

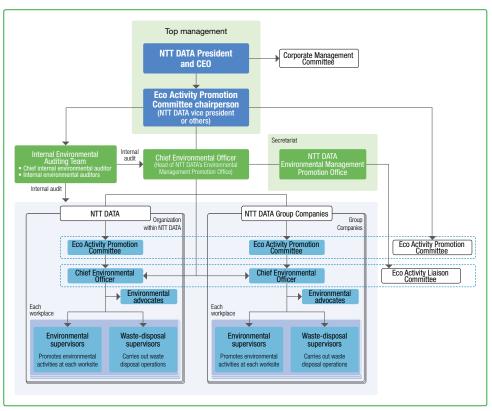
## ■ Strengthening the Cross-Group Environmental Management System

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 promotion 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 (EMS) to the entire Group. Work is currently under way on EMS enhancements and revisions to manuals and implementation procedures to make our transition to ISO 14001:2015 in fall 2017.

As of the end of March 2017, a total of 34 Group companies, including NTT DATA, had attained ISO 14001 certification. Of this total, 28 companies acquired Group integrated certification, while six companies gained independent certification. As a result, the EMS coverage rate of sales totaled 68%, with 58% by Group integrated certification and 10% by independent certification.

#### Status of ISO 14001 Certification (as of March 31, 2017)

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)	NTT DATA UNIVERSITY CORPORATION

NTT Group entities that have acquired certification independently		
NJK CORPORATION	JAPAN INFORMATION PROCESSING SERVICE CO., LTD.	
NTT DATA MSE CORPORATION	NTT DATA UK	
CATS CO., LTD.	Everis Participaciones, S.L.	

## **Internal Environmental Audits**

## ■ Improving Activity Levels through Periodic Internal Audits

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

In fiscal 2016, 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 EMSs, 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 2016

	Term of Implementation	First Audit: July 4 to	July 26, 2016	Second Audit: January 23 to February 28, 2017		
	Target organizations and	NTT DATA	Actual inspection: 4 organizations Self-audit: 27 organizations	NTT DATA	Actual inspection: 6 organizations Self-audit: 24 organizations	
	companies	<ul><li>Group companies</li></ul>	Actual inspection: 15 companies	Group companies	Actual inspection: 11 companies	
	Audit results	<ul> <li>Actual inspection</li> </ul>	2 serious cases, 9 minor cases, 20 cases for observation	<ul> <li>Actual inspection</li> </ul>	8 serious case, 11 minor cases, 11 cases for observation	
		<ul><li>Self-audit</li></ul>	0 serious cases, 1 minor case, 2 cases for observation	<ul><li>Self-audit</li></ul>	No serious cases, 2 minor cases, 2 cases for observation	

## ■ Training Internal Environmental Auditors

The NTT DATA Group has expanded the scope of ISO 14001 certification, enhancing systems to foster internal audit staff (90 staff as of March 31, 2017).

In fiscal 2016, 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. In accordance with ISO 14001:2015, we also held study sessions for internal environmental auditors three times during the year.

Looking ahead, we will seek to raise the efficiency of internal audits even further by promoting a long-term program for cultivating internal environmental auditors, which includes transferring know-how from experienced auditors and seeking guidance from outside experts toward the transition to ISO 14001:2015.

## 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 Saving 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.

#### Major Laws and Regulations and the Scope and Number of Facilities Impacted in Fiscal 2016

Major Laws and Regulations	Target Items	Number of Facilities Impacted
Enguery Continue Ant	Crude oil equivalent, Number of facilities using 3,000 kl/year or more	11
Energy Saving Act	Crude oil equivalent, Number of facilities using 1,500 kl/year or more	4
Air Pollution Control Act	Number of smoke-generating facilities	7
Water Quality Pollution Control Act	Number of oil storage and other facilities	46
Sewerage Service Act	Number of facilities generating 50 m³ or more of wastewater per day	4

## **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, and 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. To meet the needs of participants, we conduct group training sessions in addition to the e-learning courses we have provided to date.

In fiscal 2016, we implemented CSR and environmental education for all domestic Group employees and enhanced the curriculum related to environmental regulations and corporate support of sustainable societies with the aim of deepening understanding of environmental protection to further strengthen compliance.

We intend to maintain our efforts to enhance the content in fiscal 2017 by adding the latest topics.

## Course Participants in Fiscal 2016

CSR and environmental education	31,780
Course for waste-disposal supervisors	681
Course for environmental managers, environmental advocates, and environmental supervisors	810

### **Environmental Contributions and Communication**

#### ■ Promotion of 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 environmental contribution activities. To promote environmental contribution activities targeting local communities, the NTT DATA Group has set a target for the number of participants in environmental contribution activities since fiscal 2010.

In fiscal 2016, as a result of proactive efforts at each company to share information pertaining to social and environmental contribution activities in which each organization and company participate, we surpassed our target with a total of 5,721 employees participating.

In fiscal 2017, we will proactively participate in clean-up activities in areas around office buildings and other events held in each region.

## **Environmental Impact**

## ■ Targets for Fiscal 2017 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 year against results.

Since fiscal 2009, we have promoted the greening of clients and society, and the greening of 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 emissions of industrial waste to the final disposal rate of waste as a whole in fiscal 2012.

Moving forward, the NTT DATA Group continues to reduce its environmental impact in order to meet these targets.

#### ☐ Targets for Fiscal 2017 and Beyond

(Base year: 2008; Scope of data: NTT DATA and 27 Group companies in Japan that have acquired Group integrated ISO 14001 certification)

Scope	Target Definitions	FY2016 Results	FY2017	FY2018	FY2019
Reduce the environmental impact of society through the promotion of green IT	Newly posted Smart & Green IT*1 solutions	5 cases	5 cases	5 cases	5 cases
Reduce greenhouse gas emissions	Amount of CO <sub>2</sub> emissions	20% reduction	16% reduction	16% reduction	16% reduction
Reduce the amount of copy paper purchased	Amount of copy paper purchased (Gross amount calculated on a number-of-sheets basis)	50% reduction	37% reduction	37% reduction	37% reduction
	Amount of waste for final disposal (Gross amount)	79% reduction	90% reduction*2	90% reduction*2	90% reduction*2
Reduce the amount of waste for final disposal	Final waste disposal rate (Final disposal amount / total amount of waste)	2.2%	1.0% or less*2	1.0% or less*2	1.0% or less*2
Social and environmental contribution activities	Number of activity participants	5,721	5,700	5,800	5,900

<sup>\*1:</sup> Smart & Green IT: http://www.nttdata.com/jp/ja/green\_it/index.html (in Japanese only)

## Fiscal 2016 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 2016

(Scope of data: NTT DATA and 27 Group companies in Japan that have acquired Group integrated ISO 14001 certification)

Coope	Target Definitions	Base Value	Fiscal 2016		
Scope	Target Definitions	(Base fiscal year: 2008)	Target Value	Results	Assessment
Reduce the environmental impact of society through the promotion of Green IT	Newly posted Smart & Green IT solutions	-	5 cases	5 cases	0
Reduce greenhouse gas emissions	Amount of CO <sub>2</sub> emissions	306.562 t	16% reduction (257,512 t or less)	20% reduction (245,910 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 (206,510,000 sheets or less)	50% reduction (162,800,000 sheets or less)	
Reduce the amount of waste for final disposal	Amount of waste for final disposal (Gross amount)	402 t	72% reduction (113 t or less)	79% reduction (85 t)	0
neduce the amount of waste for final disposal	Final waste disposal rate (Final disposal amount / total amount of waste)	_	2.2% or less	2.2%	0
Social and environmental contribution activities	Number of activity participants	_	3,600	5,721	0

<sup>\*2:</sup> Figures revised to exclude effective utilization of thermal energy (thermal recycling) generated by incineration at final disposal from final disposal.

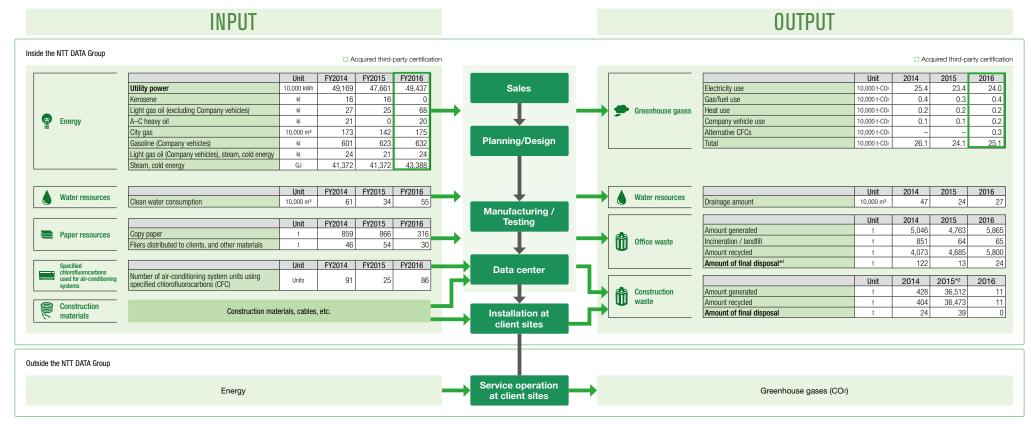
### Overview of the NTT DATA Group's Environmental Impact

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



#### 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)

- \*1 Thermal recycling has been taken into consideration for the calculation of data since fiscal 2015.
- \*2 Data for fiscal 2015 reflects the demolition of a large-scale building.

## Environmental Accounting

#### [ Aiming to Conduct Efficient and Effective Environmental Preservation Activities ]

In fiscal 2016, Group environmental cost comprised ¥121 million in investments and ¥313 million in expenses. Improved recycling rates led to a decrease in costs for inter-office waste disposal under "Resource recycling costs," thereby reducing costs associated with business domains.

#### Environmental Accounting Conservation Cost

(Scope of data: All organizations of NTT DATA and 69 Group companies (Japan only))

(Millions of yen)

	inistry of the Environment's		FY2	014	FY2015		FY2016	
Environmental Accounting Guideline Categories		Major Initiatives	Investment	Expenses	Investment	Expenses	Investment	Expenses
Вι	usiness area costs		1	277	6	187	121	51
	Pollution prevention costs	Asbestos countermeasures, PCB management, etc.	0	21	0	21	120	1
	Global environment conservation costs	Implementation of energy conservation measures; measures to reduce CO2 emissions through the introduction of outdoor-air cooling devices; elimination of specified CfCs in air-conditioning equipment, etc.	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
		Compliance with the Act on the Promotion of Sorted Collection and Recycling of Containers and Packaging	0	0	0	1	0	0
Up	ostream / downstream costs	Labor costs related to environmental protection activities, ISO certification acquisition, building greening, environmental PR, etc.	0	256	0	261	0	262
R8	&D costs	Environment-related R&D	0	0	0	0	0	0
Cit	tizen activity costs	ctivity costs Environmental contribution to regional communities		1	0	1	0	0
To	tal		1	534	6	449	121	313

Investments within business areas increased ¥115 million compared to the previous year due to the installation of oil tank leakage monitoring equipment. The installation of oil tank leakage monitoring equipment is the main reason for this increase in cost.

## **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, took effect under the United Nations General Assembly. Addressing climate change was also included in the United Nations Sustainable Development Goals (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, which reports directly to the president, analyzes the financial impact of regulatory trends (including carbon taxes, fixed price 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 Corporate Management Committee, the highest decision-making body, on risks and opportunities it deems significant and measures for addressing them.

#### 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 draws up and submits countermeasures to the Corporate Management Committee.

## Prioritization of Risks

The Environmental Management Promotion Office compiles a list of key climate change risks and opportunities together with other important factors such as  $CO_2$  emission volumes, financial effects, and external evaluation of the Company's response to climate change. It prioritizes items based on difficulty, urgency, and financial impact and then formulates proposals to address them, which are then submitted to the Corporate Management Committee.

#### Offices

We are reducing CO<sub>2</sub> emissions volume by approximately 12,903 t-CO<sub>2</sub> 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 for which we conduct green consulting, providing high voltage direct current (HVDC) and other environmentally friendly solutions, data center energy surveys, and analysis and planning of improvement measures.

As one example of HVDC, our XECHNO® Power + FRESH HVDC® significantly reduce power loss from AC/DC conversion in the power supply route of data centers, saving between 10% and 30% more energy than conventional uninterruptable power supply (UPS) power sources that are widely used in existing data centers, thereby further reducing CO<sub>2</sub> emissions. This product received the Minister of Economy, Trade and Industry Award in the energy-saving category of the Green IT Promotion Council's Green IT Awards 2012.

## ■ Risks and Opportunities Related to Climate Change

#### [ Risks Driven by Regulatory Changes ]

Compliance with climate change regulations presents the risk 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<sub>2</sub> emissions from 2050 onward. For NTT DATA, nearly all of our CO<sub>2</sub> 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 underdeveloped, achieving this is expected to be extremely difficult. Also, there are concerns that domestic regulations will be substantially strengthened, increasing the cost burden associated with CO<sub>2</sub> 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 ¥4.8 billion. To mitigate these risks, NTT DATA has shifted to electricity providers that mainly use LNG fired power plants, which have lower emissions than petroleum or coal. Going forward, we will move incrementally forward with the switchover to renewable energy and other low-carbon energy sources. In addition, we have invested approximately ¥500 million in renewable energy power generation equipment, which at present, is generating 248 MWh of renewable energy.

Furthermore, under the Tokyo Metropolitan Government's Ordinance on Environmental Preservation, large facilities are required to reduce total CO<sub>2</sub> emissions from energy usage and to participate in a cap-and-trade program of emissions trading. A total of eight NTT DATA 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. Costs associated with emissions trading to meet the requirements for total

 $CO_2$  emissions reductions are estimated to be approximately ¥100 million for the period between 2015 and 2020. 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 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 2015 and fiscal 2016 was approximately ¥1.1 billion. As a result of these efforts, reductions for fiscal 2015 totaled in  $CO_2$  emissions for the same period totaled 85,045 t- $CO_2$ , a reduction rate of approximately 40%, which is the same amount forecast for fiscal 2016.

### [ 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 in Japan and the EU, while flooding and lightning could halt operations at the data centers. The suspension of operations at our data centers could have an impact on large-scale NTT DATA systems that sustain social infrastructures, such as financial and medical services, thereby posing the risk of extensively impeding wider social systems.

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. We have been taking various measures to avoid these risks, such as by: (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.

Average global temperatures have been clearly on the rise over the past few years, posing the risk of higher energy and operational costs due to air-conditioning needs at NTT DATA's data centers, which are located around the world.

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 by approximately ¥80 million. To manage this risk, we are upgrading power equipment and improving the operating efficiency of air-conditioning, lighting, etc., at data centers in Japan. 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 (PV) power generation systems and high voltage direct current power supply systems. The costs of upgrading facilities and enhancing operations at all data centers in Japan totaled approximately ¥4.9 billion for the period between fiscal 2010 and fiscal 2016.

#### [ 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, 2017, 17% of NTT DATA 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. 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 ¥272 million\*1.

NTT DATA recognizes the importance of information that investors focus on in their requests for information disclosure related to climate change, especially from CDP\*2, and proactively discloses information to investors. From fiscal 2013 to fiscal 2016, 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.

- \*1 Calculated on the basis of 280,500,000 outstanding shares as of March 2017
- \*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)

While addressing climate change is associated with business risks, it also presents business opportunities within the NTT DATA Group. Our goal is to bring about a sustainable society and achieve growth for the Group by providing IT services that can be applied to addressing the social challenge of mitigation and adaptation with regard to the impact of climate change.

#### [ Opportunities Driven by Regulatory Changes ]

The acceleration of stronger regulations aimed at realizing a zero CO<sub>2</sub> emissions society in 2050 is expected to increase demand for more efficient IT systems, which account for a certain proportion of corporate energy consumption. Examples include demand for efficiency and virtualization, consolidation into joint data centers, and outsourcing increased demand to data centers with high energy efficiency. NTT DATA's sales of data center and related services amounted to ¥69.1 billion as of March 31, 2017, and we believe we can further expand sales to ¥75.0 billion in fiscal 2018, buoyed by increased demand for outsourcing to energy-efficient data centers.

In addition, the NTT DATA Group is promoting a Green Data Center service aimed at reducing the environmental load by integrating IT and facilities technologies and is steadily introducing green data center technologies that can achieve large-scale reductions in energy consumption at its own data centers. Seeking to further expand business opportunities, we have invested over ¥10 billion in technologies including HVDC power supply systems from fiscal 2009 to fiscal 2015 and have steadily advanced from demonstration experiments to commercialization.

For example, through comprehensive installation of green data center technologies, including HVDC power supply systems, virtualization technologies, and air current control systems for cooling, we succeeded in reducing energy consumption at the NTT DATA Mitaka Building by approximately

30% compared to our conventional data centers. In 2016, we began construction of the Mitaka Data Center EAST (scheduled for completion in February 2018). We expect to realize Japan's top-class electricity consumption efficiency of PUE 1.3 or less (annual average) by adopting an outside air-cooling system utilizing natural energy and shortening air-conditioning equipment operating time. Furthermore, we collaborated with our subsidiary NTT DATA Intellilink Corporation and Japan Radio Co., Ltd., to develop a unified HVDC power supply system, which has been installed at data centers of other companies. The system was recognized with a Minister of Economy, Trade and Industry Award in the Green IT Awards 2012.

We have also been recognized by the Green IT Promotion Council for the energy-saving performance of our systems and are focused on establishing industry standards this recognition expands. In 2015, Group company NTT DATA Intellilink Corporation together with Takasago Thermal Engineering Co., Ltd., Osaka University, and the Advanced Telecommunications Research Institute International received the Minister of the Environment Award for "Joint Technological Developments Related to Drastically Low-Carbon Data Centers and Waste Heat Utilization in Offices, Etc." at the 13th Industry-Academia-Government Collaboration Achievement Awards.

#### [ Opportunities Driven by Physical Impact ]

There is an opportunity to accelerate business utilizing cloud-based data centers, which will enable high levels of safety in corporate data storage by avoiding the risk of data loss due to abnormal weather phenomena such as typhoons and localized torrential rain. In its dual roles of supporting the construction of corporate systems and providing joint-use system services, NTT DATA has accumulated expertise in system platform technologies related to cloud computing and provided safe and highly reliable system platforms.

In fiscal 2016, sales of the NTT DATA Group's cloud computing services amounted to approximately ¥330.2 billion and accounted for over 19% of total sales of ¥1,732.4 billion. For example, our joint-use enterprise systems, such as the Chigin Kyodo Center (BeSTA®) for regional banks, have gained the top market share of around 30%, and more than 90% of credit associations in Japan use our comprehensive online Shinkin Kyodo System. We believe that accelerating demand for cloud computing services will enable us to further expand our business.

Our cloud computing services create business opportunities by providing two comprehensive solutions for platform services, one that offers everything from infrastructure to applications and another that offers construction and operation services that build data center environments combining common-use system components, such as those offered in joint-use data centers for financial institutions. For example, since 2011 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 2012 we also enhanced our service line-up by adding low-cost, fast-response "quick services" to our existing menu of data analysis and information services, taking advantage of the use of Big Data, a peripheral service that is highly compatible with cloud computing.

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. Furthermore, based on the knowledge acquired through the operation of this "integrated environment cloud," we will expand its application to a variety of commercial environments. Between fiscal 2009 and fiscal 2016, we have invested over ¥10 billion in capital expenditure on cloud computing in data centers.

## **Reducing Greenhouse Gas Emissions**

## ■ Initiatives of the NTT DATA Group

In fiscal 2016, we continued to promote power-saving measures that take into account diverse workstyles, 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 about two-thirds of the  $CO_2$  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 377,424 MWh in total electricity used at all of our data centers, 248 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 2016 by at least 16.0% compared to fiscal 2008, we were actually able to achieve a considerable reduction of 20% from the levels recorded in fiscal 2008.

#### Greenhouse Gases

(Scope of data: All organizations of NTT DATA and 69 Group companies (Japan only)) (10,000 t-CO<sub>2</sub>)



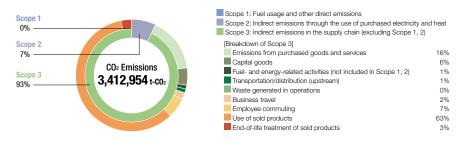
## ■ Managing Greenhouse Gas Emissions across the Supply Chain

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 CO<sub>2</sub> emissions and began management under Scope 3, which calculates the aggregate amount of CO<sub>2</sub> emissions by taking into account product and service life cycles, from their procurement through their

distribution and to their disposal. As a result, total CO<sub>2</sub> emissions of the NTT DATA Group, including overseas Group companies, was 3.412,954 t-CO<sub>2</sub>.

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 2016



## ■ Third-party Verification of Greenhouse Gas Emissions

We received third-party verification of Scope 1–3 greenhouse gas emission volume results in fiscal 2016 from Lloyd's Register Quality Assurance Limited.

Verification of Scope 1 and 2 applies to all organizations of NTT DATA and 69 domestic Group companies, while Scope 3 verification applies to all organizations of NTT DATA and all 223 Group companies in Japan and overseas.

Details of this verification is as follows.

### NTT DATA Group Fiscal 2016 Greenhouse Gas (GHG) Emissions Summary

Scope of GHG emissions	t-CO2
Indirect GHG emissions (Scope 1)	8,691
Energy source indirect GHG emissions (Scope 2 market basis)	242,120
Energy source indirect GHG emissions (Scope 2 location basis)	292,688
Other indirect GHG emissions (Scope 3)	3,162,143



#### Third-Party Verification

http://www.nttdata.com/global/en/csr/environment/third-party/pdf/third\_party\_veri\_en.pdf

## **Appropriate Use of Resources**

## **Promoting Resource Saving and Recycling**

#### **■** Waste Reduction

In fiscal 2016, 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 79% reduction in the final amount of waste disposal compared to fiscal 2008 and a final waste disposal rate of 2.2%.

Emissions are confirmed by the Japan ISO 14001 certification body. Moreover, it is confirmed as Scope 3 Category 5 "Waste generated in operations" within the third-party verification of greenhouse gas emissions.

In fiscal 2017, 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.

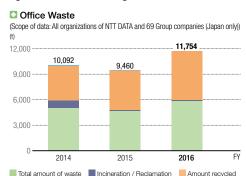
## ■ Reduction of Copy Paper Purchased

In fiscal 2016, we made a committed effort to reduce 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 2016 of reducing usage by 50% compared to fiscal 2008.

In fiscal 2017, 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 polychlorinated biphenyl (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 and such contaminated industrial waste as used syringe needles. 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.



Amount of final disposal



## **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 devices, 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 CO² emissions via the use of IT and has participated in formulating common guidelines for estimating reductions in CO² 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 sectors 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 Life Cycle Assessment Society of Japan. 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**

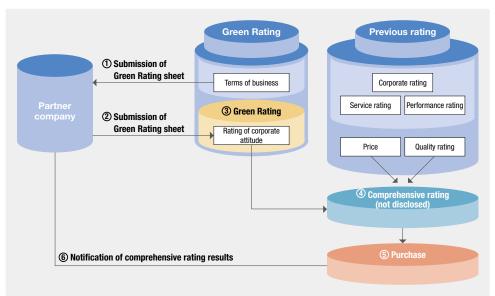
## Promoting Green Purchasing through an Assessment of a Company's Corporate Stance and Products

NTT DATA has established an assessment criterion with respect to environmental preservation and the eco-friendliness 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 center 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**

## Environmental Impact Data of the NTT DATA Group in Fiscal 2016

	Environmental Data	Units	Amount
Paper resource	Total volume used (including paper from virgin pulp and recycled paper)	t	346
	Office paper	t	316
	Client services (leaflets, pamphlets, instruction manuals, etc.)	t	30
	Amount of total paper from virgin pulp	t	322
	Office paper	t	294
	Client services (leaflets, pamphlets, instruction manuals, etc.)	t	27
Global warming	Greenhouse gas emissions (CO <sub>2</sub> ) conversion*1	t-CO2	250,811
	Carbon dioxide (CO <sub>2</sub> ) emissions	t-CO2	247,885
	Electricity use	t-CO2	239,647
	Gas / fuel use	t-CO2	4,238
	Heat use	t-CO2	2,473
	Company vehicle use	t-CO2	1,527
	Methane (CH <sub>4</sub> ) emissions	t-CO2	11
	Furnaces	t-CO2	9
	Shipping (automobiles, ships)	t-CO2	3
	Dinitrogen monoxide (N2O) emissions	t-CO2	63
	Furnaces	t-CO2	2
	Shipping (automobiles, ships)	t-CO2	61
	Hydrofluorocarbon (HFC) emissions*2	t-CO2	2,851
	Perfluorocarbon (PFC) emissions	t-CO2	0
	Low-pollution vehicles owned	Vehicles	770
	Electric vehicles	Vehicles	627
	Hybrid vehicles	Vehicles	4
	Certified fuel-saving or low-emission vehicles (gasoline-powered vehicles)	Vehicles	110
	Others	Vehicles	29
	Low-pollution vehicles introduced during the year	Vehicles	9
	Electric vehicles	Vehicles	0
	Hybrid vehicles	Vehicles	0
	Certified fuel-saving or low-emission vehicles (gasoline-powered vehicles)	Vehicles	9
	Others	Vehicles	0
	Sustainable / new energy systems installed	Vehicles	3
	Solar power systems	Vehicles	2
	Hybrid (solar and wind power) systems	Vehicles	1
	Cogeneration systems (CGS)	Vehicles	0
	Sustainable / new energy systems introduced during the year	Vehicles	0
	Solar power systems	Vehicles	0
	Hybrid (solar and wind power) systems	Vehicles	0
	CGS	Vehicles	0
	Electric power generated by sustainable / new energy systems	kWh	248,035
	Solar power systems	kWh	248,035
	Electric power generated by sustainable / new energy systems introduced during the year	kWh	0
	Solar power systems	kWh	0

	Environmental Data	Units	Amount
Waste	Industrial waste requiring special management, etc.		
countermeasures	Asbestos removed (from buildings) during the year	Instances	C
	Asbestos emissions (from buildings) during the year	t	C
	Waste batteries	t	C
	Other waste (acidic ash, alkali, oil, etc.)	t	C
	Use of products containing PCBs	Units	1
	Transformers	Units	1
	PCB-containing products renewed (removed, stored) during the year	Units	C
	Transformers	Units	C
	Stabilizers	Units	C
	Storage of PCB-containing products	Units	177
	Transformers	Units	C
	Stabilizers	Units	177
	Disposal of PCB-containing products during the year	Units	C
	Transformers	Units	C
	High-voltage condenser	Units	0
	Low-voltage condenser	Units	0
	Stabilizers	Units	0
0		UTILS	
Ozone layer	Removal of air-conditioning system units using chlorofluorocarbons (CFCs) during the year	11.0	
protection	Removal of air-conditioning system units using specified CFCs	Units	2
	Removal of air-conditioning system units using alternative hydrochlorofluo- rocarbons (HCFCs)	Units	3
	Removal of air-conditioning system units using alternative hydrofluorocar- bons (HFCs)	Units	0
	Recovery and destruction of specified CFCs used for air-conditioning systems	kg	547
	Recovery and destruction of alternative HCFCs used for air-conditioning systems	kg	50
	Recovery and destruction of alternative HFCs used for air-conditioning systems	kg	C
	Use of air-conditioning system units using CFCs	<u> </u>	
	Air-conditioning system units using specified CFCs	Units	86
	Air-conditioning system units using alternative HCFCs	Units	593
	Air-conditioning system units using alternative Holics  Air-conditioning system units using alternative HFCs	Units	2,012
	Specified CFCs used for air-conditioning systems		9,916
		kg	
	Alternative HCFCs used for air-conditioning	kg	19,000
	Alternative HFCs used for air-conditioning	kg	36,739
	Storage of air-conditioning system units using CFCs		
	Storage of air-conditioning system units using specified CFCs	Units	C
	Storage of air-conditioning system units using alternative HCFCs	Units	C
	Storage of air-conditioning system units using alternative HFCs	Units	C
	Stored amount of specified CFCs used for air-conditioning systems	kg	3,279
	Stored amount of alternative HCFCs used for air-conditioning systems	kg	1,268
	Stored amount of alternative HFCs used for air-conditioning systems	kg	305
	Use of vehicles using CFCs		
	Company vehicles that employ CFCs in air-conditioner refrigerants	Units	C
	Company vehicles that employ HCFCs in air-conditioner refrigerants	Units	C
	Company vehicles that employ HFCs in air-conditioner refrigerants	Units	861
	Use of CFCs in vehicle air-conditioners	kg	C
	Use of HCFCs in vehicle air-conditioners	kg	C
	Use of HFCs in vehicle air-conditioners	kg	9
	Elimination of specified-halon fire prevention equipment	Ng	
	Buildings from which specified-halon fire prevention equipment removed	Buildings	C
	during the year  Amount of specified halons removed from fire prevention equipment during	kg	C
	the year  Amount of specified halon gas emitted by fire prevention equipment during	kg	
	Remaining number of buildings employing specified-halon fire prevention	Buildings	13
	equipment  Remaining specified halon gas emissions from fire prevention equipment	kg	36,400

	Environmental Data	Units	Amount
Resource usage	Consumption of water resources	m <sup>3</sup>	826,896
	Clean water consumption	m <sup>3</sup>	553,703
	Sewerage water consumption	m <sup>3</sup>	273,193
	Gray water consumption	m³	0
	Rainwater consumption	m³	0
	Consumption of clean, sewerage, and other water	m³	0
	Energy consumption		
	Utility power	10,000 kWh	49,437
	Kerosene	kl	0
	Light gas oil (excluding Company vehicles)	kl	68
	A-C heavy oil	kl	20
	City gas	10,000 m <sup>3</sup>	175
	Gasoline for Company vehicles	kl	632
	Light gas oil for Company vehicles	kl	24
	Steam	GJ	10,192
	Cold energy	GJ	33,196

### Scope of Environmental Impact Measurement

All NTT DATA organizations, 69 Group companies in Japan

## Office Waste of the NTT DATA Group in Fiscal 2016

(ko

			Waste Dispo	osal Amount		Final Disposal	
Primary	Subcategory	Recycled Amount	Disposal	Method	Total Emissions		
Category		Amount	Incineration	Landfill Amount	EIIIISSIOIIS	Disposai	
Category A + B	Mixture of Categories A and B (unsorted waste)	0	0	0	0	0	
	Fine paper	1,319,789	380	0	1,320,169	38	
	Newspapers, magazines, cardboard	62,522	0	0	62,522	0	
	Raw garbage (tea leaves, food scraps, cigarette butts, etc.)	11,201	177	0	11,378	18	
Category A (Burnable)	Paper waste	289,408	3,451	0	292,858	345	
(,	Plastics (burnable)	5,860	0	0	5,860	0	
	Waster oil	5,240	0	0	5,240	0	
	Unsorted burnable waste, other burnable waste	372,954	5,835	0	378,789	583	
	Bottles	18,445	0	215	18,660	215	
	Cans	38,548	0	0	38,548	0	
Category B (Non-burnable)	Plastics (non-burnable)	858	0	0	858	0	
(Non-burnable)	PET bottles	8,052	0	0	8,052	0	
	Unsorted non-burnable waste, other nonburnable waste	1,089	0	1,248	2,337	1,248	
Category C	OA equipment, fixtures, others	3,665,996	35,396	17,868	3,719,260	21,408	
Total		5,799,960	45,238	19,331	5,864,530	23,855	

#### Scope of Environmental Impact Measurement

All NTT DATA organizations, 69 Group companies in Japan

<sup>\*1</sup> CO<sub>2</sub> conversion factor uses CO<sub>2</sub> emission factor by electric power companies.

<sup>\*2</sup> Units and emissions from fiscal 2013 include individual free-standing air-conditioning units as well as central air-conditioning units.

# 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.

## Corporate Governance

| Structure | Basic Policies | Internal Control |

# Directors, Audit & Supervisory Board Members, and Senior Vice Presidents

Excecutive Officers

## Compliance

Policy and Structure | Compliance Training and Awareness

## Initiatives on Human Rights

Respect for Human Rights

## Risk Management

| Policy and Structure | Risk Management Method | Global-Control Risks | Region-Control Risks | Risk Management Training |

## Information Security

| Basic Policy | NTT DATA Group's Unified Information Security Policy | | Information Security Management System | | Information Security Strategies | Information Security Education and Training |

## Disaster and System Failure Countermeasures

| Plans and a System Responsive to Disaster-Related Risks | | System Failure Countermeasures Focusing on Prevention and Response |

## **Tax Strategy**

| Tax Payments and Reporting | | Raising the Awareness of NTT DATA Group Employees | Relationship with Tax Authorities |

## Brand Management

NTT DATA Brand Awareness Surveys

## Innovation Management

| Basic Policy | Focus Field 1 | Focus Field 2 | | Sharing the Fruits of Innovation |

# **Corporate Governance**

#### 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 sectors 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 chief executive officer 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.

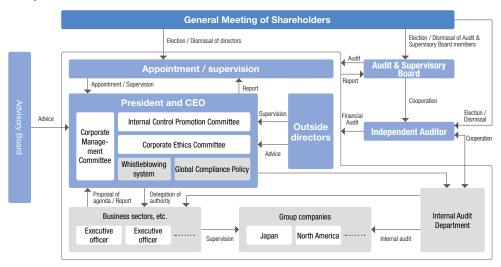
Regarding self-assessments and analyses in fiscal 2016, the following methods were conducted on the advice of an external organization.

- Implementation period: October-December 2016
- 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 in January and February of 2016 resulted in a generally positive assessment of the Board of Director composition and operation, recognizing the ongoing efficacy of the
  entire Board of Directors.

Also, considering the emergence of issues to be addressed in the future, such as opinions expecting further enhancements to strategic discussions, we plan to make improvements that include increasing the weight of strategic discussions among the Board of Directors.

Going forward, we will implement ongoing assessments related to the efficacy of the Board of Directors and promote initiatives that heighten its function.

#### Corporate Governance Structure



## **Basic Policies**

NTT DATA is working on the following basic policies in accordance with the purpose of each principle of the 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. Such 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 audits 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 parent 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 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 other Heads of important Sections or Groups, and has prior discussions at such Corporate Management Committee meetings effective deliberations about the items to be resolved at the Board of Directors' meetings. 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. Aiming for 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.

## ■ 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 2017, NTT DATA had two outside directors and four outside Audit & Supervisory Board members. In appointing these 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 three 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 achieve further growth and ensure the sound management of our operations.

### ■ Initiatives to Spread Our Vision

The NTT DATA Group formulated a new Group Vision in May 2013, and we have been making an effort to share the values that express our core value system to fulfill our Group Vision. 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 coworkers. 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 2016, approximately13,000 employees in more than 60 cities and nearly 20 countries took part in workshops and talked about our values. In 2017, many employees from around the world also participated.







Denmark

United Kingdom

China

#### ■ 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.

Particularly in recent years, 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.

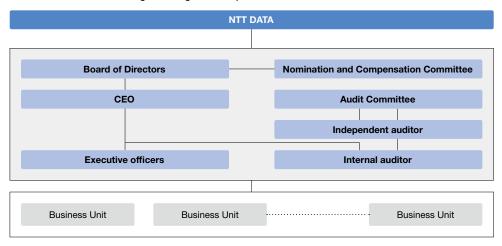
In Japan, in the fiscal year ended March 31, 2014, NTT DATA increased management efficiency by beginning the renewal of the common accounting system that domestic Group companies use. As of March 31, 2016, NTT DATA extended the introduction of the system, which is used by approximately 70 major domestic 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 Group companies' management information (in the financial and personnel fields) to domestic Group companies. 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. Furthermore, with respect to consultation and reporting between NTT DATA and Group companies, Group Management Rules have been established for domestic Group companies and a Group Authority Matrix has been established for overseas Group companies. The rules and matrix are used in combination with Group Management Policies to realize robust management of Group governance.

#### □ Governance Structure of Regional Integrated Companies



## **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 also 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 2016, the Company audited in-house organizations, 9 domestic Group companies, and 8 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 26 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 new 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 computer-assisted audit techniques (CAAT) tools to analyze data from various in-house information systems. This auditing system is already being applied to our internal organizations, and we are seeking to advance the initiative by considering expanding its application to Group companies in Japan and anticipating more of its deployment in our overseas Group companies as well.

Going forward, NTT DATA aims 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 related to financial reporting 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**

Position	Name	Outside / Indepen- dent	Term	Areas of Responsibility	Concurrent Position	Meeting Attendance	Shares Owned
Representative Director, President and Chief Executive Officer	Toshio Iwamoto	-	*3			-	14,000
Representative Director and Senior Executive Vice President	Yo Honma	-	*3	Responsible for Japan & Asia Region	President, Construction-ec.com Co., Ltd.	-	5,800
Representative Director and Senior Executive Vice President	Eiji Ueki	-	*3	Responsible for Corporate*1 and Technology Strategy*2		-	7,400
Representative Director and Senior Executive Vice President	Kazuhiro Nishihata	-	*3	Responsible for Global Marketing, U.S. and Europe Region, EMEA & Latin America Region	NTT Data International L.L.C. Chair	-	5,800
Director and Executive Vice President	Tsuyoshi Kitani	-	*3	Head of Technology and Innovation General Headquarters		-	4,100
Director and Executive Vice President	Keiichiro Yanagi	-	*3	Head of HR Headquarters and ESG Promotion Department		-	5,200
Director and Executive Vice President	Hiroyuki Aoki	-	*3	Responsible for Public & Social Infrastructure Segment		-	1,200
Director and Executive Vice President	Shigeki Yamaguchi	-	*3	Responsible for Enterprise & Solutions Segment, China & APAC Segment		-	1,800
Director and Executive Vice President	Tooshi Fujiwara	-	*3	Responsible for Financial Segment		-	2,400
Director	Yukio Okamoto	Outside and independent	*3		Representative Director, Okamoto Associates, Inc. Outside Director, Mitsubishi Materials Corporation Outside Director, Nippon Yusen Kabushiki Kaisha (NYK LINE) Representative Director, NPO Shingeneki-Net	18/18	600
Director	Eiji Hirano	Outside and independent	*3		Vice Chairman, Director, MetLife, Inc. Director, RIKEN CORPORATION	11/13	100
Director	Takashi Ebihara	-	*3			-	0
Standing Audit & Supervisory Board Member	Yukio Ishijima	Outside and independent	*4			18/18	600
Standing Audit & Supervisory Board Member	Tetsuro Yamaguchi	Outside	*4			18/18	300
Standing Audit & Supervisory Board Member	Akio Nakamura	Outside and independent	*4		Special Partner, TANABE & PARTNERS Director, Tokyo Century Corporation	13/13	200
Audit & Supervisory Board Member	Rieko Sato	Outside and independent	*4		Partner of Ishii Law Office Auditor, GignoSystem Japan, Incorporated. Director, Dai-ichi Life Holdings, Inc.	18/18	1,300

<sup>\*1</sup> Exercises oversight of formulation and execution of Group strategies related to business operation and human resources, finance, IR, risk management, and PR

# ■ Total Remuneration of Directors and Audit & Supervisory Board Members for the Business Year under Review

Executive Classification	Number of Persons	Basic Remuneration	Directors' Bonuses	Remuneration Amount
Directors (excluding outside directors)	11	281 million	72 million	354 million
Audit & Supervisory Board members (excluding outside Audit & Supervisory Board members)	-	_	_	_
Total	11	281 million	72 million	354 million

<sup>\*</sup> The above includes three directors who retired as of the conclusion of the 28th Ordinary General Meeting of Shareholders held on June 22, 2016.

## ■ Total Remuneration of Outside Corporate Officers for the Business Year under Review

	Number of Persons	Basic Remuneration
Total remuneration of outside corporate officers	7	121 million

<sup>\*\*</sup> The above includes an outside corporate officer who retired as of the conclusion of the 28th Ordinary General Meeting of Shareholders held on June 22, 2016

## **■** 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 remuneration and bonuses. The amount of monthly remuneration is determined and provided in accordance with the responsibility and extent of the role of his or her position. Bonuses are determined and provided with the company 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 their own monthly remuneration. 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.

<sup>\*2</sup> Exercises oversight of formulation and execution of Group strategies related to technological development and R&D and the formulation and execution of security strategies

<sup>\*3</sup> 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

<sup>\*4</sup> 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

<sup>\*</sup> 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.

# Compliance

We share our guidelines on ethical conduct beyond legal compliance across the 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

NTT DATA has a Corporate Ethics Committee chaired by the Chief Risk Officer (CRO), which works to include elements of the Global Compliance Policy in the performance review. The committee is also engaged in promoting the spread and thorough understanding of the policy among executives and employees and fostering corporate culture conducive to compliance with legal regulations and corporate ethical rules.

After details of various compliance-related initiatives are reported to and discussed by the Corporate Ethics Committee, their ongoing implementation is determined. We also maintain a remuneration system for staff responsible for management, which reflects the occurrence of ethics violations throughout the Group.

## ■ 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 about 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 sexual and power 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.

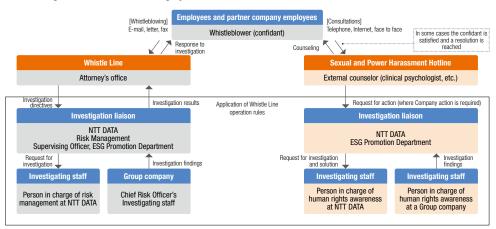
In operating this service, we place the utmost importance on the protection of privacy, prohibitions against unfair treatment, and the obligation to uphold confidentiality. We accept consultation requests and respond to inquiries at all times and have set up a Human Rights Awareness Activity Promotion 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 cases and take Groupwide measures on prominent cases to draw attention and prevent a reoccurrence.

In fiscal 2016, we received 85 reports, including 60 reports about harassment, 16 concerning in-house programs and the workplace environment, and 9 on other issues. Looking ahead, we will continue to encourage the use of these internal reporting systems and strengthen efforts aimed at making improvements regarding similar incidents.

When it receives information internally, the NTT DATA Group 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.

#### 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 problem areas in the workplace, we will enhance educational material content and implement thorough training sessions for all employees.

## ■ Promoting Compliance Training

The NTT DATA Group conducts compliance training (including e-learning) for approximately 81,000 of its employees at domestic and overseas Group companies. The Company also arranges lectures on corporate ethics at position-based training sessions held 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.

In fiscal 2016, 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 2016

Name of Training Session	Numbers of Attendees	
Compliance IBT Training (e-learning)	Approx. 35,000 (domestic employees)	
Global Compliance Policy Training	Approx. 46,000 (overseas employees)	
Position-Based Group Training Sessions (lectures on corporate ethics, risk management, etc.)	Approx. 2,300	

# **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 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 working 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

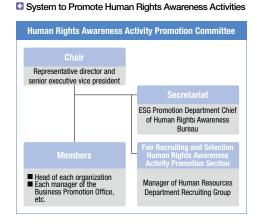
We recognize that the respect for human rights is a corporate responsibility and aim to create a safe, secure and rich social environment by fulfilling its responsibility.

- 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.
- \* "We" means the NTT Group and its officers and employees.

### ■ 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 Awareness Activity 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.

## **■ 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 replaced in fiscal 2010 our human rights awareness-raising e-learning program, which had been implemented targeting all NTT DATA Group employees in Japan, with Human Rights Awareness Workplace Seminars to promote and encourage understanding on human rights issues at the workplace level.

In addition to seminars, in fiscal 2016 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-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 2016, a total of 51 employees assigned to one of 12 overseas posts took part in the program. Also, in October 2016 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 260 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 2016
Human rights awareness workplace seminars	24,064
Position-based training course	2,176
Recruiters' training course	557
Training experts (in charge of promoting human rights awareness activities and the HR section in the ESG Promotion Department)	24 (9 sessions)
Pre-overseas assignment training	51 (12 countries)
Human respect slogan contest (number of applicants)	260 nhrases

# **Risk Management**

To continue fulfilling our responsibilities to clients and society, we identify and rigorously manage risks.

## **Policy and Structure**

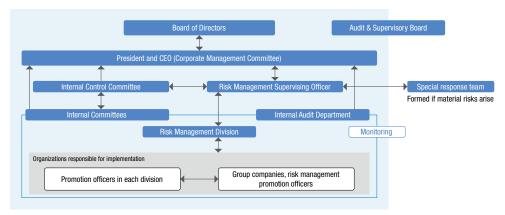
The NTT DATA Group seeks to ascertain all risks associated with business activities to minimize the frequency of occurrence of these risks and limit their impact on operations should they materialize. To facilitate this effort, in 2002 we appointed an officer in charge of supervising and promoting risk 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 the evaluations are reported to the Corporate Management Committee as well as the Board of Directors.

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 decided to delegate considerable power to sector heads. This measure makes an effort to ensure proper understanding of and prompt responses to risks relating to client relationships and market environments.

## Risk Management Structure

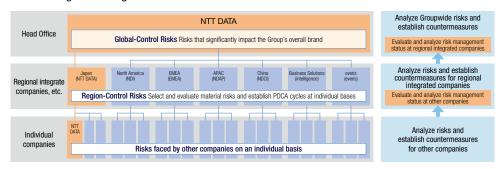


## **Risk Management Method**

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.

#### 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 2016, we will continue 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.

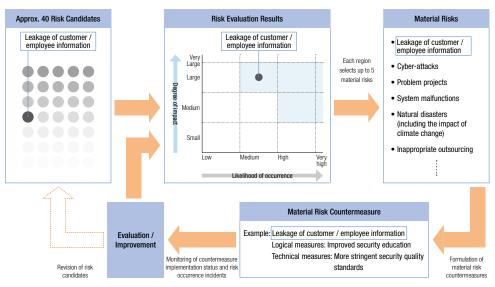
#### NTT DATA's Global-Control Risks

Material Risks	Major Improvements, etc.	Initiatives
Information leakage, personal / confidential information, cyber-attacks	Continue enhancing countermeasures for ever-increasing security risks     Strengthen preparedness for advanced cyber-attacks focused on public institutions	Promote Companywide security measures (drills on targeted attack emails), conduct cyber-attack response drills, review response to malware mass infection, and provide shared infrastructure for security     Expand security personnel training / qualifications
Accounting fraud, including window dressing	Expand global unified auditing, connect to risk indication auditing	Review and implement global unified auditing items     Conduct full-scale risk indication auditing, consider deployment at Group companies, including those overseas     Simulate awareness through training
Bribery	Continue strengthening compliance education	Conduct training regarding bribery     Create Global Compliance Policy guide

## **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. 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 the results are reflected in the systems we develop for the Group and our clients.

## **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.

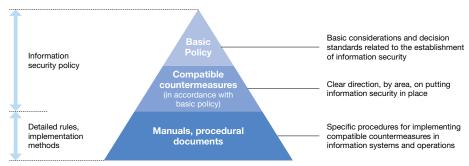
## NTT DATA Group's Unified Information Security Policy

Information leaks stemming from security breaches and improper use of information have serious implications for our credibility. NTT DATA has therefore established policies covering the entire Group to ensure appropriate handling of information assets in line with uniform standards so that information can be circulated safely throughout the Group. Also, we established rules to prevent information security incidents at partner companies commissioned by NTT DATA to undertake operations, including software development.

#### Information Security Policies

Policy	Outline
NTT DATA Group Security Policy (GSP)	Uniform rules for information security for the NTT DATA Group
Unformation Security Policy	Basic policies, standards, and specific procedures related to information security

#### 



## **Information Security Management System**

The NTT DATA Group has built an information security management system and established an information security governance in order to deal with information security risks. 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 chief information security officer and comprising managers of each sector, 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 (Monitoring)	Promotes the decisions of the Information Security Committee and confirms the status of progress. Designates information security promotion officers at each worksite.
NTT DATA-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)*3 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.

<sup>\*1</sup> Actualization of security threats related to information management and system operation, such as computer malware infection, unauthorized access, and information leakage

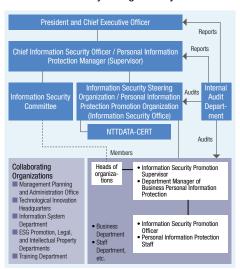
<sup>\*2</sup> A global community consisting of approximately 380 CSIRTS from government agencies, educational institutions, companies, and other organizations

<sup>\*3</sup> Incident response teams comprised of security specialists. The teams collect and analyze information on security incidents, security-related technologies, and vulnerabilities and conduct activities including implementing effective countermeasures and training.

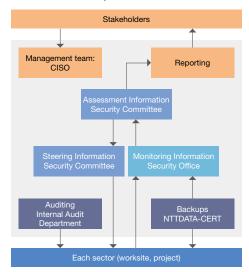
Furthermore, to reinforce information security on a global scale we operate a global security governance system centered on regional integrated companies that is similar to the system in place for business management. NTT DATA reviews the information management conditions of each regional integrated 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 targeting Group companies in Japan and overseas aimed at strengthening our initial response in the event of an incident.

#### ☑ Information Security Management System



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## ■ 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, 2017, 44 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, 38 Group companies, including NTT DATA, have been granted the right to display the Privacy Mark of the Japan Institute for Promotion of Digital Economy and Community (JIPDEC). As part of its efforts in personal information protection, NTT DATA (CHINA) CO., LTD., obtained Personal Information Protection Assessment (PIPA) certification, equivalent to Japan's Privacy Mark, in January 2012.

## **Information Security Strategies**

#### ■ Key Strategies in Fiscal 2016

Practicing and maintaining an appropriate balance between ensuring safety of information and actively utilizing and sharing information, both of which are objectives of the Group Security Policy, is essential if the NTT DATA Group is to continue to be a partner to customers that aids in their evolution. In fiscal 2016, we planned and implemented the three key measures of enhancement and strengthening of security management, implementation of cyber security measures, and training of security personnel.

## ■ Measures to Ensure Security of Commercial Systems

Recently, there have been multiple incidents of illegal access to information through breaches (vulner-abilities) 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, NTT DATA 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 provide 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, as well as monitoring system management.

<sup>\*1</sup> Solution for detecting malware by running programs within a protected virtual environment

<sup>\*2</sup> Security Information and Event Management

<sup>\*3</sup> Security Operation Center: A center or system for conducting comprehensive monitoring of IDS/IPS, firewalls, DB firewalls, and Web application firewalls (WAF)

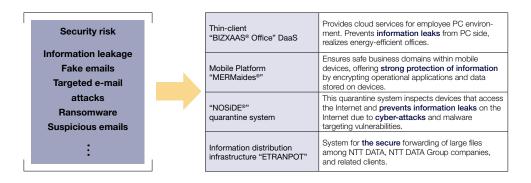
## ■ In-House IT Platform for Minimizing Risks

Targeted attacks on information systems frequently causes harm to government agencies and private businesses. Because many targeted attacks use already-known vulnerabilities, it can be preventable by security patch management and other measures.

The NTT DATA Group has intensified vulnerability checks on its main software programs and ensured that terminals with inadequate security measures cannot connect to the Group's in-house networks.

However, taking measures such as malware detection using anti-malware software (entry measure) and blocking by URL filters (output measure) alone would be insufficient for sophisticated attacks. Attacks may exploit the brief period between the discovery of a vulnerability and the application of patch software and cause damage. NTT DATA is making advances in R&D into new detection methods and dynamic defenses to construct systems and structures that provide early detection and response by monitoring suspicious communications and blocking unwanted access, so that we can take immediate action in the event that a vulnerability is exploited to cause damage, such as spreading computer malware.

NTT DATA maintains an in-house IT platform to minimize the various security risks.





Information Security Report 2016

http://www.nttdata.com/global/en/csr/security/index.html

## Information Security Education and Training

## ■ Education and Training Targeting Employees and Partner Companies

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 Group Security Policy, and the need to be constantly aware of the importance of information security in one's work.

In fiscal 2016, 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 2016

Target	Content and Format	Participation		
All amplayees	Information Security and Personal Information Protection Training	Target	100% employee completion (11,330 people)	
All employees	(e-learning; in three languages)		100% employee completion (11,330 people)	
By position	Information security lectures (classroom instruction)	Incorporated in position-based training conducted by the Human Resource Department		
	Personal Information Protection Introduction Training / Information	Target	100% of all parties registered on our company system (24,629 people)	
Business partners and temporary staff	security education (e-learning)		100% of all parties registered on our company system (24,629 people)	
	Information Security Training Handbook	Booklets of	distributed to all new business partners and temporary staff	

#### ☐ Information Security Training at Key Group Companies in Fiscal 2016

Target	Implementation Format	Participation
Group company employees, business partners, and temporary staff	GSP security training and personal information protection training (e-learning) (3 languages)	91 companies, 30,511 employees
Information security team member	GSP internal auditor training (studying offline at their desks)	78 companies; number of participants managed by each company

## 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.

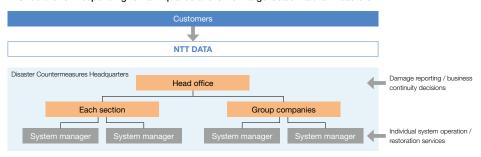
In terms of unique measures, beginning in fiscal 2016, we plan and develop training aimed at instilling the latest security knowledge and practical skills necessary for the sales, development, and operation phases. From fiscal 2017, we will deploy this training at all domestic NTT DATA Group companies.

In addition, we are making efforts to allocate personnel with a high degree of security knowledge to key sales, development, and operational positions, as well as providing them opportunities to apply the skills they have learned, with the aim of enhancing the level of security throughout the NTT DATA Group.

# **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 disaster BCPs 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 a System 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 we swiftly respond for the continuation of our 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.

## 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.

## **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 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 2016, corporate taxes amounted to ¥36,820 million, a tax burden of 34.96% 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.

# **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 public relations (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 the NTT DATA 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 United States, England, Germany, Italy, Singapore, and China. 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.

#### Standardized Score in Six Countries



"Well aware of the Company's products, services, and content of business" + "Know a little about the Company's products, services, and content of business" + "Only know the name of the Company"

## **Innovation Management**

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

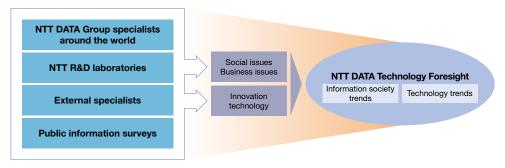
## **Basic Policy**

Adopting the perspective of clients and based on the issues faced by society and businesses, NTT DATA conducts surveys on and investigations of various trends. Specifically, we focus on the nearfuture information society trends (near-future outlook) expected to have a substantial influence on client businesses over the medium to long term as well as the technology trends that lie at the base of these trends. The findings of these activities are compiled in the NTT DATA Technology Foresight report, released annually. The trends described in these reports are re-incorporated into management strategies and utilized to guide forward-looking technological development ventures as well as efforts to co-create businesses together with clients.

In particular, we analyze political, social, economic, and technological trends. We also engage in wide-ranging information collection activities and discussions that extend to NTT DATA Group companies as well as 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.

#### NTT DATA Technology Foresight Formulation Process



## Focus Field 1—Production Technology Innovation

The NTT DATA Group has been working to achieve high-quality, rapid software development by employing automated tools, which has given us a highly competitive edge. At the same time, rival companies have also made advances in their automation technology for software development. Under these circumstances, further sophistication in automation technology and improvement in adoption rate with regard to internal development projects have become important factors in surviving the competition.

In addition, the need for renewing legacy systems, or legacy modernization, is expected to grow in significance within the IT industry as a new technological factor. For systems developed long ago, repeated additions of functions have commonly resulted in clients themselves losing perspective of system specifications, making the renewal of the systems highly challenging. As current systems become obsolete, we expect there will be an increase in these projects, which would require the establishment of a safe and reliable methodology for legacy modernization.

## ■ Example of Major Initiatives

## [ Integration of Development Methodology ]

For further continued growth through global synergy, NTT DATA integrated the development methodologies of its Group companies all over the world. Since April 2017, we have strived to prevent contradictions resulting from technical term inconsistencies to enable the realization of projects to achieving high productivity and quality by sharing this development methodology among our development bases in Japan and overseas, instilling this intellectual concept throughout all Group companies. Based on this development methodology, going forward, we will enhance development capabilities globally and provide high-quality services that are consistent among Group companies regardless of the regions by effectively utilizing the human resources and knowledge possessed by our domestic and overseas Group companies.

## [Integrated Development Cloud Operation]

In April 2017, NTT DATA launched operation of the "integrated development cloud" to integrate the system development environments of all Group companies into the cloud and improve the productivity of system development. Recently, there is a demand not only for "defensive IT (SoR\*1)" for the creation of new business but also "offensive IT (SoE\*2)" for existing businesses and operation processes efficiency, and a seamless link between both. To meet these needs, we will promote cloud integration at our overseas Group companies and apply it to commercial environments (i.e., client services) sequentially.

<sup>\*1</sup> Systems of Record: Refers to all conventional operational systems, such as core systems

<sup>\*2</sup> Systems of Engagement: Refers to a system that enables digital innovation, such as the innovation in corporate business processes and the creation of new business

## Focus Field 2—Utilization of Advanced Technologies

NTT DATA has specifically focused on the technology themes of AI, IoT, and advanced technology of IT infrastructure (e.g., blockchain) and placed priority on investment in PoCs for applicable research topics and clients. As a means of discerning research topics for the midium to long term, we try to ascertain changes in the future from the four perspectives of politics, economy, society, and technology in order to discern near-future information society trends and technology trends, which we formulate and publish as NTT DATA Technology Foresight.

## **■ Example of Major Initiatives**

## [ Development of Smart Alert Solution ]

NTT DATA and its Group company in Spain, everis Group, have developed the Smart Alert Solution for the ICU at Virgen del Rocío University Hospital in Seville, which is the largest hospital in Spain. The solution predicts the risks for serious complications, and immediately sends an alert to enable doctors and others for early medical intervention. We will conduct validation in multiple countries other than Spain, commercialize the solution by the end of 2017, and deploy it in hospitals all over the world starting with Spain, Latin America, and North America. In fiscal 2016, R&D expenses including this project amounted to ¥12,359 million.

## Sharing the Fruits of Innovation

The NTT DATA Group passes on its cutting-edge initiatives to society and contributes to the realization of a sustainable society.

## ■ Activities at the INFORIUM Toyosu Innovation Center

In 2015, we set up the INFORIUM Toyosu Center within our headquarters at the Toyosu Center Building. 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.



INFORIUM Toyosu Innovation Center, an exhibition space at the head office

## ■ NTT DATA Technology Foresight

We monitor changes in IT from the standpoints of political, social, economic, and technological trends and annually compile and publish information society trends (near-future outlook) and technology trends via a special website.



http://www.nttdata.com/global/en/insights/foresight/sp/

## ■ "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)

## **■** Pursuit of Open Innovation

## [From Toyosu Harbor®]

Initiative for accelerating the pace of new business creation by bringing together a broad array of knowledge, technology, and human networks from inside and outside the NTT DATA Group as well as across organizational frameworks under the banner of open innovation.



http://oi.nttdata.com/en/

#### Owned Media INFORIUM

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)

### Holding of "Future Paradigm Conference"

In fiscal 2016, NTT DATA began holding regular conferences to encourage innovators to interact and create new paradigms for the future. This program embraces the NTT DATA Group's mission to use IT to create new paradigms and values, which help contribute to a more affluent and harmonious society, contributing to society's overall growth and sustainability. On the day of the

event, prominent figures in various industries lectured on topics linked to co-creation, with themes including the space business, the use of drones in disaster prevention and mitigation, and regional revitalization. Participants from NPOs, companies, universities, government agencies, and NTT DATA Group employees with particular interest in innovation utilizing IT take part in these regular conferences, discussing and exchanging ideas at workshop sessions.



Workshop participants exchanging ideas

# **GRI Standards**

**GRI Sustainability Reporting Standards Index** 

CONSOLIDATED SET OF GRI SUSTAINABILITY REPORTING STANDARDS 2016

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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.