Overview
Overview of NTT Group’s Value Creation Mechanism
NTT Group’s Process of Self-Transformation
Value Creation Process
NTT Group Formation
NTT Group Topics
Performance Highlights
Non-Financial Highlights

Strategy
Top Message
Special Feature: Acceleration of B2B2X Businesses

ESG
Corporate Governance
Value Creation through Social and Environmental Contributions
Initiatives for Addressing Material Issues
1. Reinforcement of Information Security and Personal Information Protection
2. Reduction of Environmental Impact
3. Development of Frameworks for Encouraging Participation by Diverse Human Resources

Operation
Operations in Review
Regional Communications Business
Long Distance and International Communications Business
Mobile Communications Business
Data Communications Business
Other Businesses

Innovation
Research and Development
Value Creation Process

Editorial Policy
This is an integrated report that combines information that is important to shareholders and investors, including not only such information as growth strategies and financial results but also environmental (E), social (S), and governance (G) information. The report focuses on explanations of NTT Group’s initiatives targeting increases in corporate value over the medium to long term. In editing this report, reference was made to the International Integrated Reporting Framework of the International Integrated Reporting Council (IIRC). The report is intended to help readers to understand NTT Group, which is accelerating the process of business structure transformation to be a “Value Partner” and working to increase corporate value by contributing to the realization of a sustainable society.

Forward-Looking Statements
The forward-looking statements and projected figures concerning the future performance of NTT and its subsidiaries and affiliates contained or referred to in this report are based on a series of assumptions, projections, estimates, judgments, and beliefs of the management of NTT and are not guarantees of future performance. There is a risk that the future results of operations and financial condition of NTT and its subsidiaries and affiliates may not meet the expectations of investors and shareholders due to various uncertainties. As such, investors and shareholders should not place undue reliance on forward-looking statements and projected figures. The forward-looking statements and projected figures contained or referred to in this report may also be subject to other risks and uncertainties, which are described in this report.

Other Materials
- Presentation Materials: http://www.ntt.co.jp/ir/library_e/presentation/
- Shareholders’ Meeting Materials: http://www.ntt.co.jp/ir/shareholders_meetings.html
- Financial Results: http://www.ntt.co.jp/ir/library_e/results/
- Form 20-F: http://www.ntt.co.jp/ir/library_e/sec/
NTT Group has proceeded to implement strategic initiatives that address changes in the social structure while simultaneously leading innovation in information and telecommunications technologies. In this way, the Group has continued to drive ahead with a process of self-transformation to achieve sustained increases in its corporate value.

### Expansion of Global Cloud Services

- **Overview**: NTT Group’s Value Creation Mechanism

#### Key Milestones

- **1986**: Establishment of Nippon Telegraph and Telephone Corporation
- **1987**: Start of provision of mobile phone service
- **1988**: Establishment of docomo
- **1991**: Start of provision of i-mode
- **1996**: Start of provision of OCN
- **1998**: Start of provision of NTT Data
- **1999**: Establishment of NTT DATA
- **2000**: Start of provision of FLET’S, Hikari, and FLET’S ADSL
- **2001**: Start of provision of FLET’S ICN and FLET’S ADSL
- **2004**: Start of provision of NTT Docomo
- **2007**: Start of provision of NTT TV
- **2009**: Start of provision of FOMA
- **2010**: Start of provision of LTE (3G) service
- **2013**: Start of provision of Hikari Denso
- **2015**: Start of provision of FLET’S TV
- **2016**: Start of provision of i-mode
- **2018**: Start of provision of docomo Hikari

### Operating Revenues and Operating Income

- **Fiscal year ended March 31, 2001**: ¥5.1 trillion,
  Operating income: ¥0.76 trillion
- **Fiscal year ended March 31, 2008**: ¥11.4 trillion,
  Operating income: ¥1.59 trillion
- **Fiscal year ended March 31, 2015**: ¥11.8 trillion,
  Operating income: ¥1.54 trillion
- **Fiscal year ended March 31, 2017**: ¥11.3 trillion,
  Operating income: ¥1.57 trillion

### Overview of NTT Group’s Value Creation Mechanism

- **Fiscal year ended March 31, 2008**: Overseas sales ¥15.0 billion
  Overseas operating income ¥0.67 billion
- **Fiscal year ended March 31, 2015**: Overseas sales ¥19.6 billion
  Overseas operating income ¥1.2 billion

### Development of Telephony Services

- **Fixed-Line Broadband Services (FLET’S Hikari and FLET’S ADSL)**
- **Mobile Communications Services (LTE + 3G + 2G)**

### Transitioning from Operations Centered on Voice Services to Operations Centered on SI / IP Services

- **Fiscal year ended March 31, 2008**: St., etc. 26% Voice 48%
- **Fiscal year ended March 31, 2017**: St., etc. 49% Voice 18%

### Expanding Overseas Sales

- **Fiscal year ended March 31, 2018**: Overseas sales ¥19.6 billion
  Overseas operating income ¥1.2 billion
Value Creation Image

Guided by the “Towards the Next Stage 2.0” Medium-Term Management Strategy, NTT Group will leverage the management resources it has accumulated to date to pursue sustainable gains in corporate value in a distinctive manner by utilizing ICT.

From Fiscal Year 2015 to Fiscal Year 2017

Towards the Next Stage 2.0

Profit Growth

Expand Global Business / Increase Overseas Profit Generation

Overseas Sales
$22.0 billion

Overseas Operating Income*1
$1.5 billion

Profit Growth

Improve Efficiency and Enhance Profitability of Domestic Network Business

Streamline Capital Investment*2 At least ¥200.0 billion decrease

Reduce Cost*3 At least ¥800.0 billion decrease

Expand B2B2X Businesses

EPS Target
At least ¥400

Improve Capital Efficiency

Stock Repurchases
Enhancement of Dividends

Foundation to Support the Value Creation

• Reinforcement of information security and personal information protection
• Reduction of environmental impact
• Development of frameworks for encouraging participation by diverse human resources
• etc.

Contributions to Society and the Environment

Corporate Governance

• Supervisory function carried out by outside independent Members of the Board in relation to business execution
• Management oversight function carried out by Audit & Supervisory Board Members, including outside independent Audit & Supervisory Board Members
• etc.

Overview of NTT Group’s Value Creation Mechanism

Management Resources

Customer Base

• Solid customer base in Japan
  • No. 1 share for fiber-optic access services (20.05 million subscriptions)
  • No. 1 share for mobile services (74.88 million subscriptions)
  • 88% of the top 100 Fortune Global 500 companies are NTT customers

Brand Image

• Globally recognized brand image
  • Brand Finance Global 500: Rated 15th in the world
  • 2017 BrandZ Top 100 Most Valuable Global Brands: Rated 50th in the world

Human Resources

• Human resources active around the world
  • 111,000 employees (approximately 40% of all employees) work overseas
  • Services provided in 196 countries and regions
  • Number of security experts: Approx. 30,000

R&D Capabilities

• World-leading technologies
  • Clarivate Analytics: Included among 2016 Top 100 Global Innovators
  • Number of patents: Approx. 16,000

Financial Base

• Capacity to generate stable earnings
  • Operating income: More than ¥1 trillion

Brand Image

• Globally recognized brand image
  • Brand Finance Global 500: Rated 15th in the world
  • 2017 BrandZ Top 100 Most Valuable Global Brands: Rated 50th in the world

Human Resources

• Human resources active around the world
  • 111,000 employees (approximately 40% of all employees) work overseas
  • Services provided in 196 countries and regions
  • Number of security experts: Approx. 30,000

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• World-leading technologies
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Financial Base

• Capacity to generate stable earnings
  • Operating income: More than ¥1 trillion

Overview of NTT Group’s Value Creation Mechanism

Overview Strategy ESG Operation Innovation

Medium-to Long-Term Improvement in Corporate Value

Overview Strategy ESG Operation Innovation

NIPPON TELEGRAPH AND TELEPHONE CORPORATION ANNUAL REPORT 2017
## Overview of NTT Group's Value Creation Mechanism

### NTT Group Formation (Fiscal year ended March 31, 2017)

**NTT Group**

<table>
<thead>
<tr>
<th>Segment</th>
<th>Operating Revenues</th>
<th>Operating Income</th>
<th>Number of Employees</th>
<th>Consolidated Subsidiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Communications Business</td>
<td>100.00%</td>
<td>100.00%</td>
<td>274,844</td>
<td>944</td>
</tr>
<tr>
<td>Long Distance and International Communications Business</td>
<td>66.66%</td>
<td>54.21%</td>
<td>25,843</td>
<td>68,243</td>
</tr>
<tr>
<td>Mobile Communications Business</td>
<td>45.21%</td>
<td>61.9%</td>
<td>6,039</td>
<td>9,734</td>
</tr>
<tr>
<td>Data Communications Business</td>
<td>22.06%</td>
<td>0.0%</td>
<td>3,891</td>
<td>341</td>
</tr>
<tr>
<td>Other Businesses</td>
<td>9.8%</td>
<td>61.9%</td>
<td>3,891</td>
<td>341</td>
</tr>
</tbody>
</table>

### Composition by Segments

- **Other Businesses**
  - Data Communications Business: 9.8% (¥1,262.1 billion)
  - Regional Communications Business: 10.4% (¥1,574.7 billion)
  - Mobile Communications Business: 3.7% (¥444.9 billion)
  - Long Distance and International Communications Business: 24.4% (¥1,196.5 billion)

### Capital Investment

- **Other Businesses**
  - Data Communications Business: 6.9% (¥1,065.1 billion)
  - Regional Communications Business: 9.3% (¥1,331.1 billion)
  - Mobile Communications Business: 35.1% (¥577.1 billion)
  - Long Distance and International Communications Business: 26.4% (¥433.4 billion)

### Number of Employees

- **Other Businesses**
  - Data Communications Business: 10.7% (5,554)
  - Mobile Communications Business: 41.6% (40,687)
  - Regional Communications Business: 8.9% (9,679)
  - Long Distance and International Communications Business: 8.9% (9,679)

*1) Percentage of simple sum of all segments (including intersegment transactions)
## NTT Group Topics
(Fiscal year ended March 31, 2017)

In accordance with the Medium-Term Management Strategy, “Towards the Next Stage 2.0,” each segment implemented initiatives to accelerate the process of self-transformation to a “Value Partner” and to return NTT Group to a profit growth track.

<table>
<thead>
<tr>
<th>Holding Company (Groupwide Coordination)</th>
<th>Regional Communications Business</th>
<th>Long Distance and International Communications Business</th>
<th>Mobile Communications Business</th>
<th>Data Communications Business</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First quarter</strong></td>
<td><strong>Second quarter</strong></td>
<td><strong>Third quarter</strong></td>
<td><strong>Fourth quarter</strong></td>
<td></td>
</tr>
<tr>
<td>Established NTT Security Corporation as a specialized security company</td>
<td>NTT East began providing data center services and security services to major U.S. insurance company Ikano UK Services Limited</td>
<td>Received data center services and security services for over 30 million homes</td>
<td>Began providing points thanking customers for viewing contents</td>
<td>Began providing points thanking customers for viewing contents</td>
</tr>
<tr>
<td>NTT West concluded comprehensive collaboration agreement with Watanabe City, Ehime Prefecture</td>
<td>NTT East appointed as the first gold partner for the 2017 Sapporo Asian Winter Games</td>
<td>Launched COTTON® WI communication engine that converses in natural Japanese</td>
<td>Just appointed the first gold partner for the 2017 Sapporo Asian Winter Games</td>
<td>Received order for development and operation of transportation IC card system from Public Transport Victoria of Australia through collaboration with NTT DATA</td>
</tr>
<tr>
<td><strong>July</strong></td>
<td><strong>April</strong></td>
<td><strong>April</strong></td>
<td><strong>January</strong></td>
<td><strong>June</strong></td>
</tr>
<tr>
<td>Developed a partnership with Kubota Corporation for creating innovative ICT for use in the agricultural, widget, and environmental infrastructure fields</td>
<td>Reached an agreement with Panasonic Corporation to collaborate in utilizing the IoT for manufacturing optimization</td>
<td>Participating in the PANASONIC Intelligent Edge Link and Drive system scheme</td>
<td>Just appointed as the first gold partner for the 2017 Sapporo Asian Winter Games</td>
<td>Developed a partnership with Panasonic Corporation for utilizing the IoT for manufacturing optimization</td>
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<tr>
<td>Utilizing ICT to increase the competitiveness of the agricultural industry and to provide more comfortable living environments</td>
<td>Concluded a cooperation agreement on the Smart Stadium project between the J.League, DAZN, and NTT Group</td>
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<td>Reached an agreement with NTT DATA to collaborate in utilizing the IoT for manufacturing optimization</td>
<td>NTT East began providing a platform service that consolidates and supplies household electricity use information</td>
<td>Made it possible to use DAZN to watch the 2017 World Cup from anywhere in the world</td>
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<td><strong>February</strong></td>
</tr>
</tbody>
</table>
Performance Highlights

### Financial Data

<table>
<thead>
<tr>
<th>Financial Year</th>
<th>Operating Revenues</th>
<th>Operating Income</th>
<th>Net Income Attributable to NTT Group*1</th>
<th>Cash Flows from Operating Activities</th>
<th>Cash Flows from Investing Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017/3</td>
<td>¥10,769.6</td>
<td>¥10,889.9</td>
<td>¥10,461.3</td>
<td>¥2,361.3</td>
<td>(¥2,151.0)</td>
</tr>
<tr>
<td>2016/3</td>
<td>¥10,629.6</td>
<td>¥10,305.0</td>
<td>¥10,567.4</td>
<td>¥2,817.8</td>
<td>(¥2,308.9)</td>
</tr>
<tr>
<td>2015/3</td>
<td>¥10,571.8</td>
<td>¥10,700.7</td>
<td>¥10,409.7</td>
<td>¥2,830.9</td>
<td>(¥2,052.2)</td>
</tr>
<tr>
<td>2014/3</td>
<td>¥10,407.8</td>
<td>¥10,412.3</td>
<td>¥10,181.7</td>
<td>¥2,508.3</td>
<td>(¥1,971.2)</td>
</tr>
<tr>
<td>2013/3</td>
<td>¥10,302.3</td>
<td>¥10,083.6</td>
<td>¥9,711.5</td>
<td>¥2,453.7</td>
<td>(¥1,776.3)</td>
</tr>
<tr>
<td>2012/3</td>
<td>¥10,341.0</td>
<td>¥11,207.1</td>
<td>¥10,192.8</td>
<td>¥2,729.7</td>
<td>(¥1,828.0)</td>
</tr>
</tbody>
</table>

**Note:**
- *1: In regard to financial statements for the fiscal years ended March 31, 2010, and March 31, 2016, the names of line items were changed with effect from the fiscal year ended March 31, 2010.
- *2: In regard to financial statements for the fiscal years ended March 31, 2010, and March 31, 2015, the line item name was changed.
- *3: Capital investment is recognized on an asset basis for the acquisition of property, plant and equipment.
- *4: Cash from sales includes Capital investment / Operating revenues × 100
- *5: Cash from sales includes Capital investment / Operating revenues × 100
- *6: Free cash flows include Cash flows from operating activities - Capital expenditures - Cash flow from investing activities

### Performance Highlights

- **Overview of NTT Group’s Value Creation Mechanism:**
  - EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization)
  - ROE (Return on Equity)
  - D/E Ratio (Debt to Equity Ratio)

### Financial Highlights

- **EBITDA:**
  - 2017/3: ¥1,107.0
  - 2016/3: ¥1,304.6
  - 2015/3: ¥1,109.8
  - 2014/3: ¥1,117.7

- **Operating Income:**
  - 2017/3: ¥1,539.8
  - 2016/3: ¥1,539.8
  - 2015/3: ¥1,456.7
  - 2014/3: ¥1,223.0

- **Net Income Attributable to NTT Group:**
  - 2017/3: ¥31.2
  - 2016/3: ¥33.8
  - 2015/3: ¥32.5
  - 2014/3: ¥31.9

- **EBITDA Margin (%):**
  - 2017/3: 31.2%
  - 2016/3: 33.8%
  - 2015/3: 32.5%
  - 2014/3: 31.9%

**Note:**
- *From the fiscal year ended March 31, 2017, the method for calculating EBITDA has been revised.*
- EBITDA = Operating income / Depreciation + Loss on sales of property, plant, and equipment + Impairment loss

### Ratings

- **Ratings:**
  - **NTT Group:**
    - Moody’s: Aa1/AA+ (stable) (rated: 2017/3)
    - S&P: Aa1/AA+ (stable) (rated: 2017/3)
    - Fitch: A+ (stable) (rated: 2017/3)

### Key Financial Ratios

- **Capex to Sales Ratio:**
  - 2017/3: 31.2%
  - 2016/3: 33.8%
  - 2015/3: 32.5%
  - 2014/3: 31.9%

- **EBITDA Margin:**
  - 2017/3: 31.2%
  - 2016/3: 33.8%
  - 2015/3: 32.5%
  - 2014/3: 31.9%

### Notes:

- *For details on the revisions made to the accounting principle, refer to the NTT Group’s Annual Report for the Fiscal Year Ended March 31, 2017.*
- *For details on the calculations of financial ratios, refer to the NTT Group’s Annual Report for the Fiscal Year Ended March 31, 2017.*
- *For details on the calculation of EBITDA, refer to the NTT Group’s Annual Report for the Fiscal Year Ended March 31, 2017.*
- *For details on the calculation of EBITDA margin, refer to the NTT Group’s Annual Report for the Fiscal Year Ended March 31, 2017.*
Performance Highlights

Operational Data (End of year / month)

<table>
<thead>
<tr>
<th>Fixed-line communications services</th>
<th>Thousands of subscriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone subscriber line<em>4 + INS-Net</em>5</td>
<td>2017/3</td>
</tr>
<tr>
<td>NTT East</td>
<td>50,495</td>
</tr>
<tr>
<td>NTT West</td>
<td>5,323</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fixed-line broadband services subscriptions</th>
<th>Thousands of subscriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLET’S ADSL</td>
<td>2017/3</td>
</tr>
<tr>
<td>NTT East</td>
<td>6,076</td>
</tr>
<tr>
<td>NTT West</td>
<td>2,378</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Video services subscriptions</th>
<th>Thousands of subscriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hikari TV</td>
<td>2017/3</td>
</tr>
<tr>
<td>NTT East</td>
<td>1,109</td>
</tr>
<tr>
<td>NTT West</td>
<td>270</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mobile communications services subscriptions</th>
<th>Thousands of subscriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xi + ROMA + mova</td>
<td>2017/3</td>
</tr>
<tr>
<td>NTT East</td>
<td>52,621</td>
</tr>
<tr>
<td>NTT West</td>
<td>35,529</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4 dmarket (10,000 subscriptions)*6</th>
<th>Thousands of subscriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>dmarket</td>
<td>2017/3</td>
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<thead>
<tr>
<th>ARPU<em>7</em>8</th>
<th>Thousands of subscriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARPU of fixed-line NTT East</td>
<td>2017/3</td>
</tr>
<tr>
<td>Telephone subscriber line<em>4 + INS-Net</em>5</td>
<td>NTT East</td>
</tr>
<tr>
<td>NTT West</td>
<td>3,200</td>
</tr>
<tr>
<td>ARPU of FLET’S Hikari*9</td>
<td>2017/3</td>
</tr>
<tr>
<td>NTT East</td>
<td>1,059</td>
</tr>
<tr>
<td>NTT West</td>
<td>270</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mobile aggregate ARPU*10</th>
<th>Thousands of subscriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile aggregate ARPU</td>
<td>2017/3</td>
</tr>
<tr>
<td>NTT East</td>
<td>6,700</td>
</tr>
<tr>
<td>NTT West</td>
<td>5,120</td>
</tr>
</tbody>
</table>

Graph 1: Fixed-Line Broadband Services Subscriptions

Graph 2: Mobile Communications Services Subscriptions

Graph 3: ARPU of FLET’S Hikari

Graph 4: Mobile Aggregate ARPU

*1 No of fixed-line customer as of March 31.
*2 The number of Telephone service line in the total of individual lines and central station lines (Subscriber Telephone service line is included).
*3 The number of Telephone service line in the total of individual lines and central station lines (Subscriber Telephone service line is included).
*4 The number of Telephone service line in the total of individual lines and central station lines (Subscriber Telephone service line is included).
*5 The number of Telephone service line in the total of individual lines and central station lines (Subscriber Telephone service line is included).
*6 The figures for dmarket (10,000 subscriptions) is calculated by number of channels in thousands.
*7 The number of INS-Net is the total of INS-Net 64 and INS-Net 1500 (INS-Net 64 Lite Plan is included). In terms of the number of channels, transmission rate, and line use rate (base rate), INS-Net 1500 is in all cases roughly 10 times greater than INS-Net 64. For this reason, one INS-Net 1500 subscription is calculated as 10 INS-Net 64 subscriptions.
*8 ARPU of INS-Net includes FLET’S Hikari, NTT East, and NTT West.
*9 ARPU calculation method was changed from the fiscal year ended March 31, 2016. Accompanying this change, the new method has been applied retrospectively to the ARPU figures for the fiscal year ended March 31, 2016, and the fiscal year ended March 31, 2015. Please see page 90 for the ARPU calculation method and other details.
*10 Number of INS-Net is the total of INS-Net 64 and INS-Net 1500 (INS-Net 64 Lite Plan is included). In terms of the number of channels, transmission rate, and line use rate (base rate), INS-Net 1500 is in all cases roughly 10 times greater than INS-Net 64. For this reason, one INS-Net 1500 subscription is calculated as 10 INS-Net 64 subscriptions.
Non-Financial Highlights

### Environmental / Social Data

#### Environmental Data

<table>
<thead>
<tr>
<th>Metric</th>
<th>2013/3</th>
<th>2014/3</th>
<th>2015/3</th>
<th>2016/3</th>
<th>2017/3</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2 emissions volume*1 (Million tons of CO2)</td>
<td>4.41</td>
<td>4.96</td>
<td>5.08</td>
<td>4.89</td>
<td>4.59</td>
</tr>
<tr>
<td>CO2 emissions per sales $/CO2 (Billions of yen)</td>
<td>432</td>
<td>466</td>
<td>530</td>
<td>525</td>
<td>460</td>
</tr>
<tr>
<td>Contribution to reduction in society’s CO2 emissions?</td>
<td>Calculated from the fiscal year ended March 31, 2017</td>
<td>5.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Firm’s, compared to CO2 from NTT Group)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Firms, improvement from the fiscal year ended March 31, 2016)</td>
<td>Calculated from the fiscal year ended March 31, 2017</td>
<td>2.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final disposal rate for waste (%)</td>
<td>1.45</td>
<td>1.15</td>
<td>0.88</td>
<td>0.82</td>
<td>1.03</td>
</tr>
</tbody>
</table>

*1 Total for scope 1 (direct emissions from the use of fuel, etc.) and scope 2 (indirect emissions accompanying the use of energy, such as electricity)
*2 Performance in comparison with 2030 environmental targets
*3 Calculated by converting the energy saving benefits of supplied ICT services into CO2
*4 Calculated for five major domestic companies (NTT East, NTT West, NTT Communications, NTT DOCOMO, and NTT DATA)

#### Social Data

**Numbers of Consolidated Group Companies and Employees**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Group companies (Companies)</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013/3</td>
<td>944</td>
<td>275,000</td>
</tr>
<tr>
<td>2014/3</td>
<td>946</td>
<td>275,000</td>
</tr>
<tr>
<td>2015/3</td>
<td>917</td>
<td>275,000</td>
</tr>
<tr>
<td>2016/3</td>
<td>907</td>
<td>275,000</td>
</tr>
<tr>
<td>2017/3</td>
<td>907</td>
<td>275,000</td>
</tr>
</tbody>
</table>

**Employment**

<table>
<thead>
<tr>
<th>Region</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overseas</td>
<td>114,010</td>
<td>35,370</td>
<td>149,380</td>
</tr>
<tr>
<td>Japan</td>
<td>104,000</td>
<td>32,030</td>
<td>136,030</td>
</tr>
</tbody>
</table>

**Electricity efficiency of communications services**

<table>
<thead>
<tr>
<th>Year</th>
<th>2013/3</th>
<th>2014/3</th>
<th>2015/3</th>
<th>2016/3</th>
<th>2017/3</th>
</tr>
</thead>
<tbody>
<tr>
<td>m2 / gbps</td>
<td>1514</td>
<td>1513</td>
<td>2016</td>
<td>2016</td>
<td>2016</td>
</tr>
</tbody>
</table>

**Intellectual Property Related**

**Clarivate Analytics Top 100 Global Innovators**
Top 100 organizations selected as global business leaders each year by Clarivate Analytics. Organizations are selected on the basis of granted IP rights for unique inventions and successful commercialization.

**Brand Related**

**Brand Finance Global 500**
Brand Finance is a global leader in brand valuation and strategic consultancy, with a presence in more than 20 countries. Brand Finance uses an original methodology to quantify and rank corporate brands for companies in a wide range of categories.

**BrandZ Top 100 Most Valuable Global Brands 2016**
Milward Brown, which is one of the world’s leading market research firms, conducts brand-, media-, and communications-related operations. Milward Brown uses an original methodology to rank approximately 23,000 company brands, with comprehensive consideration of company finances and corporate image based on consumer surveys.

### External Evaluations

#### SRI Indexes and Other External Evaluations

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dow Jones Sustainability Index</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FTFSE E4 Good Index</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global ESG index from FTSE Russell, of the U.K., a wholly owned subsidiary of the London Stock Exchange</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FTSE Blossom Japan Index</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morningstar Socially Responsible Investment Index</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clarivate Analytics Top 100 Global Innovators</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Finance Global 500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BrandZ Top 100 Most Valuable Global Brands 2016</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**Note:**
*All statistics are as of March 31, 2017, unless otherwise noted.

**Japan**

- Number of managers*1: 110,010
- Total number of employees of NTT, directly affiliated companies in Japan, and their affiliated companies in Japan (total of 41 companies)

**Asia Pacific**

- Number of managers*1: 25,190
- As of June

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Aiming to achieve sustained gains in corporate value as the “Value Partner” that customers continue to select

Business Transformation Based on the Medium-Term Management Strategy

In November 2012, NTT Group announced its “Towards the Next Stage” Medium-Term Management Strategy, positioning the growth field of global cloud services as a core pillar for its business going forward. At the same time, we commenced efforts to improve the efficiency of existing network services and thoroughly bolster competitiveness. Later, in May 2015 we launched “Towards the Next Stage 2.0,” a management strategy aimed at realizing further profit growth that was formulated to guide these efforts.

“Towards the Next Stage 2.0” maintains the basic focus of the prior medium-term management strategy while placing additional emphasis on increasing profits, targeting growth in earnings per share (EPS). To achieve the redefined target for EPS growth, the new strategy is centered on accelerating the profit generation of global cloud services and enhancing the profitability of network services.

Under “Towards the Next Stage 2.0,” we have chosen to pursue sustainable growth by promoting the B2B2X model to explore new markets. In other words, we aim to have NTT Group function as a catalyst for the creation of new business models and new, high-value-added services with various partners.

September 2017
President and Chief Executive Officer,
Representative Member of the Board

2. Progress of and Outlook for “Towards the Next Stage 2.0” Medium-Term Management Strategy

“Towards the Next Stage 2.0” has four financial targets. The most important of these targets is for EPS growth. The other targets are for streamlining capital investment in the domestic network business, reducing costs associated with fixed-line and mobile access networks, and increasing overseas sales and operating income.

These financial targets are set to be achieved in the fiscal year ending March 31, 2018. I will now briefly discuss our current forecasts with regard to these targets.

For the fiscal year ending March 31, 2018, we aim to achieve recording-breaking operating revenues, operating income, and net income. Through efforts targeting this goal, EPS—defined as the most important medium-term financial target—should come to ¥414, exceeding the targeted level of at least ¥400. We are also making smooth progress toward our targets for streamlining capital investment in the domestic network business and reducing costs associated with fixed-line and mobile access networks, both of which we expect to achieve.

With regard to overseas sales and operating income, we have determined that it will be difficult to accomplish the targets of ¥22.0 billion and ¥1.5 billion set for these items, respectively, in the fiscal year ending March 31, 2018. Instead, we are forecasting overseas sales of ¥19.6 billion and overseas operating income of ¥1.2 billion. In regard to our overseas operations, we have continued to expand our global business lineup through mergers and acquisitions while pursuing sales and service coordination between Group companies. In the fiscal year ended March 31, 2017, the results of these efforts began appearing steadily as we received orders from customers in various industries around the world. One noteworthy example of a global client would be the Public Transport Victoria of Australia. In the fiscal year ending March 31, 2018, we will step up the cross-selling and other collaborative initiatives we have been implementing thus far and also work toward further cost reductions. At the same time, we will undertake new initiatives, such as the integration and reinforcement of the cloud services of NTT Communications and Dimension Data. We will seek to accomplish our global business targets at the earliest possible date through the continued advancement of such cross-Group initiatives.

Progress toward Medium-Term Financial Targets and Future Outlook

<table>
<thead>
<tr>
<th>Category</th>
<th>Medium-term financial targets</th>
<th>Fiscal year ended March 31, 2018 (Plan)</th>
<th>Fiscal year ended March 31, 2017 (Actual)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPS Growth</td>
<td>At least ¥400</td>
<td>¥391</td>
<td>¥414</td>
</tr>
<tr>
<td>Streamlining Capital Investment</td>
<td>At least ¥200.0 billion</td>
<td>¥136.4 billion</td>
<td>¥205.0 billion</td>
</tr>
<tr>
<td>Cost Reductions</td>
<td>At least ¥800.0 billion</td>
<td>¥654.0 billion</td>
<td>¥830.0 billion</td>
</tr>
<tr>
<td>Overseas Sales / Operating Income</td>
<td>¥22.0 billion / ¥1.5 billion</td>
<td>¥16.9 billion / ¥0.79 billion</td>
<td>¥19.6 billion / ¥1.2 billion</td>
</tr>
</tbody>
</table>

Notes:
1. Overseas operating income excludes M&A-related temporary expenses, such as depreciation costs of intangible fixed assets.
2. Streamlining capital investment in domestic network business excludes capital investment for NTT Communications’ data centers and certain other assets.
3. Figures for cost reductions based on mobile access networks are actual targets that exclude the impact of the change in the depreciation method for property, plant, and equipment.
4. Pro forma targets for overseas sales and overseas operating income and for streamlining capital investment have not been revised.
5. In the current fiscal year, the target for cost reductions was revised from at least ¥600.0 billion to at least ¥800.0 billion.
Top Message

Enhancement of Shareholder Returns

We plan to continue increasing dividend payments over the medium term while giving consideration to stability and sustainability. Annual dividends for the fiscal year ended March 31, 2017, were ¥120 per share. We plan to raise dividend payments by ¥30, to ¥150 per share, in the fiscal year ending March 31, 2018, in light of the favorable trends in business performance. This amount is six times higher than when the Company was first listed on the stock market 30 years ago. Looking ahead, we will continue to increase dividend payments while giving consideration to stability and sustainability.

With regard to share buybacks, it was decided to conduct acquisitions of treasury stock with an upper limit of ¥150.0 billion at a meeting of the Board of Directors held in December 2016. These acquisitions were completed in April 2017. This entailed treasury stock acquisitions in the fiscal year ended March 31, 2017, that totaled ¥347.1 billion, including the portion acquired from the government of Japan in June 2016, as well as an additional ¥43.2 billion in acquisitions conducted in April 2017. In the future, we will maintain a flexible stance toward conducting share buybacks based on consideration of factors including performance and market trends as well as the need to improve capital efficiency.

Annual Dividends

Annual Dividends

Note: Figures above have been adjusted for a stock split of common stock (100 for 1) conducted with an effective date of January 8, 2016, and a stock split of common stock (5 for 1) conducted with an effective date of July 1, 2016.

3. Pursuit of Further Corporate Value Gains

Aim of B2B2X Model Initiatives

In the fiscal year ended March 31, 2017, we were able to accelerate several concrete collaborative projects together with various partner companies through our B2B2X model initiatives. We have been proactive in explaining NTT Group’s efforts with this regard. For example, some of these initiatives were described at CEBIT 2017, the world’s largest ICT business trade fair, which was held in Germany in March 2017. I feel that strong progress was made in B2B2X model initiatives during the fiscal year ended March 31, 2017. I would like to take this opportunity to refresh your understanding with regard to the aim and concept of our B2B2X model initiatives.

In the “Towards the Next Stage” Medium-Term Management Strategy announced in November 2012, we set forth our goal of becoming a “Value Partner” that customers continue to select and deem valuable. This goal is meant to be achieved by responding to the globalization of markets and the evolution of cloud services in order to break away from being simply telecommunications operators.

The current era is one in which customers are able to freely choose the services they wish to use. In this era, it is not enough to be chosen once; companies must continue to be selected. Furthermore, this era is no longer one in which telecommunications operators can play a lead role by supplying all the necessary services themselves. NTT Group does not look to play a lead role, but rather aims to become one of many crucial actors in supporting customers as they transform their business models and create new businesses. Launched in February 2015, the Hikari Collaboration Model, the world’s first model for full-scale fiber-access services offered through a wholesale framework, is based on this policy. This service is thus aimed at creating new businesses and new, high-value-added services together with partners.

The “Towards the Next Stage 2.0” Medium-Term Management Strategy, which inherited this policy, set the clear goal for achieving sustainable growth of exploring new markets by further promoting the B2B2X model. The aim of the B2B2X model is to support the business model transformations of service providers, represented by the center B, in order to contribute to innovation in the lifestyles of end users, represented by the X, or to the resolution of social issues with new services created together with service providers. In this manner, the B2B2X model goes beyond the previous approach of growing earnings by providing network and peripheral services directly to individuals, companies, and other consumers. The true aim of this model is to work together with partners to provide the value born out of NTT Group’s strengths to individuals and companies through an ever-widening range of service providers, and thereby create new business models.

We are currently accelerating numerous B2B2X model collaborative projects together with various service providers. These ventures include the merger of Kabuki and ICT to create new and moving experiences in the entertainment field, the realization of smart soccer stadiums and new visual expressions in the sports field, the optimization of manufacturing through the use of the IoT in factories in the manufacturing field, and the development and verification of connected car technologies in the automotive field. We will further build upon these initiatives going forward.
Resolution of Social Issues and Shaping of the Future

To reiterate, NTT Group is promoting the B2B2X model with the aim of creating new services and value to innovate lifestyles and resolve social issues. Turning our eyes to the world at large, we will see that the movement to develop a sustainable society is gaining steam on a global scale, as exemplified by the adoption of the Sustainable Development Goals by the United Nations. This movement is increasingly directing more attention toward NTT Group, which has continued to utilize ICT to resolve social issues over the years. In Japan, the Cabinet Office is promoting “Society5.0” initiatives with the goal of creating an ultra-smart society as part of its initiatives for building industries and transforming society for the future. The principles behind these initiatives are shared by NTT Group. In conjunction with the Cabinet Office’s initiatives, the Japan Business Federation (Keidanren) has established its own action plan with a view to implementing these initiatives shared by NTT Group. In conjunction with the Cabinet Office’s initiatives, Japan Business Federation (Keidanren) has established its own action plan with a view to implementing these initiatives seen through public-private partnerships.

The realization of Society5.0 is anticipated to be driven by the IoT, big data, and AI. This is because the IoT makes it possible to accumulate various social data as big data, which can be analyzed by AI to contribute to the resolution of social issues. This process will require that data from society as a whole be shared and utilized. However, there are two major tasks that will need to be addressed to make this possible. The first task is the development of frameworks for collecting data. Specifically, frameworks must be established for enhancing data in terms of both quality and quantity. The second task is the formulation of rules for ensuring the safe and trustworthy use of personal information.

For addressing these issues, a scheme in which local governments play a central role in accumulating and promoting the use of big data is ideal. Rather than giving a single company exclusive access to this data, it would be better for population, map, disaster prevention, and other publicly available information held by local governments and for the big data collected by companies to be compiled and provided to the entire industry as a public asset. In this scheme, local governments should lead efforts to share and utilize this data to contribute to the improvement of services for local residents and to the development of local industries.

NTT Laboratories is developing secret sharing technologies that enable data to be stored safely and be protected from deletion following system failures as well as secret computation technologies that make it possible to process anonymized data. I believe that these technologies will help support the sharing and utilization of data. We should also be able to offer assistance through our AI-powered big data analysis technologies as well as through the telecommunication services we have accumulated to date.

We have concluded comprehensive partnership agreements with Fukuoka City and Sapporo City and are examining and implementing various solutions to the issues faced by the local governments in each city.

In this manner, NTT Group will collaborate with local governments to link contributions to regional economic development to the improvement of corporate value.

Reinforcement of Foundations for Improving Corporate Value

Good corporate governance and the empowerment of diverse human resources are important building blocks for our foundations for improving corporate value.

I believe that the effective functioning of corporate governance is indispensable for sustained gains in corporate value. Accordingly, NTT is working to bolster the effective functioning of corporate governance based on its fundamental policies of ensuring sound management, conducting appropriate decision-making and business activities, clarifying accountability, and maintaining thorough compliance.

I believe that accountability is one of our most important responsibilities, and we therefore implement management with an emphasis on communication with shareholders and other investors. Our medium-term management strategy focuses on enhancing our understanding of our medium-term management strategy.

In terms of compliance, we recognize the extreme importance of operating our business in observance of laws and regulations and with a strong sense of ethics. To this end, the NTT Group Corporate Ethics Charter sets forth conduct guidelines for corporate officers and employees. NTT also conducts training and annual surveys of employees to measure their awareness, and the results are then used for corporate ethics awareness enhancement initiatives in order to guarantee the effectiveness of the charter.

Employees are an important source of competitiveness for companies. In order to empower a diverse range of employees, we have positioned diversity management as a core element of our management strategies, and diversity promotion initiatives are being implemented accordingly. These initiatives have led NTT to receive the highest rating of gold in the PRIDE INDEX, which is designed to recognize efforts for supporting the LGBT community and other sexual minorities.

We also realize that the creation of a workplace environment that is conducive to the long-term efforts of a diverse range of human resources is an urgent task. In reforming work styles and leave acquisition practices, managers should be the vanguards of changing awareness ahead of employees. To get the ball rolling on such changes, I issued a message to all NTT Group employees and managers stating that managers should strive to set a good example in terms of work styles and leave acquisition practices. Going forward, we will promote work style reform to secure human resources and cultivate a workplace environment that is more conducive to employees’ exercising their talents to improve labor productivity. Specific measures with this regard will include encouraging employees to take extended leave, allowing employees to work from home and otherwise practice teleworking, and making it possible for employees to work early morning hours through flextime systems.

International trends remain opaque, and NTT Group is currently faced with a need to prepare for business risks. At the same time, it can be expected that the IoT, big data, AI, and other ICT will evolve to address various issues, accelerating the speed of transformation in industrial structures and social life.

In this environment, NTT Group finds itself poised to take advantage of various business opportunities. To capitalize on this prime positioning, we will enhance the R&D and operating capabilities we have fostered to date. At the same time, we will collaborate with partners in other industries as a “Value Partner” in our ongoing quest to create new services and business models.

I would like to ask for your ongoing support of NTT Group in the years ahead.
Special Feature:

Acceleration of B2B2X Businesses

Drastic Transformation of Business Structure

NTT Group has continued to transform its business structure in response to changes in markets and in technologies. Such transformations have included the development of broadband operations and global businesses.

We are currently exploring new business fields with the potential to drive the ongoing growth of NTT Group with an eye to 2020 and the revitalization of local economies.

We are combining our broadband operations, which are being developed across Japan, with our information systems, which boast strengths in various fields, to make comprehensive value proposals and develop businesses with various aims. Such aims include developing sports and other fields into growth industries; boosting the competitiveness of the agricultural, manufacturing, and service industries; resolving social issues arising from the declining birth rate, aging population, and other causes; and transforming people’s lifestyles.

Aims of B2B2X Model Initiatives

The digitization of information will allow for a variety of data to be collected, processed, and distributed via networks, making it possible for previously under-utilized information assets and expertise to be used more effectively.

The advancement of the IoT, meanwhile, will enable for the conditions of various articles to be monitored in a timely fashion through smartphones and other mobile terminals as well as through network-connected sensors and monitors attached to machinery, buildings, and infrastructure.

In addition, artificial intelligence (AI) will greatly increase the ability to support service providers (the second B) in creating new value by instantaneously processing and analyzing massive amounts of collected data.

Accelerating the development of B2B2X businesses is a strategy designed to transform NTT Group’s business structure so that it may evolve from a model of providing services directly to individuals and businesses to a model of supporting service providers in various fields to deliver value to end users. The Group will advance this transformation while at the same time taking advantage of digitization, the IoT, AI, and other social and technological developments.

Major Initiatives in the Fiscal Year Ended March 31, 2017

In the fiscal year ended March 31, 2017, NTT Group accelerated several concrete projects together with various partners, including companies, organizations, and local governments.

The results of some of these initiatives were introduced at CEBIT 2017, which was held in Germany in March 2017, and at Niconico Chokaigi 2017, which was held in April 2017 in Makuhari, Japan, as part of our proactive drive to explain these efforts.

NTT Group will strive to continue being an entity with which second B service providers want to collaborate.

As we develop these operations, NTT Group’s business structure is undergoing a drastic transformation, evolving from its former telecommunications-centered business-to-consumer structure to adopt a structure focused on B2B2X businesses.

B2B2X businesses are a step forward from the business-to-business model. In these businesses, NTT Group supports service providers, represented by the second B, in supplying various services to end users, represented by the X, through smartphones and network-connected sensors.

NTT Group strives to serve as a catalyst for service providers falling under the second B, stimulating transformations in the business models of companies and in the services for residents offered by local governments as well as supporting information-grounded decision making by consumers and community members through these transformations. The ultimate goal of these efforts is to aid in lifestyle transformation.
Examples of B2B2X Model Initiatives

**B2B2X Model Collaboration with a Sports League**

**Contribution to the Development of the Sports Field into a Growth Industry with J.League Club Teams**

Recently, we have been witnessing the expansion of the sports content industry on a global scale along with other market changes. As a response to these trends, the Japanese government is spurring forward a drive to develop the sports field into a growth industry in light of 2020.

In the midst of these trends, NTT Group has concluded a collaboration agreement with the J.League and Perform Group with regard to the Smart Stadium project. This project, which is aimed at promoting the advancement of ICT in J.League stadiums and club hometowns, represents one of our first B2B2X model initiatives.

In the fiscal year ended March 31, 2017, NTT Group began converting Yurtec Stadium Sandai and Kashima Soccer Stadium into smart stadiums, joining NACK5 Stadium Omiya, which has already undergone this conversion. We plan to expand smart stadium initiatives going forward. In addition, we are collaborating with Perform Group to make it possible to view sports events anytime, anywhere through DAZN for dokomo, a revolutionary live sports viewing channel, and through Alkari TV.

**Diagram of Collaboration Initiatives**

**Expansion of Customer Base through Digital Marketing**

- **Contribution to higher earnings for the J.League and its club teams and create new services and business models for NTT Group**
- **Fully leverage NTT Group’s assets to support the marketing activities of the J.League**

**Contribution to the Development of the Sports Field into a Growth Industry**

1. **Discovery of potential new customers**
2. **Improvement of satisfaction of current fans**
3. **Invigoration of J.League club hometowns**

Furthermore, NTT DOCOMO has concluded a top partner agreement with the J.League, while NTT Group has entered into an official technology partner agreement. By building upon our cooperative relationship with the J.League, we will utilize NTT Group’s ICT services and assets to promote the B2B2X model.

Looking ahead, NTT Group will strive to encourage greater engagement with current J.League fans and supporters and to step up communication with prospective soccer fans. To this end, we will utilize Group assets, such as NTT DOCOMO’s P.OINT service, while also holding user-participation events linked to social networking services (SNSs).

We aim to deliver higher levels of satisfaction to current J.League fans and to create new fans by leveraging NTT Group’s augmented reality (AR), VR, and other technologies to create new entertainment experiences and by making effective use of J.League’s archive of past videos.

In addition, we will help invigorate J.League club hometowns by enhancing relationships between local fans and supporters and the J.League and its club teams through coordination among Group company branches and dokomo shops located throughout Japan.

**B2B2X Model Collaboration with Entertainment Companies**

**Merger of Kabuki and ICT to Create New and More Moving Experiences**

NTT is collaborating with SHOCHIKU Co., Ltd., in a joint test aimed at proposing completely new ways of viewing Kabuki by merging Kabuki with state-of-the-art ICT. As the first step of this test, we delivered a real-time, ultahigh-presence live viewing experience of the KABUKI LION SHI-SHI-O: The Adventures of the Mythical Lion performance, which took place at Japan KABUKI Festival in Las Vegas 2016, to Haneda Airport by using the Kirari! immersive telepresence technology and other cutting-edge technologies.

At the Las Vegas event, an exhibition was held displaying such technological feats as a system that used angle-free object search technology to recognize specialized masks simulating the unique kumadori makeup featured in Kabuki. When a mask was held up to one’s face, it would be recognized, and the Kabuki makeup mask would be superimposed onto the individual’s face on a monitor using AR technologies. In addition, projection mapping was applied to a giant three-dimensional face object in conjunction with the distinctive pauses and expressions and other dynamic performances for which Kabuki is known. At the same time, deformation lamp light projection technologies were used to present the appearance that still kumadori images on a wall were actually moving, injecting an added degree of human emotion into the exhibit.

Furthermore, the KABUKI LION SHI-SHI-O Las Vegas Performance Returns in Kumamoto event was held to give form to the desires of NTT, NTT West, Kumamoto Prefecture, and SHOCHIKU to support the recovery from the impacts of the 2016 Kumamoto earthquakes. This event included Kabuki Theater Virtual Performance and other exhibits that enabled visitors to experience the potential of merging Kabuki with ICT.

Through these events, we are conducting R&D ventures for utilizing ICT to realize next-generation Kabuki. As we advance these ventures, we will leverage the insight into entertainment expressions gained through these events in future efforts for providing new and more moving experiences.
Examples of B2B2X Model Initiatives

**B2B2X Model Collaboration with Local Governments and Companies**

**Contribution to ICT Community Development Utilized Publicly Available Data and Real-World Data through Collaboration with Sapporo City and Local Distribution Companies**

NTT Group is supporting Sapporo City’s efforts to build an advanced model for ICT community development.

We have joined the Sapporo City ICT Utilization Platform Study Panel, a public-private-academic partnership established by Sapporo City. Through participation in this committee, we aim to contribute to ICT community development in a wide range of fields, including sports, tourism, transportation, snow countermeasures, health, childcare, regional economic development, and resident services.

Our first initiative through this partnership was conducted in conjunction with the Sapporo Snow Festival and the 2017 Sapporo Asian Winter Games. We worked together with Sapporo City and local distribution companies to collect and analyze real-world data related to travel, preference, and purchasing trends among domestic and overseas tourists. This information was used to deploy measures for stimulating consumption, including mutual customer referrals by hotels, tourist spots, and shopping facilities, and to help communicate the appeal of Sapporo City.

These data-based marketing initiatives led to substantial year-on-year increases in the sales of the local distribution companies with which we partnered. Furthermore, we were able to analyze industry-wide data on purchases by product category and nationality, data that normally would not have been shared with competitors. These analyses allowed for the rediscovery of markets that individual companies had failed to discover and made it possible to implement marketing measures from new perspectives. These benefits served to verify the advantages of sharing data with industry peers.

By increasing the number of companies participating in these initiatives, we hope to provide further support for consumption-stimulating measures.

NTT Group will also continue aiding the ICT community development efforts of Sapporo City and cities in the fields of transportation, snow countermeasures, health, and childcare.

**Overall Framework for Data-Based Marketing (Travel and Consumption)**

**B2B2X Model Collaboration in Manufacturing Industry**

**Agreement with FANUC to Work toward Quick Establishment and Commencement of Service of FIELD System for Optimizing Manufacturing with the IoT**

An agreement has been reached between FANUC CORPORATION, NTT, NTT Communications, and NTT DATA to engage in collaboration pertaining to edge computing technologies and ICT platform utilization, both areas of focus for all parties, to quickly establish and commence service of the FANUC Intelligent Edge Link and Drive (FIELD) system. This system is an open platform being developed by FANUC that is meant to be connected to computer numerical control devices, robots, peripheral devices, sensors, and other equipment to perform sophisticated analyses for optimizing manufacturing.

**Scheme for Optimizing Manufacturing at Factories**

**Requirements**

- Improve production efficiency without reducing uptime
- Detect and predict equipment failures
- Coordinate multiple pieces of equipment
- Modification and revision of functions
- Connectivity with various equipment

**Overview**

FANUC is a global supplier in the field of factory automation and robots. This company is currently engaged in the development and commercialization of the FIELD system. This open platform is designed to be linked to the various equipment used at manufacturing sites to enable smart processing and utilization of the big data produced by such equipment in order to realize unprecedentedly smart manufacturing sites.

Through our partnership with FANUC, the cutting-edge technologies of NTT Laboratories and the ICT platforms and management solutions being deployed on a global basis by NTT Communications will be incorporated into the FIELD system scheme to realize the quick establishment and commencement of service of this system. We will also seek to make this system the de facto standard. At the same time, NTT DATA’s application development experience and expertise, which entails using analyses of big data to resolve various issues seen at factories, will be utilized to support the work process reforms of organizations adopting the FIELD system.

Acting as the “value partner” that customers continue to select, NTT Group will collaborate with various partners in the field of ICT to promote co-innovation initiatives. NTT Group has positioned manufacturing industry as a priority field. In this field, NTT Group is united in its goal of creating new, high-value-added services and business models together with its partners.
Examples of B2B2X Model Initiatives

**B2B2X Model Collaboration in Livestock Industry**

**Provision and Testing of Beef Cattle Life Cycle IoT Services for Realizing Stable Supply of Wagyu Beef**

In primary industries in Japan, such as agriculture and fishing, the IoT, AI, and other ICT are anticipated to contribute to the resolution of serious issues faced in these industries, including the lack of practitioners stemming from population aging. In addition to helping increase production efficiency and stabilize and improve quality, ICT is expected to make it possible for practical know-how to be represented visually and passed on to others.

In the Wagyu beef industry, the aging and decline of cattle farmers are causing an ongoing shortage of calves. Looking to address this issue, NTT Group has turned its attention to the overall beef cattle life cycle. We hope to reduce the labor requirements for successfully breeding calves, fattening them, and eventually shipping them using the IoT and to offer IoT services that support stable shipments of Wagyu beef.

NTT DOCOMO is working together with the ZEN NOH Group to advance initiatives targeting cattle farmers for reducing the amount of labor associated with the birth of Wagyu cattle. In these initiatives, sensors for the cattle body temperature monitoring system developed by REMOTE, INC., are attached to cows that are expected to deliver calves in the near future. The body temperatures of these cows are monitored closely, and graphs are produced, which can be viewed via a smartphone or tablet connected to NTT DOCOMO’s communications network. Accordingly, cattle farmers are able to easily maintain an understanding of the cows’ conditions. E-mails are sent to farmers 24 hours before the expected delivery or when the cow’s water breaks so they can have sufficient time to prepare. Through these features, the system reduces the need for farmers to check up on cows day and night.

In addition, NTT East is engaged in a verification test together with Zenchikuren and Computer Associated Laboratory, Inc., aimed at preventing falling-related deaths of beef cattle prior to shipment. In this verification test, we have deployed a system in which infrared motion sensors are installed in cattle barns. The image data from these sensors is collected via Wi-Fi and uploaded to a cloud server by means of a milli-wave network capable of long-distance, wireless communications. This data is utilized to identify when beef cattle have fallen, and e-mails are sent when a fallen cattle is detected. Every year, between 1% and 2% of procured calves die before being raised to a shipable state due to their lungs collapsing as a result of going undetected after having fallen down. This initiative is designed to prevent such deaths.

**Beef Cattle Life Cycle**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Age</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth of Calf</td>
<td>10 months</td>
<td>Fattened Cow shipped after 55 months</td>
</tr>
<tr>
<td>Birth of Mother Cow (Breeding Cow)</td>
<td>15 months</td>
<td>First insemination, pregnancy period (230 days)</td>
</tr>
<tr>
<td>Birth of Fattened Cow</td>
<td>55 months</td>
<td>Shipment approx. 700 kg</td>
</tr>
</tbody>
</table>

**Realization of Society5.0**

The Cabinet Office is promoting “Society5.0” initiatives with the goal of creating an ultra-smart society as part of its initiatives for building industries and transforming society for the future. These initiatives are being advanced through public-private partnerships to transform society for the future. The IoT, big data, and AI are expected to be key technologies and concepts for the realization of Society5.0.

**Society5.0 (5th Science and Technology Basic Plan)**

- **Transformation of society by expanding the application of the IoT to various fields**
- **Sophisticated integration of virtual and physical spaces**

The IoT is anticipated to make it possible for data from throughout society to be accumulated as big data and analyzed via AI to resolve various social issues.

In order for the IoT and big data to be used to resolve social issues in this way, it will be necessary to appropriately share and utilize the population, road, and other infrastructure (public sector) data possessed by local governments along with purchasing, transportability, and other industry (private sector) data.

In this undertaking, local governments should play a central role by effectively managing public sector and private sector data that has been collected to return the value produced by this information to citizens and local companies. This process will expand the possibilities for utilizing data and thereby contribute to the development of local businesses and the improvement of services for residents.

NTT Group aims to support the efforts of local governments to use ICT for community development purposes. To this end, we have concluded comprehensive partnership agreements with Fukuoka City and Sapporo City through which we have been contributing to the development of tourism and other local industries and to the improvement of healthcare, child support, and other resident services. These initiatives have brought to light a number of tasks needing to be addressed.

The first task is to establish data management entities and increase the number of companies taking part in the aforementioned scheme. If local governments are able to commit to playing a central role in this scheme, participating companies will be more trusting of the scheme, which in turn will make it possible to accumulate highly viable data that would be difficult to compile at the individual-company level. Furthermore, returning the value created through this data to the companies that supplied it will support an ongoing cycle of data collection, processing, and utilization. NTT Group hopes to assist in generating such a cycle.
The second task is to formulate standardized rules and guidelines. One goal of this scheme is for various business operators to share purchase data and use it in marketing and promotional activities. However, the types of data collected currently vary by company as do the methods for categorizing products, and policies for disclosure are not uniform. It is therefore necessary for rules to be decided upon by business operators each time information is shared, and the development of such rules thus represents an obstacle needing to be overcome in order to promote such initiatives. By gaining experience through involvement in various information-sharing initiatives, we aim to provide support to enable industry organizations and business operators to flexibly take part in such initiatives.

The third task will be to develop safe data management technologies and procedures. It can be expected that the data to be utilized through this scheme will include sensitive information in the possession of participating companies. For this reason, it is crucial to develop technologies for safely and reliably managing this data, including encryption and anonymization technologies, as well as management systems for preventing misuse of data. NTT Laboratories is developing secret sharing and secret computation technologies as well as anonymization technologies and is preparing for the practical application of these technologies.

Looking forward, NTT Group will utilize its assets to contribute to the resolution of government issues, the invigoration of local communities, and consequently the realization of Society5.0.

Future Market Scale and Initiatives for B2B2X Businesses

The government’s Japan Revitalization Strategy 2016 defines 10 areas for public-private partnership projects. By advancing growth strategies focused on these 10 areas, this strategy targets a gross domestic product of ¥600 trillion. Of this amount, ¥30 trillion is to be generated by the industrial field, ¥10 trillion is to come from sports, and ¥11 trillion is to stem from tourism.

In the future, NTT Group will merge the broadband and information systems it has developed to date to pursue sustainable growth by supporting efforts for making industries and lifestyles smarter. Broadband and information systems will remain central pillars of NTT Group’s operations going forward. At the same time, we will leverage the unique strengths born out of the Group’s operations in various business domains, including real estate and energy management, as we adopt the perspective of second B service providers in delivering comprehensive value and taking part in collaborative efforts with entities outside of the Group. We thereby aim to help increase the value supplied to end users, the X of the B2B2X model, by second B providers in order to expand our B2B2X businesses.

Potential for the B2B2X Market


Long-term change and growth in the B2B2X model is expected to come from efforts for closing gaps in the value chain. The value chain in the B2B2X model is expected to come from efforts for closing gaps in the value chain.

The government’s Japan Revitalization Strategy 2016 defines 10 areas for public-private partnership projects. By advancing growth strategies focused on these 10 areas, this strategy targets a gross domestic product of ¥600 trillion. Of this amount, ¥30 trillion is to be generated by the industrial field, ¥10 trillion is to come from sports, and ¥11 trillion is to stem from tourism.

Furthermore, the Japanese government’s Growth Strategy 2017 has defined “building and developing pleasant infrastructure and towns,” “realization of mobility revolution,” and “extension of healthy lifespan” as strategic areas for realizing Society5.0. In addition, tourism, sports, and culture; aggressive development of the agricultural, forestry, and fisheries industries; and energyization and productivity improvement in service industries have been defined as core areas for government policy aimed at the construction of a regional economic virtuous circulation system.

NTT Group will coordinate its efforts with government policy as it utilizes ICT for realizing smart industries in various fields and supporting improvements in the resident services of local governments in order to expand B2B2X businesses.
Corporate Governance

Overview of Corporate Governance Systems

Basic Policy
NTT believes that raising the effectiveness of corporate governance is an important management issue for meeting the expectations of various stakeholders, including shareholders and other investors, as well as customers, business partners, and employees, and for maximizing corporate value. Accordingly, NTT is working to strengthen corporate governance based on the principles of Japan’s Corporate Governance Code, which was put forth by the Tokyo Stock Exchange. Based on the “Towards the Next Stage 2.0” strategy established in May 2015, NTT seeks to accelerate the process of self-transformation to a “Value Partner” and place the entire group on a profit growth track. To this end, NTT will work to realize its basic policies of ensuring sound management, executing appropriate decision-making and business activities, clarifying accountability, and maintaining thorough compliance.

Overview of Enhancing Corporate Governance System

- Strengthen the supervise function based on the Company with Board of Company Auditors model
- Establish an Audit & Supervisory Board that consists of four members, including two outside independent members
- Members make up a majority to strengthen the supervise functions
- NTT’s Board of Directors and Supervisory Board make decisions on matters stipulated by law and on important matters related to corporate management and Group management. Moreover, through such means as periodic reports from Members of the Board on the status of the execution of members’ duties, the Board of Directors supervises the execution of duties by Members of the Board. The members of NTT’s Board of Directors are elected based on having a high level of integrity and insight.

1. Board of Directors
   - Number of meetings in the fiscal year ended March 31, 2017: 22
   - The Audit & Supervisory Board consists of a total of five Audit & Supervisory Board Members, comprising two internal Audit & Supervisory Board Members (one of whom is female) and three external independent Audit & Supervisory Board Members (one of whom is female). From an independent perspective that offers from that of individuals responsible for business execution, the Audit & Supervisory Board implements operational audits and accounting audits and audits the status of the execution of duties by Members of the Board.

2. Appointment and Compensation Committee
   - Number of meetings in the fiscal year ended March 31, 2017: 2
   - Important corporate matters to be decided are, in principle and in advance, discussed by the Executive Officers Meeting, which is made up of the president, senior executive vice presidents, full-time directors, and the heads of staff organizations. The Executive Officers Meeting is held about once a week. To improve the transparency of management decision-making, one Audit & Supervisory Board Member participates in the Executive Officers Meeting.

3. Various Committees
   - A number of committees have been established below the Executive Officers Meeting to discuss specific issues related to corporate and Group management strategies. Major committees include the Technology Strategy Committee, which deliberates on the Group’s R&D vision and technology development strategy; the Investment Strategy Committee, which examines investment projects that are larger than a certain scale; and the Group’s Strategy Committee, which discusses basic financial strategies and financial issues. These committees, which are convened as necessary throughout the year, are, in principle, chaired by the president or a senior executive vice president and are attended by relevant members of the Board and others.

Corporate Governance System
NTT, in order to strengthen functions for appropriately super- vising business execution, appoints several outside independent Members of the Board and has established the Audit & Supervisory Board, of which outside independent Audit & Supervisory Board Members make up a majority to strengthen its auditing system. Additionally, NTT has voluntarily established the Appointment and Compensation Committee, which consists of four members, including two outside independent Members of the Board, to further increase the objectivity and transparency of decisions relating to appointments and compensation. NTT has determined that governance functions based on the Company with Board of Company Auditors model are sufficiently effective to achieve this purpose.

Business execution at NTT is conducted in accordance with the organizational regulations governing the functions and operations of each organization. Important decisions are made under the supervision of the Board of Directors and based on the responsibility regulations that define the responsibilities and authorities for the president, senior executive vice presidents, and the head of each organization. In addition, NTT has established various meetings and committees as has been deemed necessary to discuss important matters related to corporate management and Group management in order to ensure that appropriate decisions are made for facilitating Group management.

Composition of Board of Directors / Audit & Supervisory Board

Members of the Board: 17
Outside independent members: 9
Female members: 2
Nonresident Audit & Supervisory Board Members: 3
Members of the Board (as of June 30, 2017)

- **Senior Vice President**, **Member of the Board**: Takeshi Hikoi
  - Head of Finance and Risk Management
- **Senior Vice President**, **Member of the Board**: Tsunehisa Okuno
  - Head of Global Business
- **Senior Executive Vice President**, **Representative Member of the Board**: Hiromichi Shimohara
  - Chief Technology Officer
  - Chief Information Security Officer
  - In charge of technical strategy and international standardization
  - Head of Research and Development Planning
- **Executive Vice President**, **Member of the Board**: Mitsuyoshi Kobayashi
  - Head of Technology Planning
- **Senior Executive Vice President**, **Representative Member of the Board**: Jun Sawada
  - Chief Financial Officer
  - Chief Compliance Officer
  - Chief Information Officer
  - In charge of business strategy and risk management
- **Senior Vice President**, **Member of the Board**: Takashi Hiroi
  - Head of Technology Planning
- **Senior Vice President**, **Member of the Board**: Tsunehisa Okuno
  - Head of Global Business
- **Senior Vice President**, **Member of the Board**: Takashi Hiroi
  - Head of Finance and Accounting
- **Chairman of the Board**: Satoshi Miura
- **President and Chief Executive Officer**, **Representative Member of the Board**: Hiroo Unoura
  - Director of Japan Display, Inc.
- **Outside Independent Member of the Board**: Katsuhiko Shirai
  - Director of Japan Display, Inc.
- **Outside Independent Member of the Board**: Sadayuki Sakakibara
  - Senior Adviser of Toray Industries, Inc.
  - Director of Hitachi, Ltd.
  - Chairman of the Japan Business Federation (Keidanren)
- **Senior Vice President**, **Member of the Board**: Akira Shimada
  - Head of Strategic Business Development
  - In charge of 2020 Project
- **Senior Vice President**, **Member of the Board**: Hiroki Kurijima
  - Head of Corporate Strategy Planning
- **Senior Vice President**, **Member of the Board**: Eiichi Sakamoto
  - Head of Corporate Strategy Planning
- **Chairman of the Board**: Satoshi Miura
  - Executive Vice President
  - Member of the Board
  - Akira Shimada
  - Head of General Affairs
Background and Experience of Members of the Board

Satoshir Miura
Date of Birth: March 4, 1946
Chairman of the Board
Years served as Member of the Board: 12
Shares owned: 33,743
Number of Meetings Attended (Percent): 12/12 (100%)

Hiroshi Ushio
Date of Birth: January 19, 1955
President and Chief Executive Officer
Years served as Member of the Board: 12
Shares owned: 24,000
Number of Meetings Attended (Percent): 12/12 (100%)

Tsuneo Iysako
Date of Birth: October 13, 1940
Senior Vice President
Years served as Member of the Board: 5
Shares owned: 4,000
Number of Meetings Attended (Percent): 9/12 (75%)

Jun Sawada
Date of Birth: July 30, 1945
Senior Executive Vice President
Years served as Member of the Board: 10
Shares owned: 2,000
Number of Meetings Attended (Percent): 9/12 (75%)

Takashi Hiroi
Date of Birth: January 13, 1940
Senior Vice President
Years served as Member of the Board: 6
Shares owned: 4,000
Number of Meetings Attended (Percent): 12/12 (100%)

Akira Shimada
Date of Birth: December 16, 1957
Executive Vice President
Years served as Member of the Board: 6
Shares owned: 8,941
Number of Meetings Attended (Percent): 12/12 (100%)

Katsuhiko Shirai
Date of Birth: September 24, 1959
Dutiable independent Member of the Board
Years served as Member of the Board: 5
Shares owned: 4,000
Number of Meetings Attended (Percent): 9/12 (75%)

Satoshi Kobiayashi
Date of Birth: November 3, 1947
Executive Vice President
Years served as Member of the Board: 9
Shares owned: 8,400
Number of Meetings Attended (Percent): 12/12 (100%)

Mitsutoki Kobayashi
Date of Birth: November 3, 1947
Executive Vice President
Years served as Member of the Board: 9
Shares owned: 8,400
Number of Meetings Attended (Percent): 12/12 (100%)

Background and Experience
Apr. 1987 - Joined Nippon Telegraph and Telephone Public Corporation
Jun. 1994 - Executive Officer of NTT Corporation
Jun. 2003 - Managing Officer of NTT Corporation
Jun. 2006 - Executive Manager of the Corporate Strategy Planning Department
Jun. 2009 - Executive Manager of Corporate Strategy
Jun. 2012 - Senior Executive Vice President
Jun. 2015 - President and Representative Director of Nippon Telegraph and Telephone Corporation
Jun. 2019 - President of the Company

Principal Concurrent Position
Executive Director of Nippon Telecommunications and Broadcasting, Ltd.

Profiles:

Akira Shimada
Date of Birth: December 16, 1957
Executive Vice President
Head of General Affairs
Years served as Member of the Board: 6
Shares owned: 8,941
Number of Meetings Attended (Percent): 12/12 (100%)

Principal Concurrent Position
Member of the Board of NTT COMMUNICATION CORPORATION

Katsuhiko Shirai
Date of Birth: September 24, 1959
Dutiable independent Member of the Board
Years served as Member of the Board: 5
Shares owned: 4,000
Number of Meetings Attended (Percent): 9/12 (75%)

Principal Concurrent Position
Director (First Vice) of Japan Display, Inc.

Mitsutoki Kobayashi
Date of Birth: November 3, 1947
Executive Vice President
Head of Technology Planning
Years served as Member of the Board: 9
Shares owned: 8,400
Number of Meetings Attended (Percent): 12/12 (100%)

Principal Concurrent Position
Member of the Board of NTT COMMUNICATION CORPORATION

Background and Experience
Apr. 1996 - Joined Nippon Telegraph and Telephone Public Corporation
Jun. 2004 - Manager of the Corporate Strategy Planning Department
Jun. 2010 - Manager of the Corporate Strategy Department
Jun. 2012 - Senior Executive Officer
Jun. 2015 - Senior Executive Vice President
Jun. 2017 - Senior Executive Vice President
Jun. 2018 - Senior Executive Vice President
Jun. 2019 - President of the Company

Principal Concurrent Position
Chairman of NTT Corporation (present post)

Hiroshi Ushio
Date of Birth: January 19, 1955
President and Chief Executive Officer
Years served as Member of the Board: 12
Shares owned: 24,000
Number of Meetings Attended (Percent): 12/12 (100%)

Principal Concurrent Position
Executive Director of Nippon Telecommunications and Broadcasting, Ltd.

Background and Experience
Apr. 1973 - Joined Nippon Telegraph and Telephone Public Corporation
Jul. 1976 - Director of the Corporate Planning Department
Jul. 1980 - Manager of the Corporate Planning Department
Jul. 1980 - Manager of the Corporate Strategy Planning Department
Jul. 1986 - Manager of the Corporate Strategy Planning Department
Jul. 1991 - Manager of the Corporate Strategy Planning Department
Jul. 1993 - Manager of the Corporate Strategy Planning Department
Jul. 1994 - Senior Manager of the Corporate Strategy Planning Department
Jul. 2003 - Executive Manager of the Corporate Strategy Planning Department
Jul. 2003 - Head of the Corporate Strategy Planning Department
Jul. 2008 - Executive Manager of the Corporate Strategy Planning Department
Jul. 2008 - Head of the Corporate Strategy Planning Department
Jul. 2011 - Senior Executive Manager of the Corporate Strategy Planning Department
Jul. 2011 - Executive Manager of the Corporate Strategy Planning Department
Jul. 2011 - Director of the Corporate Strategy Planning Department
Jul. 2015 - Senior Executive Manager of the Corporate Strategy Planning Department
Jul. 2015 - Executive Manager of the Corporate Strategy Planning Department
Jul. 2018 - General Manager of the Corporate Strategy Planning Department
Jul. 2019 - Director of the Corporate Strategy Planning Department

Principal Concurrent Position
Executive Director of Nippon Telecommunications and Broadcasting, Ltd.

Table: Background and Experience of Members of the Board

<table>
<thead>
<tr>
<th>Name</th>
<th>Date of Birth</th>
<th>Position</th>
<th>Years served</th>
<th>Shares owned</th>
<th>Meetings Attended (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satoshir Miura</td>
<td>March 4, 1946</td>
<td>Chairman</td>
<td>12</td>
<td></td>
<td>12/12 (100%)</td>
</tr>
<tr>
<td>Hiroshi Ushio</td>
<td>January 19, 1955</td>
<td>President &amp; CEO</td>
<td>12</td>
<td>24,000</td>
<td>12/12 (100%)</td>
</tr>
<tr>
<td>Hiroshi Ushio</td>
<td>January 19, 1955</td>
<td>President &amp; CEO</td>
<td>12</td>
<td>24,000</td>
<td>12/12 (100%)</td>
</tr>
<tr>
<td>Tsuneo Iysako</td>
<td>October 13, 1940</td>
<td>Senior VP</td>
<td>5</td>
<td>4,000</td>
<td>9/12 (75%)</td>
</tr>
<tr>
<td>Jun Sawada</td>
<td>July 30, 1945</td>
<td>Senior EVP</td>
<td>10</td>
<td>2,000</td>
<td>9/12 (75%)</td>
</tr>
<tr>
<td>Takashi Hiroi</td>
<td>January 13, 1940</td>
<td>Senior VP</td>
<td>6</td>
<td>4,000</td>
<td>12/12 (100%)</td>
</tr>
<tr>
<td>Akira Shimada</td>
<td>December 16, 1957</td>
<td>EVP</td>
<td>6</td>
<td>8,941</td>
<td>12/12 (100%)</td>
</tr>
<tr>
<td>Katsuhiko Shirai</td>
<td>September 24, 1959</td>
<td>Member of the Board</td>
<td>5</td>
<td>4,000</td>
<td>9/12 (75%)</td>
</tr>
<tr>
<td>Mitsutoki Kobayashi</td>
<td>November 3, 1947</td>
<td>EVP</td>
<td>9</td>
<td>8,400</td>
<td>12/12 (100%)</td>
</tr>
<tr>
<td>Satoshi Kobiayashi</td>
<td>November 3, 1947</td>
<td>EVP</td>
<td>9</td>
<td>8,400</td>
<td>12/12 (100%)</td>
</tr>
</tbody>
</table>
Corporate Governance

Composition of the Board of Directors

The Board of Directors consists of a size appropriate to the Group’s business, and the composition of the Board of Directors reflects consideration for a balance of specialties and for diversity. The Board of Directors has 12 Members of the Board, including two outside independent Members of the Board, who have been appointed in order to strengthen functions for supervising business execution.

Activities of the Board of Directors

In principle, ordinary meetings of the Board of Directors are held once per month. In addition, extraordinary meetings are held as needed. The Board of Directors makes decisions on matters stipulated by law and on important matters related to corporate management and Group strategy.

Evaluation of the Effectiveness of the Board of Directors

The Board of Directors of NTT, which is a pure holding company, plays the role of monitoring the specific business operations of Group companies based on the medium-term to long-term business strategy of the entire Group.

The Board of Directors of NTT decides on important items related to the Group’s management that have passed the review of the Executive Officers Meeting, made up of the president, senior executive vice presidents, full-time directors, and the heads of staff organizations, as well as the review of the various committees chaired by the president or a senior executive vice president and attended by the relevant directors, while also monitoring the status of the execution of the duties of individual Members of the Board.

At the meetings of the Board of Directors, based on the authority of the individual Members of the Board, current issues regarding Group management and the initiatives being taken to resolve them are reported and reviewed. In the fiscal year ended March 31, 2017, the Board of Directors met 12 times, and discussions were held on initiatives to expand profits in the near term for global cloud services, the status of business recovery and new policies aimed at sustained growth in network services, and measures for improving return to shareholders in relation to “Toward the Next Stage 2.0.”

Additionally, ideas and opinions on issues concerning Group management were exchanged among outside independent Members of the Board and Audit & Supervisory Board Members, among outside independent Members of the Board and Representative Members of the Board, among outside independent Members of the Board and executives of major Group companies in and outside Japan, and among outside independent Members of the Board of NTT and outside independent Members of the Board of major Group companies and other members.

In those meetings, we received opinions on NTT’s Board of Directors from outside independent Members of the Board and Audit & Supervisory Board Members stating that adequate information is provided and that Members of the Board engage in active discussion, thereby ensuring the Board’s effectiveness.

Taking into account these initiatives, through evaluation, we have determined that the effectiveness of the Board of Directors is being enhanced, and NTT will work to further improve the Board’s effectiveness going forward.

Nomination Policies and Procedure for Members of the Board

NTT Group, in view of the resolution of social issues and the realization of a safer, more secure society, is striving to fulfill its role as a partner, boldly addressing social issues such as health and safety and the promotion of diversity and work-life balance. NTT Group is working on activities such as improving the disclosure of labor standards, and has established a policy of promoting human resources who share these ideals in the upper ranks of NTT Group’s management, and NTT is electing these human resources from both inside and outside the Group.

In regard to Member of the Board candidates, individuals are elected based on their having the broad-ranging perspective and experience, superior management skills and leadership, strong business intuition, and motivation necessary to contribute to the overall development of NTT Group.

Support System for Members of the Board

NTT has concluded contracts with the lawyers and other specialists who may be called upon as necessary to provide advice at the expense of NTT.

The secretariat of the Board of Directors is made available as a venue of contact for outside independent Members of the Board, which they can use to receive support with regard to their daily duties through explanations, responses to inquiries about business execution, and other means.

Training for Members of the Board

NTT Group works to cultivate candidates suitable for positions in top management, enabling the Board to respond to the rapidly changing management environment by creating a range of training opportunities in such areas as domestic and overseas economic and social issues, compliance, and risk management, and by allowing employees to accumulate new job experience. Additionally, outside independent Members of the Board can gain a deeper understanding of NTT Group’s businesses through opportunities to deepen their understanding of the business trends of Group companies and of the latest R&D results at the research facilities of NTT.

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In regard to Member of the Board candidates, individuals are elected based on their having the broad-ranging perspective and experience, superior management skills and leadership, strong business intuition, and motivation necessary to contribute to the overall development of NTT Group in order to facilitate the increasing of NTT Group’s corporate value.

From the perspective of strengthening the function of supervising business execution, for outside independent Members of the Board, NTT elects individuals who present no risk of a conflict of interest with general shareholders. In principle, NTT appoints several outside independent Members of the Board.

The nomination procedure for Member of the Board candidates involves the review of candidates by the Appointment and Compensation Committee. The candidates are then approved by the Board of Directors and presented for voting at the General Meeting of Shareholders.

Audit & Supervisory Board

Activities of the Audit & Supervisory Board

Audit & Supervisory Board Members attend meetings of the Board of Directors and other important meetings. In addition, Audit & Supervisory Board Members meet periodically with Representative Members of the Board and Members of the Board to exchange ideas and opinions and hold discussions on various topics. In this way, Audit & Supervisory Board Members maintain an understanding of the execution of duties by Members of the Board and provide their opinions as needed.

In the fiscal year ended March 31, 2017, the Audit & Supervisory Board met 22 times. Moreover, separate from meetings at the Audit & Supervisory Board, the Audit & Supervisory Board Members Preliminary Deliberation Meeting convened 36 times. These meetings provide a venue for the sharing of information. For example, at these meetings Audit & Supervisory Board Members receive explanations from corporate officers on matters to be discussed at the Executive Officers Meeting. In addition, Audit & Supervisory Board Members work closely with Independent Auditors and the Internal Control Office. Audit & Supervisory Board Members also receive explanations concerning audit plans and reports on the status of internal control systems and provide advice as needed.

In initiatives related to Group companies, Audit & Supervisory Board Members received information from the Representative Members of the Board on 20 major Group companies regarding the status of corporate governance and measures to maintain and enhance corporate governance, and discussions were conducted on these matters. In addition, the Audit & Supervisory Board is implementing initiatives that contribute to enhancing the auditing activities of Audit & Supervisory Board Members of major Group companies, including regularly holding training sessions by outside experts for Audit & Supervisory Board Members of major Group companies.

Audit & Supervisory Board Members support the sound, steady growth of NTT and Group companies from an independent perspective that differs from that of individuals responsible for business execution. In addition, Audit & Supervisory Board Members contribute to the strengthening of corporate governance systems and the fostering of awareness of compliance matters.
NIPPON TELEGRAPH AND TELEPHONE CORPORATION ANNUAL REPORT 2017

Corporate Governance

Background and Experience of Audit & Supervisory Board Members

Akiko Iida
Date of Birth: February 26, 1965
Outside Independent Audit & Supervisory Board Member
Years served as Audit & Supervisory Board Member: 3
Shares Owned: 1,153,407
Board of Directors Number of Meetings Attended (Percent): 10/12 (83%)
Audit & Supervisory Board Number of Meetings Attended (Percent): 9/12 (75%)

Mieko Tomomaga
Date of Birth: May 12, 1959
Outside Independent Audit & Supervisory Board Member
Years served as Audit & Supervisory Board Member: 3
Shares Owned: 2,500
Board of Directors Number of Meetings Attended (Percent): 11/12 (92%)
Audit & Supervisory Board Number of Meetings Attended (Percent): 11/12 (92%)

Takashi Iida
Date of Birth: September 5, 1946
Outside Corporate Auditor
Years served as Audit & Supervisory Board Member: 3
Shares Owned: 3,708
Board of Directors Number of Meetings Attended (Percent): 10/12 (83%)
Audit & Supervisory Board Number of Meetings Attended (Percent): 8/12 (67%)

Takao Marazawa
Date of Birth: October 16, 1945
Audit & Supervisory Board Member
Years served as Audit & Supervisory Board Member: 1
Shares Owned: 8,384
Board of Directors Number of Meetings Attended (Percent): 9/9 (100%)
Audit & Supervisory Board Number of Meetings Attended (Percent): 9/9 (100%)

Seiichi Ochiai
Date of Birth: February 12, 1956
Outside Independent Audit & Supervisory Board Member
Years served as Audit & Supervisory Board Member: 2
Shares Owned: 1,568
Board of Directors Number of Meetings Attended (Percent): 9/12 (75%)
Audit & Supervisory Board Number of Meetings Attended (Percent): 9/12 (75%)

Background and Experience of Audit & Supervisory Board Members

Nomination Policy and Procedure for Audit & Supervisory Board Members

NTT has the policy of electing Audit & Supervisory Board Members who have the capacity to provide audits based on their independence and expertise. NTT elects Audit & Supervisory Board Members who meet the criteria of independence as stipulated by the Companies Act, NTT’s own independence standards as outside independent Audit & Supervisory Board Members, and consent is granted if appropriate. The candidates are then approved by the Board of Directors for voting at the General Meeting of Shareholders.

Support Structures for Audit & Supervisory Board Members

The Office of Audit & Supervisory Board Members, which has four dedicated NTT employees, has been established as a structure to support audits by Audit & Supervisory Board Members. In addition, NTT has concluded contracts with the lawyers and other specialists who may be called upon as necessary to provide advice at the expense of NTT. In addition, when Audit & Supervisory Board Members are elected, they are trained with respect to market trends and corporate governance.

Independent Members of the Board and Audit & Supervisory Board Members

Nomination Procedure for Outside Members of the Board and Outside Audit & Supervisory Board Members

From the perspectives of strengthening supervision functions for evaluation and guaranteeing appropriate audits of the business of NTT, NTT has the policy of selecting individuals to serve as outside members of the Board and outside Audit & Supervisory Board Members who do not represent risks of conflicts of interest with general shareholders.

Independence Standards

In order to meet the independence criteria, a person may not fall under any of the categories below in the last three fiscal years:

1. A person who executes business in a partner company that exceeds NTT’s Standards
2. A person who executes business in a lending company that exceeds NTT’s Standards
3. A person who executes business in a partner company that exceeds NTT’s Standards
4. A person who executes business in an organization that received donations exceeding NTT’s Standards
5. A person who executes business in a partner company that exceeds NTT’s Standards

Even if any of (1) through (4) above applies to a person, where it has been decided that a person meets the Independence Standards, the reasons shall be explained and disclosed at the time of the person’s appointment as the Independent Member of the Board or Audit & Supervisory Board Member.
Corporate Governance

Reason for Nomination and Status of Independence

Outside Members of the Board (Independent Members of the Board)

<table>
<thead>
<tr>
<th>Name</th>
<th>Reason for nomination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seiichi Ochiai</td>
<td>his career.</td>
</tr>
<tr>
<td>Takashi Iida</td>
<td>his managerial perspective.</td>
</tr>
<tr>
<td>Michiko Tomonaga</td>
<td>his extensive experience as a university professor specialising in financial law.</td>
</tr>
<tr>
<td>Katsuhiko Shirai</td>
<td>his extensive experience as a lawyer.</td>
</tr>
<tr>
<td>Tomonaga Sakakibara</td>
<td>his extensive experience as a corporate executive with extensive experience.</td>
</tr>
</tbody>
</table>

Status of Activities of Outside Members of the Board and Outside Audit & Supervisory Board Members

Name Statements Made at Board of Directors’ Meetings and Audit & Supervisory Board Meetings

Outside Members of the Board (Independent Members of the Board)      Status of Independence

Katsuhiko Shirai made comments mainly concerning the business strategies of Group companies, research and development, and internal control. Seiichi Ochiai made comments mainly concerning corporate governance.

Sadayuki Sakakibara made comments mainly concerning the business strategies of Group companies, business plans, and investment from his perspective as a corporate executive with extensive experience.

Michiko Tomonaga made comments mainly concerning the accounting audit based on the professional perspective fostered through his extensive experience as a certified public accountant.

Seiichi Ochiai made comments mainly concerning corporate governance based on the professional perspective fostered through his extensive experience as a lawyer.

Takashi Iida made comments mainly concerning corporate governance based on the professional perspective fostered through his extensive experience as a corporate executive with extensive experience. 

Compensation of Members of the Board and Audit & Supervisory Board Members

For the purpose of improving objectivity and transparency in the compensation of Members of the Board, NTT has established the Appointment and Compensation Committee, which consists of four Members of the Board, including two outside independent Members of the Board. After discussion at this committee, compensation-related decisions are made by the Board of Directors. Compensation of Members of the Board (excluding outside Members of the Board) consists of a base salary and a bonus. The base salary is paid monthly on the basis of the scope of each Member of the Board’s roles and responsibilities. The bonus is paid taking into account NTT’s business results for the respective fiscal year. Also, Members of the Board make monthly contributions of a defined amount or more from their base salary for the purchase of NTT shares through the Board Members Shareholding Association in order to reflect NTT’s medium- and long-term business results in compensation. Purchased shares are to be held by the Members of the Board throughout their terms of office. In order to maintain a high level of independence, compensa-
tion of outside Members of the Board consists of a base salary only, and is not linked to NTT’s business results. For the fiscal year ended March 31, 2017, the total compensation of Members of the Board consists of a base salary only, and the amount of this salary is determined by resolution of the Audit & Supervisory Board.

Independent Auditor

Activities of the Independent Auditor

NTT has appointed KPMG AZSA LLC as its Independent Auditor.

The Independent Auditor maintains the level of coordination with the Audit & Supervisory Board and the Internal Control Office necessary to conduct appropriate audits. As part of this coordination, the Independent Auditor appropriately audits by reporting the audit plans and audit results to the Audit & Supervisory Board and working together with the Internal Control Office to establish systems for monitoring the status of oversight related to evaluating internal control systems for financial reports. For the fiscal year ended March 31, 2017, the Independent Auditors who carried out the audit were Takui Kansai, Hansuke Sodokawa, and Masaoki Oki, whose years of experience as independent Auditors are within the statutory guidelines. In addition, 20 certified public accountants and 34 other staff members assisted in conducting the audits.
Nippon Telegraph and Telephone Corporation Annual Report 2017

Corporation Governance

Nomination of the Independent Auditor

NTT believes that it is important to maintain and enhance audit quality while increasing audit efficiency. Based on this policy, the Audit & Supervisory Board evaluates independent auditor candidates from the perspectives of their independence and specialities and the appropriateness as well as adequateness of their auditing activities. The candidates who are approved by the Audit & Supervisory Board are then presented for voting at the Ordinary General Meeting of Shareholders. The Audit & Supervisory Board may choose to dismiss or not reappoint the Independent Auditor in any of the cases described in Article 340 (1) of the Companies Act based on a unanimous vote by all Audit & Supervisory Board Members. In addition, if the Board of Directors determines that it would be difficult for the Independent Auditor to perform proper audits, the Audit & Supervisory Board may propose a resolution to the Ordinary General Meeting of Shareholders that the Independent Auditor be discharged or that the Independent Auditor not be reappointed.

Compensation of Independent Auditor

NTT and its major subsidiaries pay compensation to KPMG AZSA LLC, NTT’s Independent Auditor, and other member firms of the KPMG network for audit services and for non-audit services.

<table>
<thead>
<tr>
<th>Fiscal year ended March 31, 2016</th>
<th>Fiscal year ended March 31, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compensation for audit services</td>
<td>¥4,812 million</td>
</tr>
<tr>
<td>Compensation for non-audit services</td>
<td>¥847 million</td>
</tr>
<tr>
<td>Total</td>
<td>¥5,659 million</td>
</tr>
</tbody>
</table>

Note: Audit services refer to the auditing of the financial statements of NTT and its consolidated subsidiaries in Japan and overseas. Non-audit services include the provision of guidance and advice related to International Financial Reporting Standards, tax returns, and tax consultation for consolidated subsidiaries in Japan and overseas.

Internal Control

Overview of Internal Control Systems

NTT maintains internal control systems related to financial reporting based on the U.S. Public Company Accounting Reform and Investor Protection Act of 2002 (Sarbanes-Oxley Act), Section 404, and the Financial Instruments and Exchange Act of Japan. Based on tests and evaluations of the design and operational effectiveness of these systems, we have been able to confirm the effectiveness of these systems without any particular issues.

The Internal Control Office, with its staff of 22 people, verifies the internal control systems in place throughout the Group and the status of their implementation. Internal audits are conducted by the internal auditing divisions of each Group company, and the results of those auditing activities are reviewed by NTT. In addition, standardized audits are performed with regard to major risk factors that are common issues throughout the Group, and we are continuously enhancing and verifying their effectiveness. At the same time, NTT is continuously accelerating its efforts to develop and implement IT and other Groupwide internal control systems and to improve their operational procedures and efficiency.

NTT has established the Basic Policies Concerning the Maintenance of Internal Control Systems for NTT Group, which was approved via the Resolution of the Board of Directors. The basic concepts of these policies are as follows.

Basic Policies Concerning the Maintenance of Internal Control Systems (Excerpt)

I. Basic Concepts for the Development of Internal Control Systems

1. NTT shall develop a system of internal controls by taking measures for the prevention and minimization of losses, with the objectives of ensuring compliance with legal requirements, managing risks, and achieving appropriate and efficient business operations.

2. NTT shall establish the Internal Control Office, which oversees the establishment of internal controls and frameworks. The Internal Control Office shall evaluate the effectiveness of the internal control systems based on internal audits regarding high risk matters affecting the entire NTT Group, and shall make sure that necessary corrective measures and improvements are implemented.

3. NTT shall also take appropriate measures to ensure the reliability of its internal control systems for financial reporting based on the U.S. Public Company Accounting Reform and Investor Protection Act of 2002 (‘Sarbanes-Oxley Act’) and the Financial Instruments and Exchange Act.

4. As a chief executive officer, the president shall be responsible for ensuring the development and operation of the internal control systems.

Compliance Systems

Establishment of the NTT Group Corporate Ethics Charter

Recognizing the importance of maintaining corporate business in compliance with laws and regulations and to maintain high ethical standards in order to promote sound corporate activities, NTT established the NTT Group Corporate Ethics Charter in November 2002.

The NTT Group Corporate Ethics Charter, which applies to all officers and employees of NTT Group, lays out the basic principles for corporate ethics and provides specific guidelines for ethical behavior. These guidelines are intended to remind everyone of their duty as members of a group that bears significant responsibility to society. This responsibility includes preventing dishonesty, misconduct, and the disclosure of corporate secrets as well as maintaining a high level of ethical standards as far as expected. In addition, the guidelines aim to ensure the highest ethical standards in both private and public activities.

NTT Group Corporate Ethics Charter

1. Recognizing the establishment of corporate ethics as one of its most important missions, top management shall exert its efforts to ensure that the spirit of this Charter is adopted throughout the Company, and shall assume full responsibility for solving any problems which may occur inconsistent with that spirit occurs.

2. Every person with subordinate employees shall not only act in a self-disciplined manner, but shall also provide guidance and assistance to his / her subordinate staff to ensure that their conduct is in conformity with our corporate ethics.

3. Every officer and employee of NTT Group shall not only comply with all laws and regulations, social standards, and internal company rules whether in Japan or overseas, but officers and employees shall also hold the highest ethical philosophy within themselves. Furthermore, it is also expected that the principles be applied in any private situations. Among other things, each officer and employee, as an officer or employee of a member of a Global Information Sharing Corporate Group, shall keep himself / herself fully aware that any disclosures of customer or other internal privileged information constitutes a materially wrongful act.

4. As a member of a group of companies which holds great social responsibilities, he / she shall strictly refrain from giving or receiving from customers, business partners, and other interested parties excessive gratuities.

5. Each NTT Group company, at the first opportunity, shall take initiatives to provide training programs in order to help its officers and employees enhance their awareness of our corporate ethics.

6. Every officer and employee of NTT Group shall act his / her efforts to prevent wrongful or scandalous acts which may potentially occur as specialization and advancement of our business processes. Each NTT Group company shall improve its system to prevent such acts, including, for instance, the re-assignment of contract representatives who have remained with the same customer for a long period of time, and the implementation of monitoring tools to protect customer and other information.

7. Any officer or employee who may come to know of the occurrence of any wrongful act or any scandal shall promptly report the wrongful act or scandal to his / her superior or other appropriate person. If he / she is not able to make such a report, he / she may contact the Corporate Ethics Help Line (Contact Point). It should be noted that every officer and employee who reports the occurrence of any wrongful act or scandal shall be protected so that the reporting party shall not suffer any negative consequences due to such reporting.

8. In the event of any occurrence of any wrongful act or scandal, each NTT Group company shall be committed to the settlement of the problem by taking appropriate steps through a speedy and accurate fact finding process, and responding in a timely, suitable, and transparent manner in order to fulfill its social accountability.

Initiatives to Promote Awareness of the NTT Group Corporate Ethics Charter

To ensure the effectiveness of the NTT Group Corporate Ethics Charter, NTT Group companies after training sessions on corporate ethics to employees. In addition, on a website for employees, examples of corporate ethics issues are explained in detail and the text of the NTT Group Corporate Ethics Charter is made available. In these ways, NTT is working to enhance the understanding of employees. Furthermore, NTT conducts annual surveys of employees to measure their awareness and implementation of other corporate ethics awareness-enhancement initiatives.

Groupwide Corporate Ethics Help Line (External Help Line)

To prevent dishonesty or misconduct, each Group company has set up an internal consulting center. In addition, NTT has established the Groupwide Corporate Ethics Help Line as an external contact point and operates its service to a law firm.

The content of the consultations and investigations are reported and handled by the staff member in charge, and a report is submitted to the Corporate Ethics Committees of each Group company. All reports are collected at least once a year by NTT, where the response status is ascertained and reported to the Board of Directors.

Reports Filed through the Groupwide Corporate Ethics Help Line

<table>
<thead>
<tr>
<th>Fiscal year ended March 31, 2014</th>
<th>Fiscal year ended March 31, 2015</th>
<th>Fiscal year ended March 31, 2016</th>
<th>Fiscal year ended March 31, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of reports</td>
<td>454</td>
<td>365</td>
<td>324</td>
</tr>
</tbody>
</table>
Prevention of Bribery
In recognition that it is essential to conduct business in compli-
ance with laws and regulations and in accordance with high
ethical standards, NTT Group forbids dishonesty, including all
forms of bribery, provision of preferential treatment to suppliers.
In particular, in regard to the prevention of bribery, we have
prepared a bribery prevention handbook, which has also been
made available on the in-house website. We are working to
ensure that all Group employees, including those at overseas
subsidiaries, are aware of bribery prevention. In these ways, we
are taking steps to foster a thorough understanding of bribery
prevention.

NTT Group is making every effort to prevent and control
bribery and other forms of misconduct along the supply chain.
The NTT Guidelines for CSR in Supply Chain states that
suppliers are required “to maintain a sound and normal
relationship with political bodies and government administra-
tions, without resorting to bribery and / or making illegal political
donations” and “not to offer and / or request inappropriate
benefits to / from stakeholders.” We expect suppliers to comply
with these requests, and are striving to prevent misconduct at
suppliers and throughout the entire supply chain.

Promotion of Risk Management
With respect to business risk management, NTT has estab-
lished Risk Management Rules stipulating basic policies on risk
management with the aims of, among others, anticipating and
preventing the materialization of potential risks and minimizing
losses if any risk materializes. Chaired by a senior executive vice
president, the Business Risk Management Committee spear-
heads efforts to develop and operate a PDCA cycle for managing
risks. During the fiscal year under review, the committee held
one meeting during which discussions involved identifying risks
that could potentially have a Companywide impact, policies for
managing such risks, and other such matters.

Identifiers of Risks / Specified Material Risks
From time to time, NTT reviews assumed risks and manage-
ment policies based on changes in the social environment.
In the identification of risks, the Business Risk Management
Committee plays the central role. Analysis processes for the
risks faced by NTT Group are formulated, and risk analysis is

Information Security Risk
If there is a leak or other misuse of confidential information,
such as personal information, the action may affect NTT
Group’s business, including its credibility and reputation, and
the Group’s ability to obtain new subscribers or secure govern-
mental contracts may be adversely impacted.

To prevent such a situation, NTT Group is making efforts to
protect confidential information obtained in the course of its
business, including the personal information of customers. In
addition, NTT Group has formulated the NTT Group Information
Security Policy, which outlines its stance on ensuring information
security. Furthermore, NTT Group continues to take steps on a
Groupwide basis to protect the personal information of
customers and prevent any leakage, including enhanced
internal information management, the prevention of improper
access; the implementation of physical, system-level security
measures to prevent information leakage, alteration, leakage, etc.;
training and awareness-raising for officers and employees;
appropriate supervision of contractors; and the publication of
manuals.

Disaster Risk
Five Group companies—NTT, NTT East, NTT West, NTT
Communications, and NTT DOCOMO—have been designated as
public institutions under the Basic Act on Disaster Control
Measures.

Accordingly, in preparation for a disaster, NTT Group has
formulated the Disaster Management Operation Plan for the
purpose of smooth, appropriate implementation of measures to
prevent damage.

Investment Risk
NTT Group actively engages in joint ventures, alliances, and
acquisitions, both domestically and overseas, as well as
acquisitions and other strategic investments in order to respond
rapidly to changes in market structures and customer needs.
Before investments are made, commercial viability and risks are
investigated and analyzed. In addition, after investments are
made, monitoring is conducted periodically. In these ways, the
Group is working to obtain the expected investment returns and
to strengthen governance and risk management.

Strategic Shareholdings
NTT does not hold so-called “cross-held shares” to create
stable shareholders, and has no plans to hold them in the future.
However, as one of its business policies, the Company
pursues collaboration and open innovation with partners in
various industries to contribute to medium- to long-term
improvement in corporate value. Based on this policy, we own
shares of partner companies as necessary.

With respect to exercising voting rights in relation to strategic
shareholdings, NTT exercises voting rights acquired through
share ownership, as it sees fit, from the perspectives of sustain-
able growth of the companies NTT invests in and improving
corporate value for both NTT and the companies.
Management Emphasizing Dialogue with Shareholders

Example: Formulation and execution of the “Towards the Next Stage 2.0” Medium-Term Management Strategy

- Information Gathering
- Planning, Discussion, and Decision Making
- Monitoring

Enhancement of Shareholder Relations Activities and Communication of Feedback within the Company

NTT is actively enhancing its shareholder relations activities. Specific initiatives in this regard include increasing the number of visits to the individuals entrusted with exercising voting rights on behalf of domestic and overseas institutional investors and holding additional meetings with institutional investors for discussing environmental, social, and governance (ESG) issues. We also seek to provide a wider range of opportunities to speak with investors on the topic of corporate governance. The investor feedback received and areas of interest identified through these shareholder relations activities are communicated to the Disclosure Committee, which is chaired by a senior executive vice president (the CFO), so that disclosure policies and strategies can be formulated based on this information. Based on the resulting disclosure policies and strategies, a wider range of information pertinent to the exercise of voting rights is included in notices of convocation (business reports), integrated reports, and other documents. For example, we seek to disclose more visible information in relation to corporate governance (revised the items included to incorporate those for which investor interest is high) and narrowed the overall content of such documents to focus more on items related to increasing corporate value, such as initiatives for cybersecurity and initiatives to ensure that board and executive personnel can demonstrate their own skills and services.

The benefits of these improvements, utilizing their feedback to further enhance information disclosure. This process creates a plan-do-check-act cycle that continuously heightens the level of information disclosure by NTT Group.

Corporate Governance

Dialogue with Shareholders and Other Investors

NTT promotes management that prioritizes discussions with shareholders, which not only includes discussions at General Meetings of Shareholders but also involves senior management, including the president, actively promoting discussions with shareholders about medium-term management strategies, corporate governance, business performance trends, and other topics through one-on-one meetings with institutional investors and briefings targeting individual investors.

The opinions received from shareholders through such discussions are shared in the Company. NTT considered the “Towards the Next Stage 2.0” Medium-Term Management Strategy that was announced in May 2015 in light of shareholder opinions. During discussions with shareholders, insider information is strictly controlled, and information is proactively disclosed with due consideration to fair disclosure (timely, fair, and impartial information disclosure). To increase convenience for overseas investors, we strive to release Japanese- and English-language disclosure materials at the same time. The Japanese- and English-language versions of the entire Notice of Convocation for the Ordinary General Meeting of Shareholders, including the business report, were released at the same time, more than one month prior to the date of the Ordinary General Meeting of Shareholders.

Policy for Constructive Dialogue with Shareholders and Other Investors

- Appointment of executives / Members of the Board
- Measures to ensure positive cooperation between internal departments
- Promotion of opportunities for dialogue
- Appropriate and effective feedback
- Control of insider information

Initiatives to Enhance Dialogue

- For institutional investors
  - Implementing quarterly financial results presentations (4 times)
  - Participating in IR conferences in Japan and overseas (10 times)
  - Holding NTT IR DAY (briefing for institutional investors, 1 time)
  - Implementing online one-on-one briefings in Japan and overseas (total of more than 400 times)

- For individual investors
  - Implementing Company briefings (20 times) (including 3 company briefings by senior executives)
  - Implementing online Company briefings (2 times)
  - Participating in individual investor fairs (1 time)
  - Holding facility tours (1 time)

Note: The numbers of times are for the fiscal year ended March 31, 2017.

Receipt of Awards for IR Activities

Awards for Excellence in Corporate Disclosure (The Securities Analysts Association of Japan)
Internet IR Commendation Awards (Daiwa Investor Relations)

Feedback

Share investor feedback and areas of interest within the Company
NTT Group provides network, cloud, system integration, and various other ICT services. When providing these services, we are expected to furnish appropriate responses to a diverse range of social and environmental issues.

For example, in order to respond to cyber-attacks and other information security threats, which are becoming a social problem, NTT Group is charged with the tasks of ensuring its security in its own operations and supporting customers in improving their security.

Another pressing task for NTT Group is improving efficiency with regard to electricity consumption, a cause of CO2 emissions, in order to reduce its impact on the environment. This is especially true given the large amount of electricity used in data centers, which are critical to the provision of ICT services.

Furthermore, the ICT market is changing as various new players from within Japan and from overseas enter the market and as the services provided in this market rapidly grow increasingly more varied and sophisticated. To respond to these changes, it is vital for us to develop frameworks for encouraging participation by diverse human resources.

NTT Group is working to minimize medium- to long-term business risks by appropriately responding to social and environmental issues. At the same time, we will pursue the sustained improvement of corporate value by contributing to the resolution of such issues through our business activities.
NTT Group’s Basic Policy Regarding Social and Environmental Initiatives

The NTT Group CSR Charter consists of a statement of our commitment to CSR and the four CSR goals that outline specific priority aspects of our CSR activities.

Sustainable Development Goals
The SDGs are a set of 17 goals relating to be addressed up to 2030 that were approved at the UN Sustainable Development Summit held at the UN headquarters in New York in September 2015. The leaders of more than 150 UN member nations were present at this summit. The SDGs contain goals for addressing a wide range of social needs to put an end to poverty as well as those for combating climate change, one of a number of objectives requiring action on the part of all countries, all people, and all companies.

NTT Group CSR Charter—Basic Principles for Social and Environmental Initiatives
Guided by the basic principles put forth in the NTT Group CSR Charter, NTT Group seeks to achieve sustainable growth by contributing to the resolution of social and environmental issues. In recent years, an increasing amount of global activity for realizing a sustainable society has been seen, as visible in such events as the approval of the Sustainable Development Goals (SDGs) at the United Nations General Assembly in September 2015. Meanwhile, the business scope of the Group has been transforming as it develops global businesses and transitions to the B2B2X model. In light of this transformation, in May 2016 we revised the NTT Group CSR Priority Activities, which define material issues for the CSR activities to be addressed by a concerted effort by Group companies, and modified the NTT Group CSR Charter. Furthermore, NTT Group announced its endorsement of the SDGs in September 2016 as one such facet of its proactive efforts to address social and environmental issues.

Value Creation through Social and Environmental Contributions

NTT Group CSR Priority Activities

<table>
<thead>
<tr>
<th>Enrich Social Communication</th>
<th>Medium Term Targets</th>
<th>CSR Qualitative Indicators (90%) / Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contribute to society through ICT</strong></td>
<td>Accelerate the B2B2X business model by taking opportunities to use “2300” and “Validation of Social Economies”</td>
<td>Acceleration of the B2B2X business model</td>
</tr>
<tr>
<td><strong>Improve access to ICT</strong></td>
<td>Enhance the system to provide diverse ICT services centered around “Global Cloud Services” for the entire world</td>
<td>Make ICT services available for a broad range of customers, including the elderly and persons with disabilities</td>
</tr>
<tr>
<td><strong>Pursue customer satisfaction</strong></td>
<td>Provide high-value-added products and services and fine-tuned support</td>
<td>Customer satisfaction survey: Better than in the previous fiscal year</td>
</tr>
<tr>
<td><strong>Generate innovation</strong></td>
<td>In order to maintain our research and development as an important task, NTT Group for the first time released its worldwide information communications technologies</td>
<td>Increasing the number of patent applications</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Protect the Global Environment</th>
<th>Medium Term Targets</th>
<th>CSR Qualitative Indicators (90%) / Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use ICT value chain management</strong></td>
<td>While reducing CO2 emissions of the Company, contribute to the reduction of CO2 emissions of all society, including value chains, through the utilization of ICT</td>
<td>Amount of contribution to the reduction of CO2 emissions of all society: At least 10 times of the Company’s emissions (by FY2030)</td>
</tr>
<tr>
<td><strong>Address climate change</strong></td>
<td>Improve electrical efficiency to reduce the environmental impact of business operations</td>
<td>Electrical efficiency of the communications services: At least 1% higher than in FY2013 (by FY2018)</td>
</tr>
<tr>
<td><strong>Process effectively use resources</strong></td>
<td>Reduce the environmental impact of business operations</td>
<td>Final disposal ratio of waste: Zero emissions (under 1%) (by FY2030)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ensure Reliable Communication</th>
<th>Medium Term Targets</th>
<th>CSR Qualitative Indicators (90%) / Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CSR Priorities</strong></td>
<td>Present details of personal information</td>
<td>Number of incidents of personal information leaks: 0</td>
</tr>
<tr>
<td><strong>Enhance information security</strong></td>
<td>Train security experts</td>
<td>Number of security experts: 10,000 (by FY2020)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unite the Energies of Team NTT</th>
<th>Medium Term Targets</th>
<th>CSR Qualitative Indicators (90%) / Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Promote corporate culture</strong></td>
<td>Agronomically promote the active participation of women</td>
<td>Ratio of female managers: 65% (by FY2020)</td>
</tr>
<tr>
<td><strong>Promote the equality of differently abled employees</strong></td>
<td>Increase number of differently abled employees (newly established in FY2017)</td>
<td>Ratio of differently abled employees: 2.0% (when there are more than 50 standard employees)</td>
</tr>
<tr>
<td><strong>Respect human rights</strong></td>
<td>Conduct business activities with respect for human rights of all business locations by introducing the United Nations Guiding Principles on Business and Human Rights (Ruggie Framework) and other international principles</td>
<td>Number of confirmed human rights violations: 0</td>
</tr>
<tr>
<td><strong>Promote safety, health, and wellness</strong></td>
<td>Implement appropriate management of environmental and social risks, including value chains</td>
<td>Percentage of participation in training concerning human rights: Better than in the previous fiscal year</td>
</tr>
<tr>
<td><strong>Promote the inclusion of women</strong></td>
<td>Increase the ratio of women Ratio of female managers: 65% (by FY2020)</td>
<td></td>
</tr>
<tr>
<td><strong>Pursue customer satisfaction</strong></td>
<td>Provide special health guidance to improve employee health</td>
<td>Ratio of employees receiving special health guidance: 80%</td>
</tr>
<tr>
<td><strong>Create attractive workplaces</strong></td>
<td>Provide workplaces where employees can work with good spirits</td>
<td>Employees satisfaction: Better than in the previous year</td>
</tr>
<tr>
<td><strong>Promote a united Group effort for social contribution activities</strong></td>
<td>Encourage employees’ active participation</td>
<td>Percentage of employees participating in volunteer activities: 80% (by FY2020)</td>
</tr>
</tbody>
</table>

*For more details regarding the NTT Group CSR Priority Activities and related performance in the fiscal year ended March 31, 2017, please refer to NTT Group Sustainability Report 2017 (http://www.ntt.co.jp/sustainability/).
Sustainable Growth Together with Stakeholders

NTT Group conducts business in Japan and overseas. To increase business sustainability, NTT Group operates its business in an integrated, Groupwide manner while focusing on the expectations and needs of its various stakeholders.

Customers (Enterprises and Individuals)

- NTT Group’s Approach
  - Aiming to be selected by customers as a “Value Partner,” each individual employee will strive for an even higher quality of service that is in line with the customer’s requirements.
  - Example of Engagement
    - Construction customer satisfaction surveys
    - Utilization of websites and social media
    - Publication of yearly reports (Annual Reports, etc.)

- NTT Group endeavors to understand customer needs and perspectives in order to provide customers with higher-quality products and services and thereby increase customer satisfaction while at the same time striving to become a “Value Partner” to customers.

Reasons for Engagement

Employees (Employees, Their Families, and Retired Employees)

- NTT Group’s Approach
  - We will engage in discussions on the direction and initiatives for the information and telecommunications industry, not only in Japan but also from a global perspective, and seek to address diverse social issues together.
  - Example of Engagement
    - Entry into industry associations
    - Participation in committees, etc.

- NTT Group will strive to contribute to the development of enriched local communities and also to understand the issues faced by communities in order to make social contributions and implement disaster countermeasures.

Reasons for Engagement

ICT Companies and Industry Associations

- NTT Group’s Approach
  - We will engage in discussions on the direction and initiatives for the information and telecommunications industry, not only in Japan but also from a global perspective, and seek to address diverse social issues together.
  - Example of Engagement
    - Entry into industry associations
    - Participation in committees, etc.

- NTT Group will strive to contribute to the development of enriched local communities and also to understand the issues faced by communities in order to make social contributions and implement disaster countermeasures.

Reasons for Engagement

Central Government and Administrative Agencies

- NTT Group’s Approach
  - We will fulfill our responsibility as an information and telecommunications company by adhering to the policies of the central government, administrative agencies, and local governments.
  - Example of Engagement
    - Compliance with laws and regulations
    - Suggestions for government policy

- NTT Group will strive to contribute to the development of enriched local communities and also to understand the issues faced by communities in order to make social contributions and implement disaster countermeasures.

Reasons for Engagement
Initiatives for Addressing Material Issues 1—Reinforcement of Information Security and Personal Information Protection

NTT Group serves numerous customers, ranging from individuals to enterprises, and it has thus been entrusted with vast quantities of personal information. Recent occurrences of large-scale personal information leaks in Japan and overseas are increasing customers’ expectations for the protection of personal information. The regulatory environment is also becoming a greater influence on the needs for personal information protection, as indicated by the introduction of personal information protection regulations by the European Union. Accordingly, the requirements for effective information management are growing ever more rigorous.

Were a leak of personal information to occur, NTT Group’s operations would suffer from a decrease in corporate value, the loss of customers, and other negative impacts. It is therefore crucial that we reinforce our information security and personal information protection systems to ensure stringent information management.

Overview of NTT Group’s Information Security and Personal Information Protection Initiatives

- Initiatives for Protecting NTT Group’s Networks
  - Establishment and implementation of policies regarding information security and personal information protection
  - Maintenance of an information management structure centered on the Group CSISO Committee
  - Steering of CSIRT
  - Cultivation of information security/human resources

- Initiatives for Supporting Customers in Reinforcing Information Security
  - Integrated development of information security services through NTT Security Corporation
  - Utilization of information security technologies through collaboration

- R&D Capabilities
  - Security, orchestration technologies
  - Analytical technologies for utilizing personal data, etc.

- Initiatives for Protecting NTT Group’s Networks
  - Establishment and implementation of policies regarding information security and personal information protection
  - Monitoring of information and infection of systems by computer viruses and to manage removal of information from Company premises.
  - Conducting other ongoing information security measures, including thoroughly educating employees and appropriately supervising outsourcing contractors.

- Maintenance of an Information Management Structure Centered on the Group CSISO Committee
  - In the Group’s information management structure, a senior executive vice president (Representative Member of the Board) of NTT takes charge as the Chief Information Security Officer (CSISO), the highest authority for information management, guiding NTT Group in ensuring stringent information management. The Group CSISO Committee was established in 2015 as a body for promoting rigorous information security by formulating initiative policies, planning and instituting various measures, and promoting human resource development. With this structure, we seek out resolutions to information security issues. Similar structures are in place at Group companies and appropriate coordination is pursued between Group companies.

- Steering of CSIRT
  - NTT Group established NTT-CERT in 2004 to function as a central element of NTT Group’s security initiatives, NTT-CERT is contributing to the training of security personnel across Japan through cooperation with the government, other companies, and educational institutions. For its security personnel development measures, NTT Group has set the goal of expanding its staff of security experts in Japan from the level of 2,500 in November 2014 to about 10,000 by the fiscal year ending March 31, 2021. Meanwhile, Group companies are implementing human resource development measures based on the types and levels of security personnel. The number of certified security personnel showed a substantial year-on-year increase, reaching approximately 8,000 on April 30, 2017. We also set the goal to enhance our range of ever more practical development programs to increase the number of intermediate and advanced personnel, who are core to our security field operations.

FURTHERMORE, NTT Group has participated in the Cross-Industry Committee on Cybersecurity Personnel Development as a secretariat since its establishment in June 2015, with the aim of forming bridges for collaboration within the cybersecurity industry, defining the types of human resources necessary for the industry and tracking their development, and supporting effective human resource development activities within the industry. The Group has also held the “Cyber-attack and Cyber-defense Technologies” course at Waseda University, an academia-industry collaboration project designed to uncover and cultivate future cybersecurity industry workers, since 2015. Through participation in these and various other initiatives, the Group is contributing to the development of security personnel at the national level.

Cultivation of Information Security Human Resources

Concerns over the information security field have become increasingly sophisticated and diverse, making damage from cyber-attacks and information leaks a public concern. At the same time, the spread of the Internet of Things (IoT) is driving a rapid rise in the number of devices connected to the Internet, greatly increasing the importance of addressing security issues. However, of the approximately 265,000 information security engineers at Japanese companies, it is estimated that around 160,000 lack the necessary skills to perform their job, while another 80,000 engineers are required to sufficiently meet the demand in the Japanese market. In this context, NTT Group is working to enhance its staff of security personnel. Believing that such efforts are also necessary at the national level, NTT Group is contributing to the training of security personnel across Japan through cooperation with the government, other companies, and educational institutions. For its security personnel development measures, NTT Group has set the goal of expanding its staff of security experts in Japan from the level of 2,500 in November 2014 to about 10,000 by the fiscal year ending March 31, 2021. Meanwhile, Group companies are implementing human resource development measures based on the types and levels of security personnel. The number of certified security personnel showed a substantial year-on-year increase, reaching approximately 8,000 on April 30, 2017. We also set the goal to enhance our range of ever more practical development programs to increase the number of intermediate and advanced personnel, who are core to our security field operations.

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NTT Group CSIRTs

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<td>• Ensuring preparedness for incidents and managing leadership in responding to incidents by performing investigations and analysis and issuing instructions</td>
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<td>• Coordinating with CSIRTs at other Group companies to respond to issues impacting the entire Group</td>
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DUTIES OF GROUP CSIRTs

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Value Creation through Social and Environmental Contributions

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Initiatives for Supporting Customers in Reinforcing Information Security

Integrated Development of Information Security Services through NTT Security Corporation

NTT Security Corporation commenced operations in August 2016. This company consolidates the specialized security technologies of other Group companies from around the world for use in the development of high-value-added security services that address new risks arising from the spread of next-generation technologies, such as IoT and AI technologies, and in the global provision of these services.

In addition, NTT Security has an integrated, global organizational structure for security services. With this structure, NTT Security utilizes its functions as the Group’s center of excellence for security services by developing innovative security services and providing sophisticated security functions for the comprehensive ICT solutions other Group companies supply to customers. This company is also dealing in the Security Information & Event Management (SIEM) platform, into which it incorporates the technologies of NTT Laboratories to provide defense, quick detection, isolation, and other services for combating threats and attacks against which generally marketed security tools are ineffectual. In addition, NTT Security is developing and operating global threat intelligence platforms to aggregate the information collected from around the world through the managed security services and honeypots (decoy systems) NTT Group offers on a global scale. By analyzing this information, NTT Security identifies antagonistic agents, determines their capabilities and means of attack, and collects other valuable information, or security intelligence, for use in security measures. This security intelligence is utilized on a global scale to protect the ICT networks of customers.

Going forward, NTT Security will work to expand its provision of end-to-end business solutions with embedded security services on the global market, through promoting cross-selling and service coordination with other NTT Group companies.

Scheme for Coordination between NTT Group Companies

Major Orders

<table>
<thead>
<tr>
<th>Major Orders</th>
<th>2017/18</th>
<th>2016/17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texas Department of Information Resources of the United States</td>
<td>Security assessment</td>
<td>Order received through coordination between NTT Data and NTT Security</td>
</tr>
<tr>
<td>ReAssure Ltd. of the United Kingdom</td>
<td>Transfer of server from client-owned data center</td>
<td>Security surveillance</td>
</tr>
</tbody>
</table>

R&D Initiatives Supporting NTT Group’s Information Security and Personal Information Protection Initiatives

R&D Initiatives

- Development of proactive technologies for utilizing personal data, etc., e.g., Anonymization technologies
- Development of protective technologies for combating the threats of cyber-attacks
- Contribution to an increased ability to protect NTT Group’s network platforms and other important infrastructure, e.g., Security orchestration technologies
- Development of protective technologies for combating the threats of cyber-attacks

Example of R&D Activities

SecurityOrchestration Technologies

Cyber-attacks continue to grow more skilled and sophisticated each year. In particular, there is a need for rapid, effective security measures for networks, which can have an influence on all types of social infrastructure. NTT Group is thus advancing the development of security orchestration technologies. Reflection distribution denial of service (DDoS) attacks, for example, cause network congestion with huge amounts of traffic, but our security orchestration technologies can shut off these attacks at the optimal point, without hindering normal traffic. In addition, networks can be restored in an autonomous manner through automatic control. NTT Group will examine the introduction of these technologies on entire networks.
Utilization of Anonymously Processed Information

Anonymization Technologies for Utilizing Personal Information

In May 2017, a revision to the Act on the Protection of Personal Information came into full effect, laying out regulations for the handling of anonymously processed information. This revision came at a time when there was a strong need for the effective utilization of big data and personal data coupled with a disciplined approach respecting both legal requirements and the privacy of the individuals from whom such data originates. Anonymously processed information is personal information that has been processed in a manner that makes it impossible to identify the individual with whom it is associated or to revert it to its previous, un-anonymized form. Information processed in this manner can be distributed, with certain restrictions. In principle, un-anonymized personal information requires the consent of the individual in question in order to be provided to a third party, while anonymously processed information has the advantage of being able to freely distribute without receiving consent. The appropriate utilization of anonymized processed information has the potential of leading to the creation of new businesses.

If anonymously processed information is to be used for business applications, this information will need to be processed in a manner that meets the legal requirements for anonymity while also fulfilling safety requirements. Moreover, this processing method must also allow for this information to be utilized effectively, NTT Group has developed sophisticated anonymization technologies that employ mathematics to enable personal data to be used safely and effectively for the intended purpose and under the desired conditions. These technologies have led to victory in contests for technologies for protecting personal information. At the same time, we are advancing verification testing with companies that use data in their business to prepare services utilizing these services.

Usage of Anonymized Information

Identification of strong-selling products and sales channels, advertisements

Demographic information (general information database)

Un-anonymized information (personal information database)

Processing

Anonymized information

Identification of strong-selling products and sales channels, advertisements

Sales area analysis, store opening planning

Product manufacturer

Sales area

Customer

Sale

Consumer

Retailer

Purchase

Personal information

User registration, shopping, service use

Receipt of Excellence in the Field of Mathematics Award by NTT Fellow Dr. Okamoto in 20th Annual RSA Conference Awards

Dr. Tsatsui Okamoto, an NTT Fellow who is the head of the Okamoto Research Laboratory in NTT’s Secure Platform Laboratories, was presented with the Excellence in the Field of Mathematics award in the 20th Annual RSA Conference Awards program at RSA Conference 2017, a global information security conference.

RSA Conference Awards

The RSA Conference Awards program is a program that dates back to 1998. This program has three categories—mathematics, information security, and public policy. Each year, individuals or organizations (one per category, in principle) are presented with awards to honor their significant contributions they have made over their field over their lifetime.

Previous recipients of the Excellence in the Field of Mathematics award include researchers who have created modern encryption methods and other researchers who have made substantial contributions to the field of encryption. As such, this award is one of the highest honors one can receive in the field of encryption.

The 2017 Excellence in the Field of Mathematics was presented to Dr. Okamoto out of recognition for the exceptional contributions he and the Okamoto Research Laboratory have made to the field of encryption.

Disaster Countermeasures

Stable and Reliable Telecommunications Services in Preparation for Large-Scale Disasters

NTT Group has defined three key themes for disaster countermeasures—improving communications network reliability, securing critical communications systems, and promptly restoring telecommunications services. We have been strengthening efforts based on these themes since the Great East Japan Earthquake.

Specifically, we are taking measures to improve the reliability of our telecommunications infrastructure. To ensure that our telecommunications services operate without interruption at all times, we employ transmission trunk line multi-routing, have enacted blackout countermeasures for communications buildings and base stations, and are making communications buildings more disaster resistant. In addition, we are expanding the assortments of power supply vehicles and other disaster response equipment that we have positioned throughout Japan and are continuously conducting training to prepare for major natural disasters. Furthermore, we are making a daily effort to guarantee that, in the event of a disaster, we are able to immediately set up a Disaster Countermeasures Office and other emergency preparations and make the necessary emergency and critical communications as a public institution as designated by the Basic Act on Disaster Control Measures.

In the fiscal year ended March 31, 2017, two serious telecommunications disasters*1 occurred at four telecommunications business companies (NTT East, NTT West, NTT Communications, and NTT DOCOMO), while service stability was maintained at 99.99%.*2

*1. Number of disruptions that lead to a drop in service quality for telecommunications services and that fulfill the following conditions:

• Voice services usable for emergency reports (110, 119, etc.) Service impacted for more than one hour with more than 20,000 people affected

• Voice services not usable for emergency reports (Service impacted for more than two hours with more than 10,000 people affected or service impacted for more than one hour with more than 100,000 people affected)

• Internet-related services (Service impacted for more than 12 hours with more than 1,000,000 people affected or service impacted for more than 24 hours with more than 1,000,000 people affected)

• Other services: Service impacted for more than two hours with more than 30,000 people affected or service impacted for more than one hour with more than 1,000,000 people affected

*2. Total hours under the impact of serious disruptions (number of affected users + hour of serious disruptions) / total hours of major service restoration (number of users + 24 hours + 36 days) × 100%

NTT Group’s Basic Policy on Disaster Countermeasures

Securing critical communications systems

Securing 110, 119, 114, and other emergency services and critical communications, installing emergency-use public phones, and providing safety status checking services when disasters arise, etc.

Countermeasures strengthened since the Great East Japan Earthquake

• Measures for securing critical communications
• Early detection of communications breakdown
• Early detection of disaster situation
• Further information distribution by multiple means

Promptly restoring telecommunications services

Promptly restoring services by utilizing disaster response equipment and procuring materials, equipment, and manpower for restoration purposes, etc.

Countermeasures strengthened since the Great East Japan Earthquake

• Building up of disaster response equipment and manpower
• Enhancing management of damage prevention and recovery
• Measures to prevent and recover from damage
• Recovery and reparation under the Basic Act on Disaster Control Measures

Support for Customers’ Post-Disaster Restoration of Operations and Business Continuity

NTT Group has continued to provide telecommunications services in Japan, which cannot be allowed to be interrupted in the event of a disaster, for over 100 years. We are leveraging the track record of reliability and the associated expertise accumulated over this history to develop a solution business for supporting customers in maintaining business continuity. We anticipate significant business opportunities to arise with this regard going forward.

Damage from natural disasters, such as heavy rains and more frequent typhoons, is becoming increasingly common due to recent climate change. As a result, there is a growing risk of water leakage and lightning damage and power outages, which now threaten to cause extensive damage should they occur. Many companies need to take measures to ensure that, if emergency situations such as disasters occur in the future, the organizations are able to continue important operations and restore service promptly. It is also necessary to provide support to disaster victims and facilitate swift recovery.

For this reason, NTT Group strives to provide support to help customers restore operations and maintain business continuity after disasters. To this end, we are developing business continuity solution operations across a wide range of fields, including data center services and cloud services, an area where service is provided by NTT Communications and NTT DATA, and building and electricity technologies, an area where service is provided by NTT FACILITIES.
**Initiatives for Addressing Material Issues 2—Reduction of Environmental Impact**

### Basic Policy
Reducing CO2 emissions and otherwise lowering environmental impacts is recognized as an important issue needing to be addressed internationally in order to create a sustainable society. With expanding global businesses, increasing overseas profits, and expanding B2B2C businesses at the core of its business strategies, NTT Group is pursuing sustainable business development over the medium- to long-term. For this reason, NTT Group considers it absolutely essential to reduce its environmental impacts in order to grow further, and it is actively advancing initiatives to this end through cooperation with our various stakeholders.

### NTT Group Environmental Statement
The NTT Group Environmental Statement aligns our vision for the future with our environmental initiatives for building that future, and the company we aim to become through these efforts. The declaration begins with the words “People & Planet in Harmony.” These words symbolize our goal of creating a future housing a sustainable society in which everyone and everything around the world is interconnected. To help realize such a future, we at NTT Group will push forward with our daily environmental activities to fully exercise our capabilities as forerunners in environmental contribution.

We have defined three characteristics of the vision for the future encapsulated in the words “People & Planet in Harmony.” NTT Group will contribute to endowing the future with these characteristics through the provision of ICT services and cutting-edge technologies.

### 2030 Environmental Targets
NTT has established the 2030 Environmental Targets, a set of environmental targets to be accomplished by the fiscal year ending March 31, 2031, that is meant to guide us in realizing our vision. The 2030 Environmental Targets comprise goals related to the environmental issues prioritized by NTT Group, including those regarding climate change, energy, resources, and ecosystems. To help realize a low carbon future, we have defined targets for our contribution to reductions in society's CO2 emissions, the electrical efficiency of NTT Group's businesses, and the extent to which we will help address climate change. For implementing closed loop recycling, we have set a target for the final disposal rate for waste. Furthermore, we have established targets for ecosystem preservation activities to guarantee that our environmental impacts in order to grow further, and it is actively advancing initiatives to this end through cooperation with our various stakeholders.

### Overview of NTT Group's Environmental Impact
To reduce the environmental impact of its business activities to the greatest extent possible, NTT Group is taking steps to track and analyze what types of resources and energy it is using and what type of environmental impacts are occurring throughout its business activities.

In addition to the direct environmental impact of NTT Group’s business activities, the Group also calculates and discloses information on greenhouse gas emissions from the value chain (Scope 3 of the Greenhouse Gas Protocol), including such indirect emissions as those from ICT service provision.

In the fiscal year ended March 31, 2017, greenhouse gas emissions applicable under Scope 3 amounted to 17.16 million tons. Of these emissions, more than 85% came from category 1 (purchased goods and services), category 2 (capital goods), and category 11 (use of sold products). We are promoting the introduction of products with low environmental impact based on our Guidelines for Green Procurement and pursuing initiatives aimed at encouraging the use of energy-saving devices by our customers.

### The NTT Group's Material Balance (Fiscal Year Ended March 31, 2017)

<table>
<thead>
<tr>
<th>INPUT</th>
<th>OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased electricity</td>
<td>8.36 billion kWh</td>
</tr>
<tr>
<td>Fuel consumption</td>
<td>23 thousand kl</td>
</tr>
<tr>
<td>Sea consumption</td>
<td>50.87 million m³</td>
</tr>
<tr>
<td>Water consumption</td>
<td>12.42 million m³</td>
</tr>
<tr>
<td>Virgin pulp consumption</td>
<td>19 thousand tons</td>
</tr>
<tr>
<td>Fuel consumption by company vehicles</td>
<td>13 thousand kl</td>
</tr>
<tr>
<td>Natural gas</td>
<td>13 thousand kl</td>
</tr>
<tr>
<td>Petroleum gas</td>
<td>13 thousand kl</td>
</tr>
</tbody>
</table>

**Scope 3 Total: 17.16 million tons**

- **GHG emissions**
  - Greenhouse gas emissions generated directly: 0.19 million tons
  - Greenhouse gas emissions generated indirectly: 4.40 million tons
  - Greenhouse gas emissions generated indirectly: 0.55 million tons

- **Wastewater**
  - Discharge volume (estimated value): 5.54 million tons

- **Waste**
  - Hazardous waste: 0.068 million tons
  - Wastewater: 0.035 million tons

**Collection of Used Products**
- Customer: telecommunications devices, batteries, accessories (charge), etc.
  - 9.77 million tons
- Mobile phones
  - 5.20 million units

### Source of Information
- *Category 11: waste disposal activities for products that are part of the output values, excluding Scope 3 activities not conducted directly by a company including activities related to products and services purchased by the company (apart from activities related to products and services sold by the company (downstream)).*
Contributions to Reducing Society’s CO2 Emissions

ICT contributes to the reduction of the environmental impacts of our lives and society in various ways, including making our lives and work more efficient and providing alternatives for moving goods and people. For example, the digital distribution of books, music, movies, and other content cuts back on the energy consumed in transporting the books, CDs, DVDs, and other physical media that are normally used to distribute such content.

For the fiscal year ending March 31, 2031, NTT Group has established the target of contributing to a reduction in the CO2-emissions of society through the provision of its services and technologies that is at least 10 times greater than NTT Group’s own emissions. In the fiscal year ended March 31, 2017, the reduction in CO2 emissions from society achieved in this manner was 8.9 times the amount of emissions of NTT Group. The outcome was a result of increased use of services, such as video streaming services, in conjunction with the spread of smartphones and the development of high-speed, large-capacity networks as well as our ability to reduce the environmental impact to a degree that exceeded the amount of energy consumed by the Group in providing telecommunications services.

NTT Group will continue contributing to the reduction of society’s environmental footprint in various fields by utilizing ICT.

Electricity Efficiency in Telecommunications Operations

NIPPON TELEGRAPH AND TELEPHONE CORPORATION ANNUAL REPORT 2017

Electricity Efficiency in Telecommunications Operations

NTT Group has set the target for the fiscal year ending March 31, 2031, of increasing electricity efficiency at data centers and other facilities in telecommunications operations to at least 10 times higher than the levels seen in the fiscal year ended March 31, 2014. Electricity is essential to the continuity of telecommunications operations. Realizing more efficiency in these operations is thus both a means of mitigating business continuity risks and of preventing climate change.

In the fiscal year ended March 31, 2017, electricity efficiency in telecommunications operations was 2.7 times higher than in the fiscal year ended March 31, 2014. This feat was accomplished by introducing energy-saving equipment in accordance with the NTT Group Energy Efficiency Guidelines and improving network structure efficiency.

Electricity Efficiency in Telecommunications Operations

Energy Saving at Data Centers

NTT Communications offers data centers with power usage effectiveness (PUE) of less than 1.2, and NTT COMWARE CORPORATION offers data centers with PUE of less than 1.1, which are at the world’s highest level for energy efficiency. We are striving to enhance PUE for our other data centers as well by introducing five-star equipment with the highest level of energy efficiency in accordance with the NTT Group Energy Efficiency Guidelines. In addition, NTT FACILITIES is actively developing high-efficiency technologies for electrical power units and air-conditioning systems to reduce energy consumption at NTT Group communications buildings and data centers as well as central data center air-conditioning control systems for data centers. Furthermore, we have been introducing high-voltage direct current (HVDC) rectifiers* at NTT Group communications buildings and data centers in the fiscal year ended March 31, 2015, to reduce energy consumption at these facilities.

As of March 31, 2017, these rectifiers had been installed at approximately 400 facilities, contributing to improved energy efficiency and reduced costs for NTT Group as a whole. Going forward, NTT Group will promote the introduction of HVDC rectifiers in order to realize energy savings throughout the ICT field.

We are also operating some data centers using renewable energy and have installed a 5 kW solar power generation system at NTT East’s Kornagoma Data Center. Solar power systems have also been set up at NTT East’s Chiba Data Center; NTT West’s Osaka Data Center; NTT Communications’ Tokyo No. 2, No. 4, and No. 5 data centers; and the Takamatsu No. 2 Data Center in an effort to promote energy savings at these facilities.

Benefits of HVDC Rectifiers

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Benefits of HVDC Rectifiers

Promotion of HVDC Rectifier Introduction

HVDC power transmission systems boast lower costs than AC uninterruptable power supply systems in terms of total lifetime costs, including post-installation operation. NTT Group developed low-cost HVDC rectifiers as part of a drive to promote the introduction of these systems, and sales of these rectifiers were commenced in October 2016.

Going forward, NTT Group will continue to reduce the price of peripheral equipment and other components of HVDC power transmission systems. At the same time, we will coordinate with vendors to propose bundles that package HVDC systems with ICT equipment to help customers leverage the full benefits of these systems. We will also promote the introduction of the ICT systems at the data centers outside of the Group and in the server rooms of other companies in order to contribute to energy savings in all areas of the ICT field.

Promotion of HVDC Rectifier Introduction

HVDC is the abbreviation for high voltage direct current. HVDC can transmit electric power at voltages much higher than the usual AC voltages, and it is used for long-distance power transmission lines, including power transmission lines that cross national boundaries.

HVDC transmission systems can reduce carbon dioxide emissions compared to AC systems. By using HVDC transmission, we can reduce the environmental impact by lowering the electric power consumption of each piece of equipment in the network, thereby reducing the amount of CO2 emissions generated.

NTT Group has set the target of contributing to a reduction in the CO2-emissions of society through the provision of its services and technologies that is at least 10 times greater than NTT Group’s own emissions. In the fiscal year ended March 31, 2017, the reduction in CO2 emissions from society achieved in this manner was 8.9 times the amount of emissions of NTT Group. The outcome was a result of increased use of services, such as video streaming services, in conjunction with the spread of smartphones and the development of high-speed, large-capacity networks as well as our ability to reduce the environmental impact to a degree that exceeded the amount of energy consumed by the Group in providing telecommunications services.

NTT Group will continue contributing to the reduction of society’s environmental footprint in various fields by utilizing ICT.
NIPPON TELEGRAPH AND TELEPHONE CORPORATION ANNUAL REPORT 2017

Value Creation through Social and Environmental Contributions

Initiatives for Addressing Material Issues 3—Development of Frameworks for Encouraging Participation by Diverse Human Resources

NTT Group believes that enabling employees to realize their full potential is an important management issue needing to be addressed in order to become a “Value Partner” that customers continue to select by responding to rapidly changing markets and diversifying customer needs. To this end, we are advancing initiatives for (1) the promotion of diversity, (2) the reform of work styles, and (3) the improvement of procedures for developing, evaluating, and assigning human resources.

Promotion of Diversity

Basic Policy

Aiming to become a “Value Partner” that customers continue to select, NTT Group has positioned diversity management as an important element of its management strategies. We thereby aim to enhance our powers of innovation and corporate strengths by being receptive toward and utilizing diverse human resources. To this end, we are endeavoring to establish workplaces at which a diverse range of people can actively participate, regardless of their gender, age, race, nationality, mental or physical limitations, sexual orientation, or gender identity. In October 2007, the Diversity Management Office was established at NTT, the holding company, and by April 2008 diversity promotion supervisors were in place in Group companies. Since that time, the Diversity Management Office and diversity promotion supervisors have worked together to assist employees’ work-life management efforts, provide career development support for our diversifying employee base, and conduct educational activities aimed at reforming the corporate culture and ingrained practices of the Group. In addition, discussions on diversity within the Group are included in the training curriculum for senior managers, which is administered regardless of nationality. We thereby aim to help encourage participation by diverse human resources throughout the Group.

We also hold semiannual diversity promotion conferences to enable individual companies to share their initiatives with the whole NTT Group, and we monitor female manager ratios, the status of the hiring of people with limitations, and other numerical diversity management indicators.

Empowerment of Women in the Workforce

At NTT Group, steps are taken to nurture female leaders, support the balancing of work with child-rearing, promote work-style reforms, and conduct other measures based on the circumstances at each Group company. In the fiscal year ended March 31, 2017, we continued to advance such initiatives as the provision of Company information to employees on child-care leave, the training of employees on child-care leave and those preparing to return to work after child-care leave, the establishment of on-site day-care centers, and the use of e-learning programs to promote understanding of diversity.

To put the ideas and values of diverse individuals to use in our management and services, we announced a plan in December 2013 to double the ratio of our female managers at the level of section manager or higher in Japan, and to increase this ratio from the level of 2.9% in the fiscal year ended March 31, 2013, to 6.0% by the fiscal year ending March 31, 2021. We have since intensified efforts to train and promote female employees to management positions in 41 NTT Group companies.

As a result of efforts to hire and promote female employees, women occupied 4.6% of management positions and comprised 32% of new graduates joining NTT Group in the fiscal year ended March 31, 2017. We have published these figures on the website.

Employment Data

As of June 30, 2017, the ratio of differently abled individuals at NTT was 2.43%, for major NTT Group companies in Japan, this ratio was 2.32%, while the entire Group had a ratio of 2.16%.

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The most recent available data shows that for major subsidiaries of NTT Group, the ratio of differently abled individuals was 2.32%.

Promotion of Non-Japanese Employees

NTT Group considers diversity management to be critical to its management strategies and actively seeks to create workplaces where diverse human resources can realize their full potential, irrespective of race or nationality.

We apply the same conditions to the hiring and promotion of non-Japanese employees as we do to our Japanese employees, and we allow non-Japanese candidates to be interviewed or give presentations in English. Of the 1,504 people hired by major NTT Group companies in Japan in the fiscal year ended March 31, 2017, 79 (approximately 5.3%) were non-Japanese.

Consideration for Members of the LGBT Community and Other Sexual Minorities

With regard to diversity management, we have been working to promote women’s careers and the hiring of persons with special needs by setting up dedicated organizations (such as the Diversity Management Office) at major NTT Group companies since 2007. In addition, we have recently begun to pursue initiatives related to the LGBT community and other sexual minorities in view of expanding social awareness.

NTT Group endeavors to develop its organization and realize a society in which everyone can live and work based on who they are, regardless of their sexual orientation or gender identity. We therefore strive to create a working environment that motivates our employees to appreciate diversity and maximize their abilities and that allows for efficient work styles. In April 2016, NTT Group announced that its support systems related to important life events applicable to same-sex partners. These systems include leave, monetary payments, and, in the case of same-sex partners, membership in the LGBT & Ally Network.

Expansion of Employment of Individuals with Disabilities

NTT Group has established special-purpose subsidiaries to actively recruit individuals with disabilities and expand hiring opportunities for them while also endeavoring to create pleasant workplaces. These special-purpose subsidiaries engage in initiatives that utilize the unique capabilities of individuals with disabilities, including performing web accessibility diagnosis and conducting training for fostering sensitivity toward such individuals. In addition, individuals with disabilities take part in certain areas of NTT Group’s value chain, including equipment-related work at NTT East.

As of June 30, 2017, the ratio of differently abled individuals at NTT was 2.43%, for major NTT Group companies in Japan, this ratio was 2.32%, while the entire Group had a ratio of 2.16%.

As a result of these efforts, NTT was recognized in PRIDE INDEX 2016, receiving the highest rating of gold. The index is compiled by work with Pride to recognize initiatives by companies for supporting the LGBT community and other sexual minorities. In addition to NTT, 16 NTT Group companies were also included in this index.

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Promotion of Work Style Reform Initiatives

Basic Policy

NTT Group seeks to create new value through innovation. In order to accomplish this goal, there is a strong need for all NTT Group employees to break away from traditional work styles in order to adopt more efficient practices and thereby exercise greater levels of independence and creativity. We are also aware of the importance of supporting this shift by cultivating a deeper understanding of work-life management throughout workplaces and fostering a corporate culture that accepts the diverse work styles of each individual employee. From this standpoint, in June 2017 NTT Group made a work style reform declaration, which represented the shared sentiment of all NTT Group managers and employees. We are currently pursuing improvements in overall work processes together with business partners while advancing initiatives for helping employees maintain good physical and mental health and for encouraging reforms in the work styles of individuals.

Work Style Reform through Promotion of Working-from-Home System Use

We are reforming the work styles of all NTT Group employees and actively promoting the use of the working-from-home system and other teleworking systems as well as flexible work styles. As an ICT provider, we thereby aim to realize more efficient and flexible work styles.

Encouragement of Employees to Take Annual Paid Leave

In addition to work style reform, NTT Group is promoting a change in the practice of taking leave in an effort to facilitate the work-life management of employees. We encourage employees to take their annual paid leave in conjunction with long major holidays, such as Golden Week, , week-end of New Year holidays, and summer vacation, and conduct awareness-raising campaigns aimed at promoting extended leave acquisition. We thereby aim to create an environment that is conducive to taking leave. Other measures to facilitate leave acquisition include implementing more lenient guidelines for counting paid leave consumption in order to make it easier for employees to take so-called life plan leave for purposes such as childcare, long-term care of family members, or volunteer activities. In the fiscal year ended March 31, 2017, the average number of paid leave days taken at major NTT Group companies in Japan was 18.7 days, and the utilization ratio for paid leave was 93.3%.

Promotion of Child-Rearing and Family Care Support Systems

NTT Group believes in the importance of balancing careers with private lives and offers childcare and family care benefits that go beyond legally mandated efforts. We assist employees raising children or providing long-term care to family members, we offer a robust lineup of support systems. These include leave systems, shortened working hours, personal shits, re-employment systems for employees who leave work to raise children or provide long-term care to family members, a life plan leave system that enables employees to accumulate and use paid leave days that would have otherwise expired, reimbursement for hiring babysitters, and discounts for using long-term care systems. We are constantly striving to improve upon these systems, through such means as making it possible to use them more flexibly, in order to support the efforts of a diverse range of employees and respond to the needs of employees and the expectations of society. In April 2008, NTT was awarded “Kurumin” mark certification by the Ministry of Health, Labour and Welfare in recognition of its use of the child-rearing-support work systems. Following the revision to the Act on Measures to Support Raising Next-Generation Children, NTT Group acquired the new “Kurumin” mark certification in August 2015. Each company group has also established the “Fonomen” mark certification as well. With regard to family care support, the Ministry of Health, Labour and Welfare created the “Fonomen” symbol mark in November 2014 to encourage the establishment of working environments for balancing work and family care. NTT has been actively using the mark to publicize its initiatives and promote the development of a working environment in which employees can achieve a balance between work and family care.

Support for Training to Improve Capabilities

In addition to Group training and on-the-job training for enabling employees to gain necessary skills in their respective fields of business, we provide many other opportunities for employees who are eager to gain new skills, including distance learning, e-learning, in-house certification of skill levels to evaluate the results of educational programs, and support for acquiring qualifications. Furthermore, we actively support employee career development in various ways, including having supervisors meet with their subordinates at the start of the year, mid-year, and year-end to discuss career plans and review performance, and providing management training to employees tapped for promotion.

Promotion of Child-Rearing and Family Care Support Systems

Request for Proposals for Next-Generation Initiatives for Promoting Use of Child-Rearing and Family Care Support Systems

On-Site Day Care Centers

NTT DATA set up the Egg Garden day care center in its head office building (Koto-ku, Tokyo) in 2011, while NTT East established the Children’s Oasis HATISUDAN on-site day care center in its head office building (Shinjuku-ku, Tokyo) in 2012. By creating an environment in which employees can return quickly from childcare holidays or leave and participate fully at work, these centers are strengthening support for employees in leveraging their strengths and engaging in productive work even when their life stage changes, such as due to childbirth or childcare.

Rehiring of Employees Who Left Their Jobs for Child-Rearing or Family Care Reasons

We have established a system for rehiring employees who had worked for three consecutive years prior to leaving their job to look after a child that has not yet completed the third grade or to care for a family member. If employees request such a reemployment, we decide whether or not to rehire them after conducting interviews and health examinations.

Human Resource Development

NTT Group is committed to establishing human resource development system that enable all of its employees to make the most of their abilities through their work and deliver high value.

Employees formulate their own career plans based on the special skills necessary for each job. Skills are then improved through the implementation of the plan-do-check-act (PDCA) cycle. At Group companies, we have taken steps to establish a variety of systems related to human resource development, such as instituting a framework for defining specialized fields in line with business characteristics and work details and certifying skills.

also offer a training curriculum for cultivating experts in the security field in order to respond to the increasing security risks. To develop future management leaders, we have selected approximately 300 individuals from the executive manager and section manager levels to take part in a training curriculum meant to help participants develop leadership skills and engage in interpersonal exchanges. With an eye to the globalization of the Group’s business, we also send employees to study at overseas graduate schools or participate in overseas work experience programs in order to nurture personnel capable of performing in the global market.

Promotion of Child-Rearing and Family Care Support Systems

KIDS HATSUDAI

Advancement of Measures to Support Raising Next-Generation

support systems. Following the revision to the Act on care services. We are constantly striving to improve upon these paid leave days that would have otherwise expired, reimburse-children or provide long-term care to family members, a life plan re-employment systems for employees who leave work to raise

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The purpose of this program is to cultivate managers with broad perspectives that are not restricted to the Company, to foster a sense of solidarity within NTT Group, and to enhance personal networks. The curriculum consists of four management workshop courses conducted by external lecturers over a period of seven months.

Each program aims to help participants develop leadership skills and engage in interpersonal exchanges. With an eye to the globalization of the Group’s business, we also send employees to study at overseas graduate schools or participate in overseas work experience programs in order to nurture personnel capable of performing in the global market.

Fostering of globally capable human resources

The Global Leadership Development Program (GLDP) aims to broaden the horizons of the next generation of managers who will be responsible for developing global businesses, cultivate a sense of leadership within them, and help them form personal networks. The program includes a one-week curriculum of study at an overseas business school, where they take part in discussions on leadership and diversity, among other current topics.
NTT Group operates an in-house qualification system that puts priority on performance and sets behavior and performance targets tailored to each qualification rank. Our human resource management system is designed to encourage employees to think and act for themselves in the execution of their work duties through the steady implementation of an evaluation process that incorporates the setting of targets and the provision of feedback to employees.

Fair Evaluation Process
We endeavor to enhance the fairness and objectivity of our evaluation process. To this end, we have taken steps to prevent inappropriate evaluations due to subjective and arbitrary elements by having all of the evaluators in the same business unit hold evaluator meetings to align their evaluation criteria and perspectives.

Human Resource Management and Salary Systems In October 2013, we reconstructed our human resource management and salary systems. The new systems, which reflect the distinctive business characteristics of NTT Group, are designed to better reward employees who perform the roles and produce the results expected of them by introducing evaluation-based compensation and expanding results-based awards.

Fair Evaluation Process
We raise motivation and promote networking within the Group by providing ambitious employees with opportunities to seek new challenges in a wide range of fields through our NTT Group Job Challenge in-house recruitment program. In recent years, to raise the number of employees across the whole Group who are capable of working globally, we have been actively providing opportunities for employees to transfer to global posts by creating new global posts and increasing recruit numbers. In the fiscal year ended March 31, 2017, 453 employees used the Job Challenge program, with 167 transferring as a result to their desired workplaces.

In-House Recruitment Program
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Enhancement of Employee Satisfaction
NTT Group strives to understand the obstacles to making working environments more comfortable for employees. As part of these efforts, we regularly conduct surveys of employees at Group companies and use the results to improve working environments. Results of the survey conducted at Group companies in the fiscal year ended March 31, 2017, showed the level of employee satisfaction at 3.83 out of 5.00 points.

Turnover Rate
Human resources play a crucial role in the economic growth of companies and the advancement of corporate strategies, and the ability to secure talented human resources is vital for a company to achieve sustainable growth.

We collect data on the turnover rate at major NTT Group companies in Japan (including their affiliated companies). In the fiscal year ended March 31, 2017, the turnover rate was 7.0%.* The average length of service was 15.1 years for female employees and 22.4 years for male employees.

*1 “We” means NTT Group and its affiliates and employees.
*2 “Internationally recognized human rights” are rights included in declarations and rules that form the basis for international standards of universal human rights throughout the world and specifically refer to the following:
- The Universal Declaration of Human Rights (adopted by the United Nations General Assembly in 1948)

Measures for Strengthening Human Rights Management
A company that develops its business on a global scale must consider the impacts of its activities on the human rights of various stakeholders. To ensure that such consideration is reflected throughout the organization, it is essential for a company to be aware of how its activities can and do impact the human rights of stakeholders. As one facet of its activities to understand its impacts on human rights, NTT Group conducts human rights risk assessments during the fiscal year ended March 31, 2016. These assessments targeted specific businesses in NTT Group companies are developing overseas (business process outsourcing services and data centers) and specific regions (China and India). The goal of these activities was to form an understanding of the conditions in the global society as it pertains to NTT Group’s business in order to identify the actual human rights issues that the Group faces. Based on the findings of these assessments, we began conducting human rights management surveys based on the Guiding Principles on Business and Human Rights, in the fiscal year ended March 31, 2017. These surveys are part of our efforts to construct frameworks for preventing human rights violations. Our next step will be to supplement these internal surveys with surveys conducted through coordination with specialized external organizations (human rights impact assessments). We thereby plan to implement even more rigorous risk assessments in order to develop an understanding of actual and potential human rights issues inherent in NTT Group’s business activities and to formulate measures for addressing these issues.

The NTT Group’s Human Rights Charter
NTT Group realizes that one of its social responsibilities is to respect the human rights of employees and all of its other stakeholders. In 2014, the NTT Group’s Human Rights Charter was established to make clear our commitment to fulfilling this responsibility. This charter incorporates the ideals of such standards as the Guiding Principles on Business and Human Rights, which were approved by the United Nations Human Rights Council in 2011. The human rights needing to be respected are defined in the charter as “internationally recognized human rights.” We thus believe that the basis for standards of universal human rights is represented by the standards described in the Universal Declaration of Human Rights, the International Bill of Human Rights, and the eight core conventions of the ILO Declaration on Fundamental Principles and Rights at Work. We expect all Group companies to observe these standards.

As a new initiative in the fiscal year ended March 31, 2017, human rights management surveys were conducted with regard to human rights. We will also continue efforts to ensure that the contents and principles of the NTT Group’s Human Rights Charter are understood and entrenched throughout the Group. At the same time, the Group will share this commitment to human rights with its various partners, working together with them to promote respect for human rights on a global basis.

The NTT Group’s Human Rights Charter
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 our responsibility.

1. We* respect internationally recognized human rights*2, including the Universal Declaration of Human Rights in all company activities.
2. We reasonably respect 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 NTT Group, we will respect the business partner’s respect for human rights and not to infringe on them.

NTT Group is expanding its global business in accordance with the Medium-Term Management Strategy “Towards the Next Stage 2.0.” As our business grows more global, it is crucial that we act in compliance with global expectations for human rights with regard to the rights of our employees worldwide as well as the various other people connected to NTT Group’s value chain.

Respect for Human Rights
NTT Group is expanding its global business in accordance with the Medium-Term Management Strategy “Towards the Next Stage 2.0.” As our business grows more global, it is crucial that we act in compliance with global expectations for human rights with regard to the rights of our employees worldwide as well as the various other people connected to NTT Group’s value chain.
Details of Major Initiatives

1. Expanding Collaboration with Service Providers in Other Industries under the Hikari Collaboration Model

With regard to the Hikari Collaboration Model, the number of service providers to which NTT Group provides wholesale services was approximately 550 companies at the end of the fiscal year ended March 31, 2017, as NTT Group further expanded collaborative projects with business operators in the communications, energy, real estate, security, and other industries as well as with business operators in diverse industries including the housing industry and media industry in the fiscal year ended March 31, 2017.

Furthermore, in the housing industry, new use cases were born, including providing total lifestyle support after home purchases, which involves a combination of this model and home energy management systems (HEMS) and lifestyle-related services. As a result of these initiatives, the number of fiber-optic access service subscriptions using this model was 8.74 million on March 31, 2017.

2. Continuously Reducing Costs and Raising Efficiency in Capital Investment

With the development of the Hikari Collaboration Model, NTT Group worked to continuously reduce marketing costs. Furthermore, by simplifying and streamlining networks and further increasing the use of existing facilities, we sought to make capital investment more efficient.

3. Expanding Wi-Fi Service Coverage Areas

As companies and local governments are proactively promoting the use of Wi-Fi as a powerful information service tool, in various regions NTT Group continuously worked to improve convenience for the increasing number of visitors to Japan by expanding the coverage area of Wi-Fi, resulting in the number of Wi-Fi area owners reaching 557 on March 31, 2017.

Operations in Review

Regiona Communications Business

In the Regional Communications Business Segment, we worked to develop our B2B2X business through the Hikari Collaboration Model, the wholesale provision of fiber-optic access infrastructure services to various service providers.

Financial Results for the Year Ended March 31, 2017

<table>
<thead>
<tr>
<th></th>
<th>Operating Revenues</th>
<th>Operating Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2017</td>
<td>¥3,308.2 billion</td>
<td>¥359.5 billion</td>
</tr>
<tr>
<td>FY 2016</td>
<td>¥3,272.3 billion</td>
<td>¥309.5 billion</td>
</tr>
<tr>
<td>FY 2015</td>
<td>¥3,407.9 billion</td>
<td>¥285.9 billion</td>
</tr>
<tr>
<td>FY 2014</td>
<td>¥3,572.3 billion</td>
<td>¥127.2 billion</td>
</tr>
</tbody>
</table>

In addition to expanding access capacity, NTT Group has also focused on improving the efficiency of the network. According to the Forrester Total Economic Impact (TEI) study, NTT Group is credited with providing significant benefits in areas such as capital costs and energy consumption, which are critical for businesses today.

Number of Subscriptions for Major Services (as of March 31, 2017)

<table>
<thead>
<tr>
<th>Service</th>
<th>FY 2017</th>
<th>FY 2016</th>
<th>FY 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLET’S Hikari (FTTH)</td>
<td>20.05 million</td>
<td>17.76 million</td>
<td>15.52 million</td>
</tr>
<tr>
<td>FLET’S TV</td>
<td>8.74 million</td>
<td>6.21 million</td>
<td>4.93 million</td>
</tr>
</tbody>
</table>

Operations

In the housing industry, the Hikari Collaboration Model provided by NTT East and NTT West is being utilized to assist the spread of the “Smart House,” which allows household power consumption to be visually represented and home appliances to be regulated through ICT.

Creating New Value through Business Activities

Provision of System That Supports Local Governments in Times of Disaster to Facilitate a Quick Return to Normal Life

When a disaster occurs in Japan, victims must receive a certificate of disaster damage issued by a local government agency if they wish to apply for support programs designed to help them return to a normal life. However, there are some problems with this method, such as the amount of time required for certificates to be issued and the unfairness that arises from differences in disaster damage survey procedures.

NTT East offers a system that supports the procedures of local governments in order to facilitate a quick return to normal life for disaster victims. This system contributes to the swift issuance of certificates of disaster damage through features including automatic survey form database compilation, standardization of building damage certification surveys via standard survey forms, and management of support measures for helping victims return to a normal life by means of victim registries. When Typhoon No. 10 triggered severe landslides in Iwate Prefecture in August 2016, this system was already in place.

Accordingly, certificates of disaster damage were able to be issued in a speedy manner and support measures were able to be managed thanks to victim registries, contributing to a quick return to normal life after the disaster.

Today, numerous local governments are considering adopting this system. Looking ahead, NTT Group aims to help build a society that is resilient to disasters through ICT.
Details of Major Initiatives

1. Proactively Expanding Cloud Service Platform
   To provide ICT solutions to corporate clients based on an even more reliable international network, in October 2016 NTT Group began operations of the Asia Pacific Gateway, NTT Group’s high-bandwidth optical submarine cable network. Additionally, the Group sought to respond to demand for cloud services and data centers in various global regions. In the continuously growing market of the United States, we commenced service of the Virginia Ashburn 3 (VA3) Data Center, which is designed to achieve strong security and high-level energy savings. In this manner, NTT Group is proactively expanding its cloud service platform by working to provide a wide variety of data centers.

   As a result of these initiatives, NTT Group’s data centers were ranked as top class in the world in terms of both total floor area and potential server installation floor area according to a report by U.S. TeleGeography (published in November 2016).

2. Stepping Up Provision of Services in Growth Fields
   NTT Group received an IT outsourcing order from major U.K. insurance provider ReAssure UK Services Limited and began providing infrastructure services, including cloud services for the company’s servers, and security monitoring services.

Long Distance and International Communications Business

In the Long Distance and International Communications Business Segment, in addition to enhancing our provision capabilities for seamless ICT solutions combining network, security, and other services, we worked to strengthen our service provision capabilities in growth areas such as cloud services and IT outsourcing.

Operations in Review

Number of Subscriptions for Major Services (as of March 31, 2017)

- Number of customers for cloud services
  - 9.000 customers

- Hikari TV
  - 3.02 million subscriptions

- Number of subscriptions to networking services (VPN)
  - 0.35 million licenses

Creating New Value through Business Activities

Launch of COTOHA® AI Engine That Responds to Customers in Natural Japanese

On October 31, 2016, NTT Group launched the COTOHA® artificial intelligence (AI) engine, which utilizes NTT Group’s corevo® AI technology to realize natural conversations with people. This communication engine is capable of understanding natural expressions used by people and can therefore be entrusted with customer response services to limit the need for human intervention to only those cases in which the engine is unable to furnish an accurate response. Moreover, by logging past conversation histories and incorporating this information into its responses, COTOHA® facilitates improvements in customer satisfaction. We anticipate that the introduction of COTOHA® will bring various benefits, including the automation of initial responses on corporate helplines as well as the accompanying rise in response rates and end user satisfaction and improvements in productivity.

With COTOHA®, we aim to utilize AI to address the social issues in Japan presented by the decline in the workforce stemming from the declining birth rate and aging population. At the same time, NTT Group hopes to increase its global competitiveness by supplying this communication engine to other countries similarly experiencing birth rate decline and population aging.

Creating New Value through Business Activities

Launch of COTOHA® AI Engine That Responds to Customers in Natural Japanese

On October 31, 2016, NTT Group launched the COTOHA® artificial intelligence (AI) engine, which utilizes NTT Group’s corevo® AI technology to realize natural conversations with people. This communication engine is capable of understanding natural expressions used by people and can therefore be entrusted with customer response services to limit the need for human intervention to only those cases in which the engine is unable to furnish an accurate response. Moreover, by logging past conversation histories and incorporating this information into its responses, COTOHA® facilitates improvements in customer satisfaction. We anticipate that the introduction of COTOHA® will bring various benefits, including the automation of initial responses on corporate helplines as well as the accompanying rise in response rates and end user satisfaction and improvements in productivity.

With COTOHA®, we aim to utilize AI to address the social issues in Japan presented by the contraction of the workforce stemming from the declining birth rate and aging population. At the same time, NTT Group hopes to increase its global competitiveness by supplying this communication engine to other countries similarly experiencing birth rate decline and population aging.
Operations in Review

Mobile Communications Business

In the Mobile Communications Business Segment, we worked to promote sales of the billing plan Kake-hodai & Pake-aeru and of docomo Hikari. In addition, we took steps to enhance revenue and profitability in the Smart Life area, such as providing new value-added services through collaboration with various business partners.

Details of Major Initiatives

1. Continuously Enhancing Billing Plans
   In addition to continuing to promote the sales of Kake-hodai & Pake-aeru, a billing plan tailored to suit a customer’s stage of life that offers more affordable rates to long-term users, we began offering the docomo Child Raising Support Program in November 2016 and implemented other initiatives to enhance returns to its customers. As a result, the number of subscriptions to Kake-hodai & Pake-aeru reached 37.07 million on March 31, 2017.

2. Promoting Sales of docomo Hikari
   By utilizing the Hikari Collaboration Model from the Regional Communications Business Segment, NTT DOCOMO promoted the sales of the docomo Hikari Pack, which bundles fiber-optic access infrastructure services, Internet access services, and mobile services. As a result, the number of subscriptions to docomo Hikari reached 3.40 million on March 31, 2017.

3. Strengthening Profitability in the Smart Life Area
   In order to strengthen profitability in the Smart Life area, NTT Group pursued the +d initiative, which was aimed at creating new added value through collaboration with various business partners, and expanded its content, finance, and settlement services. Specifically, NTT Group collaborated with Perform Group to begin providing the live sports service DAZN for docomo and also worked to expand the number of member stores for its +d POINTS loyalty point program.

Financial Results for the Year Ended March 31, 2017

<table>
<thead>
<tr>
<th></th>
<th>Operating Revenues (Billions of yen)</th>
<th>Operating Income (Billions of yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiscal year ended</td>
<td>4,584.6</td>
<td>951.6</td>
</tr>
<tr>
<td>March 31</td>
<td>2016</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td>4,461.5</td>
<td>872.2</td>
</tr>
<tr>
<td></td>
<td>4,393.4</td>
<td>695.8</td>
</tr>
<tr>
<td></td>
<td>4,327.1</td>
<td>702.4</td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td>4,584.6</td>
<td>951.6</td>
</tr>
</tbody>
</table>

Creating New Value through Business Activities

Commencement of DOCOMO Drone Project

On October 19, 2016, NTT Group commenced the DOCOMO Drone Project. This project has three goals: providing drone-powered solutions to contribute to the resolutions of social issues, utilizing mobile technologies to establish an environment supporting the operation of drones, and applying platform technologies to the support of safe operation of drones that are out of eyesight. We are currently moving ahead with investigations and verification testing together with partners with the aim of supplying new solutions for disaster response, agriculture, distribution, and other fields.

In terms of disaster response, a successful verification test of portable drone base stations, which are equipped with miniature relay stations capable of setting up temporary service areas, was conducted in Nagaraohar Rural Township, Agatsuma District, Gunma Prefecture. In the agricultural field, a partnership agreement was concluded regarding a verification testing project in Nagaohara Rural Township with the aim of supporting the operation of drones, and applying platform technologies to the support of safe operation of drones that are out of eyesight. We are currently investigating measures and conducting verification testing together with partners with the aim of contributing to the establishment of a society in which customers can live more fulfilling lives that are safer and more secure.

PICK UP

Provision of DAZN for docomo

Together with Perform Group, provider of the revolutionary DAZN live sports service, NTT Group launched DAZN for docomo, a service that offers unlimited viewing of popular sports events from Japan and overseas, on February 15, 2017. This service gives users access to more than 7,500 matches from over 130 major sporting events from around the world, which can be viewed on multiple devices. Live viewing is available for people wanting to experience a match in the now along with catch-up viewing for those that joined a match late, but still want to view from the beginning. We will continue to collaborate with various stakeholders to contribute to the expansion of the sports industry into the future.

Number of Subscriptions for Major Services (as of March 31, 2017)

<table>
<thead>
<tr>
<th>Service</th>
<th>Number of mobile phone subscriptions</th>
<th>Number of docomo Hikari subscriptions</th>
<th>Number of dmarket subscriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAZN for docomo</td>
<td>74.88 million</td>
<td>37.07 million</td>
<td>3.40 million</td>
</tr>
<tr>
<td></td>
<td>(+3.92 million subscriptions from the previous fiscal year-end)</td>
<td>(+7.36 million subscriptions from the previous fiscal year-end)</td>
<td>(+0.54 million subscriptions from the previous fiscal year-end)</td>
</tr>
<tr>
<td>docomo Hikari Pack</td>
<td>74.88 million</td>
<td>37.07 million</td>
<td>3.40 million</td>
</tr>
<tr>
<td></td>
<td>(+3.92 million subscriptions from the previous fiscal year-end)</td>
<td>(+7.36 million subscriptions from the previous fiscal year-end)</td>
<td>(+0.54 million subscriptions from the previous fiscal year-end)</td>
</tr>
<tr>
<td>Kake-hodai &amp; Pake-aeru</td>
<td>74.88 million</td>
<td>37.07 million</td>
<td>3.40 million</td>
</tr>
<tr>
<td></td>
<td>(+3.92 million subscriptions from the previous fiscal year-end)</td>
<td>(+7.36 million subscriptions from the previous fiscal year-end)</td>
<td>(+0.54 million subscriptions from the previous fiscal year-end)</td>
</tr>
<tr>
<td>docomo Hikari</td>
<td>635.8</td>
<td>16.08 million</td>
<td>7.49 million</td>
</tr>
<tr>
<td></td>
<td>(+1.84 million subscriptions from the previous fiscal year-end)</td>
<td>(+4.06 million subscriptions from the previous fiscal year-end)</td>
<td>(+0.54 million subscriptions from the previous fiscal year-end)</td>
</tr>
<tr>
<td>Pake-aeru</td>
<td>578.4</td>
<td>16.08 million</td>
<td>7.49 million</td>
</tr>
<tr>
<td></td>
<td>(+0.54 million subscriptions from the previous fiscal year-end)</td>
<td>(+4.06 million subscriptions from the previous fiscal year-end)</td>
<td>(+0.54 million subscriptions from the previous fiscal year-end)</td>
</tr>
<tr>
<td></td>
<td>(+0.44 million subscriptions from the previous fiscal year-end)</td>
<td>(+3.50 million subscriptions from the previous fiscal year-end)</td>
<td>(+0.54 million subscriptions from the previous fiscal year-end)</td>
</tr>
</tbody>
</table>

Overview

Strategy

ESG

Operation

Innovation
Details of Major Initiatives

Expanding Business in the Global Market through M&A Activities
To increase its presence through the acquisition of a North America-focused operating base and to enhance cloud services and business process outsourcing (BPO) services, NTT Group acquired the businesses of Dell Services, which has been highly regarded by customers for providing digital solutions and BPO services tailored to the healthcare industry.

Promoting Initiatives for Providing New Services to the Financial Industry
To create new, financial-related services through open innovation, together with venture firms and regional banks, we established the BeSTA FinTech Lab, and are working to provide new services utilizing FinTech through methods including the verification testing of information distribution services that use location data.

Supplying the World’s Highest-Resolution Global Geospatial Information
Aiming for the expanded use of global geospatial information, creation of new markets, and the stimulation of related industries, in April 2016 NTT Group began to offer AW3D® Global High-resolution 3D Map with compatibility for all global land spaces. This service is a source of geospatial information with the world’s highest resolution that was developed together with the Remote Sensing Technology Center of Japan (RESTEC).

Financial Results for the Year Ended March 31, 2017

<table>
<thead>
<tr>
<th></th>
<th>Fiscal year ended March 31</th>
<th>2016/3</th>
<th>2015/3</th>
<th>2014/3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Revenues (Billions of yen)</td>
<td>¥1,718.7</td>
<td>¥1,343.9</td>
<td>¥1,131.0</td>
<td>¥1,016.8</td>
</tr>
<tr>
<td>Operating Income (Billions of yen)</td>
<td>¥107.9</td>
<td>¥67.9</td>
<td>¥66.4</td>
<td>¥62.7</td>
</tr>
</tbody>
</table>

Benefits of Integration of Dell Services with Existing Organizations in North America
- Improved presence in the North American market
- Expanded portfolio

Benefits of Integration of Dell Services with Existing Organizations in North America
- Acquired of 11 new customers with annual net sales of more than US$50 million, bringing total customer base to 16 companies
- Increased customer base to 16 companies with annual net sales of more than US$50 million
- Expanded portfolio

Creating New Value through Business Activities
Digital 3D Map of the Entire World
Facilitating Global-Scale Natural Disaster Response Measures
At the end of the fiscal year ended March 31, 2017, we finished compiling a 3D map that encompasses the entire world through AW3D® Global High-resolution 3D Map, a digital map with the world’s highest resolution that utilizes satellite images provided by NTT DATA and RESTEC. Use of this map is spreading, particularly in emerging countries, and it is currently utilized to provide various solutions in more than 70 countries around the world. AW3D® provides information on elevation differences for all land masses across the globe, making it a useful tool for conducting global-scale surveys for resource, environmental, disaster prevention, transportation, or other applications.

For example, this map can be used to select candidate sites for wind power generation systems by evaluating extreme wind risks based on land shapes. In the area of disaster prevention, AW3D® has demonstrated, in Vietnam and Nepal, its ability to efficiently identify areas at particularly high risk of landslides.

Future initiatives will include expanding use of global geospatial information and contributing to the resolution of social issues through the expansion of our lineup of urban area 3D maps and other AW3D® services.
Other Businesses

In the other business segment, we mainly provided services related to the real estate, finance, construction and electricity, and system development businesses.

### Financial Results for the Year Ended March 31, 2017

<table>
<thead>
<tr>
<th></th>
<th>Operating Revenues (Billions of yen)</th>
<th>Operating Income (Billions of yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2017</td>
<td>1,282.3</td>
<td>77.3</td>
</tr>
<tr>
<td>FY 2016</td>
<td>1,294.3</td>
<td>87.5</td>
</tr>
<tr>
<td>FY 2015</td>
<td>1,222.3</td>
<td>74.2</td>
</tr>
</tbody>
</table>

### Details of Major Initiatives

#### Real Estate Business

**NTT UD**

NTT Urban Development, which is the Group’s only comprehensive real estate company, developed its office building and commercial facility operations, as well as residential operations, which are implemented principally through the Wellith brand. In addition, NTT Urban Development utilized the know-how that it has cultivated in these business fields to implement initiatives in such areas as global business and the hotel and resort business.

#### Finance Business

**NTT FINANCE**

As the core finance company of NTT Group, NTT FINANCE provided leasing, installment payment, financing, and other financial services that are compatible with diversifying needs, changes in the economic climate, and the progress of globalization. NTT FINANCE also provided billing and collection services for telecommunications service bills as well as credit card transaction settlement services.

#### Construction and Electric Power Business

**NTT FACILITIES**

NTT FACILITIES provided one-stop solutions for buildings and energy facilities, ranging from planning and design services to construction, maintenance, operation, and upkeep services. NTT FACILITIES also utilized its technologies in the fields of ICT, energy, and construction to the fullest extent and integrated these technologies to develop smart cities that employ natural energy and use limited energy resources in an efficient and waste-free manner and safe cities that are resilient to natural disasters and other risks.

#### System Development Business

**NTT COMWARE**

NTT COMWARE developed its systems integration business, which targets NTT Group as well as other customers. In this business, NTT COMWARE leveraged the strengths of the superior technological prowess and expertise that it has used to support Japan’s largest telecommunication carrier business as one of NTT Group’s IT companies. With regard to customers outside of NTT Group, NTT COMWARE expanded the range of industries it serves to include the financial and distribution industries, among others, and also developed solutions utilizing AI, deep learning, and other cutting-edge technologies.

#### Advanced Technology Development Business

**NTTAI**

**NTT Electronics**

**NTT-TX**

These companies primarily worked to apply the advanced technologies of NTT Laboratories in the design, development, maintenance, and operation of products and in the provision of services. Specifically, they offered technology consulting using combinations of network technologies, media processing technologies, and other advanced technologies from Japan and overseas. In addition, these companies worked in the development, production, and sales of communications-use custom large-scale integrated circuits (LSIs) and optical devices that are indispensable to the realization of high-capacity communications networks. Other initiatives included the provision of total solutions related to software design and development and information and communications networks.
**Research and Development**

**NTT Group’s R&D**

Under its Medium-Term Management Strategy, “Towards the Next Stage 2.0,” which was launched in May 2015, NTT Group is accelerating self-transformation toward becoming a “Value Partner” that customers continue to select and embarking on a profit growth track while rapidly transitioning to a B2B2X model aimed at sustainable growth. NTT Group’s R&D activities include development projects that support increases in cost efficiency, such as network simplification. Furthermore, we are striving to develop technologies to advance the creation of new value through collaboration with other companies and to implement leading-edge research with a focus on the future.

Moreover, we will take advantage of the products of those R&D initiatives to advance a number of the priority measures. These include working toward the resolution of social issues facing Japan, such as the aging of the population, as well as strengthening industrial competitiveness and vitalizing local economies, which are objectives of the national government. Through these efforts, we aim to contribute to the development of society as well as to the growth of corporate value.

**AI and the IoT Targeted by NTT**

Artificial intelligence (AI) and the Internet of Things (IoT) have recently been garnering attention as technologies that will transform society. NTT Group does not aim for AI that emulates human intelligence or thinking but rather for AI that substitutes for and supports certain activities and that coexists and co-creates with people, thereby helping realize more fulfilling lifestyles.

We have defined four types of AI technologies that we will work with: Agent-AI, Heart-Touching-AI, Ambient-AI, and Network-AI. In addition, we have chosen corevo® as the brand name for the Group’s AI technologies based on our desire to create revolutions with our AI technologies through collaboration with various leading players in the field.

NTT Group aims to utilize its AI technologies to resolve social issues and strengthen industrial competitiveness through joint efforts together with collaboration partners and local government agencies.

In terms of the IoT, the degree to which data and other information can be collected is of utmost importance. NTT Group possesses a wealth of technologies and experience that will enable it to rise to this challenge, and we are committed to supporting customers looking to adopt the IoT with our expertise and systems.

**Creation of New Value through Collaboration**

NTT Group aims to develop new businesses and markets by further promoting the B2B2X model. In relation to R&D activities, this goal entails pursuing technological innovation by working together with partners outside of the Group to create new value based on the key word of collaboration. In particular, we hope to actively engage in an increasingly large range of collaborative initiatives with partners from other industries, as such collaboration has the potential to create unprecedented, new value the likes of which we could not previously imagine.

**Utilization of Security Technologies through Collaboration**

**Cybersecurity Technologies Supporting Safe and Secure Operation of Control Systems**

Mitsubishi Heavy Industries, Ltd., and NTT have completed the joint development of a prototype of InteRSePT®, a cybersecurity technology for critical infrastructure (social infrastructure) control systems. InteRSePT® realizes safe and secure system operation using real-time anomaly detection and response for unknown attacks. MHI and NTT plan to apply the newly developed technology to thermal power generation facilities, chemical plants, and other facilities where continuous system operation is of high importance.

**NTT Group’s R&D**

**AI and the IoT Targeted by NTT**

**Utilization of Security Technologies through Collaboration**
Collaboration Taking Advantage of AI and IoT Technologies

Joint Field Test for Realizing New Levels of Convenience for Customers

Seven & I Holdings Co., Ltd., and NTT are carrying out a joint field test of a system designed to realize new levels of convenience for customers at convenience stores by using cutting-edge ICT. This system takes advantage of angle-free object search technology, one of the technologies under NTT’s corevo® AI technology brand, to make it possible for customers to receive valuable information about products without even picking them up simply by pointing their smartphone at sandwiches or other items on product shelves. The field test is meant to evaluate the ability of the system to recognize objects and retrieve information, the convenience it offers to customers, and the satisfaction it brings to customers. This information will be incorporated into the process of examining potential services for offering increased safety and security to customers in the future.

Development of ICT Platforms for Connected Cars

An agreement has been reached between Toyota Motor Corporation and NTT Group to combine their respective automobile-related technologies and ICT technologies in a joint project to develop, verify, and standardize technologies in the connected car field. Under this agreement, TOYOTA and NTT Group will utilize the big data collected from vehicles to tackle various issues plaguing society, such as traffic accidents and congestion, while also developing technologies for providing customers with new mobility services. These efforts are anticipated to lead to the future realization of a sustainable, smart mobility society at the global level.

Potential Unlocked by Leading-Edge Research Results

Sports Brain Science Project for Strengthening the Brain to Claim Victory

In January 2017, NTT Communication Science Laboratories set up the Sports Brain Science Project as one facet of NTT Group’s efforts to develop corevo® AI technologies. The goal of this project is to establish new training methods for enhancing the mental fortitude and techniques of athletes. Playing sports is a marriage of one’s mental fortitude, physical strength, and techniques. Of these factors, mental fortitude and techniques are directly linked to the brain, which has yet to be fully explained by science. Focusing on this area, the Sports Brain Science Project seeks to identify the information processing mechanisms of brains to determine how the brains of talented athletes regulate their mental states and control their bodily functions. Through this process, we hope to develop means of strengthening the brain supporting mental fortitude and techniques in order to help athletes claim victory.

Collaborating with athletes of all levels, from junior and amateur athletes to professionals, the Sports Brain Science Project will utilize wearable sensors, virtual reality, machine learning, and other cutting-edge ICT to elucidate the latent information processing mechanisms of athletes’ brains. Other goals of this project include gaining insight for supporting the cultivation of athletes, such as by assisting in developing their skills or identifying talent at an early age, and establishing new training methods for strengthening athletes’ brains so that they may deliver higher performances.

Factors Contributing to Athlete Performance

Unprecedented Quantum Computing Mechanism Using Light to Solve Difficult Problems

Through the Cabinet Office’s Impulsing Paradigm Change through Disruptive Technologies Program, NTT has developed a quantum neural network (QMN) that employs an unprecedented computing mechanism together with the National Institute of Informatics, Osaka University, and the University of Tokyo. The QMN makes use of light to rapidly solve combinatorial optimization problems, which are difficult to solve using conventional computers. Combinatorial optimization problems involve selecting an optimal option from a set of numerous options. An example would be choosing candidate compounds in drug discovery processes. The range of options grows exponentially as the scope of a problem increases, making it difficult for conventional computers to solve larger problems. The QMN is anticipated to be of use in solving real-world combinatorial optimization problems in fields such as bioinformatics, telecommunication network optimization, traffic control, and deep learning.

Factors Contributing to Athlete Performance

Physical Strength
Muscular strength
Heart attack
Stroke prevention

Mental Fortitude
Motivation
Stress / relaxation
Techniques
Mastery
Disaster prevention

Tactics
Decision-making
Understanding
Accurate situational
Movement

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### 10-Year Financial Summary

#### Nippon Telegraph and Telephone Corporation and its subsidiaries

**Fiscal years ended March 31**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Profit and loss (For the year)</td>
<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Operating revenues</td>
<td>¥10,680.9</td>
<td>¥10,146.3</td>
<td>¥10,184.1</td>
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<td></td>
<td></td>
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<tr>
<td>Operating expenses</td>
<td>9,376.3</td>
<td>9,306.6</td>
<td>9,063.7</td>
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<td></td>
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<tr>
<td>Operating income</td>
<td>1,304.6</td>
<td>1,109.8</td>
<td>1,117.7</td>
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<td></td>
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<tr>
<td>Other income (expenses)</td>
<td>17.7</td>
<td>(4.6)</td>
<td>2.4</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Income before income taxes and equity in earnings (losses) of affiliated companies</td>
<td>1,322.3</td>
<td>1,105.2</td>
<td>1,120.1</td>
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<tr>
<td>Income tax expense</td>
<td>531.7</td>
<td>371.3</td>
<td>452.9</td>
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<td></td>
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<tr>
<td>Income before equity in earnings (losses) of affiliated companies</td>
<td>790.6</td>
<td>733.2</td>
<td>667.2</td>
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</tr>
<tr>
<td>Equity in earnings (losses) of affiliated companies</td>
<td>41.9</td>
<td>(0.7)</td>
<td>14.7</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Net income (1)(2)</td>
<td>¥ 197.4</td>
<td>¥ 194.5</td>
<td>¥ 189.6</td>
<td></td>
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**Performance indicators**

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<tr>
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</thead>
<tbody>
<tr>
<td>EBITDA margin(3)</td>
<td>33.8%</td>
<td>32.5%</td>
<td>31.9%</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>ROE (%)</td>
<td>8.7%</td>
<td>7.3%</td>
<td>6.5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per share of common stock (Yen)(4)</td>
<td>¥ 120.0</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tbody>
</table>

**Balance sheet (At year-end)**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Total assets</td>
<td>¥ 18,518.8</td>
<td>¥ 18,796.4</td>
<td>¥ 18,939.1</td>
<td>¥ 19,665.6</td>
<td>¥ 19,389.7</td>
<td>¥ 19,549.1</td>
<td>¥ 20,284.9</td>
<td>¥ 20,702.4</td>
<td>¥ 21,035.9</td>
<td></td>
</tr>
<tr>
<td>Total liabilities</td>
<td>¥ 5,332.1</td>
<td>¥ 5,956.6</td>
<td>¥ 5,579.9</td>
<td>¥ 5,895.6</td>
<td>¥ 5,847.7</td>
<td>¥ 5,527.7</td>
<td>¥ 5,657.4</td>
<td>¥ 5,902.7</td>
<td>¥ 6,009.6</td>
<td></td>
</tr>
<tr>
<td>Total equity (1)(2)</td>
<td>¥ 7,410.8</td>
<td>¥ 7,298.1</td>
<td>¥ 7,788.2</td>
<td>¥ 8,020.7</td>
<td>¥ 7,882.6</td>
<td>¥ 8,231.4</td>
<td>¥ 8,511.4</td>
<td>¥ 8,681.9</td>
<td>¥ 8,833.8</td>
<td></td>
</tr>
<tr>
<td>Total shareholders’ equity (1)(2)</td>
<td>¥ 7,410.8</td>
<td>¥ 7,298.1</td>
<td>¥ 7,788.2</td>
<td>¥ 8,020.7</td>
<td>¥ 7,882.6</td>
<td>¥ 8,231.4</td>
<td>¥ 8,511.4</td>
<td>¥ 8,681.9</td>
<td>¥ 8,833.8</td>
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</tr>
</tbody>
</table>

**Other financial data**

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</thead>
<tbody>
<tr>
<td>Capital investment (For the year)(3)</td>
<td>¥ 4,677.2</td>
<td>¥ 4,899.3</td>
<td>¥ 4,491.7</td>
<td>¥ 4,553.5</td>
<td>¥ 4,274.0</td>
<td>¥ 4,036.0</td>
<td>¥ 4,200.0</td>
<td>¥ 4,406.7</td>
<td>¥ 4,163.3</td>
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<tr>
<td>Research and development expenses (For the year)</td>
<td>¥ 271.1</td>
<td>¥ 268.2</td>
<td>¥ 278.1</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Equity in earnings (losses) of affiliated companies (1)</td>
<td>¥ 41.9</td>
<td>(0.7)</td>
<td>14.7</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Additional notes**

- **Overview**
  - The NTT Group includes NTT and its subsidiaries.

- **Strategy**
  - NTT has implemented a strategy focusing on innovation and embracing an open, agile, and flexible approach to business.

- **ESG**
  - NTT remains committed to sustainability and responsible business practices.

- **Operation**
  - NTT continues to invest in technology and infrastructure to support growth and innovation.

- **Innovation**
  - NTT fosters a culture of innovation, encouraging employees to think outside the box and drive technological advancements.

---

(1) NTT has retrospectively applied the equity method of accounting to prior years for an affiliate investment as a result of the acquisition by NTT Group of additional shares of the affiliate during the fiscal year ended March 31, 2008.

(2) The amounts in the tables above for the fiscal years ended March 31, 2008, to March 31, 2009, have been adjusted to reflect the 100-for-1 stock split conducted in the fiscal year ended March 31, 2009.

(3) Adjusted for the 2-for-1 stock split with an effective date of July 1, 2015.

(4) Financial data per share of common stock for the fiscal year ended March 31, 2008 have been adjusted to reflect the 100-for-1 stock split conducted in the fiscal year ended March 31, 2009.

(5) The fiscal years ended March 31, 2008 and 2014. The amounts in the table above for the fiscal years ended March 31, 2008, to March 31, 2009, have been adjusted to reflect the 100-for-1 stock split conducted in the fiscal year ended March 31, 2009.

(6) Capital investment is on an accrual basis for the acquisition of property, plant and equipment.
### Segment Data

#### Total Operating Revenues (Billions of yen)

<table>
<thead>
<tr>
<th>Year</th>
<th>Regional Communications</th>
<th>Long Distance and International Communications</th>
<th>Data Communications</th>
<th>Business</th>
<th>Other Businesses</th>
<th>Total REV</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>1,907.4</td>
<td>2,996.2</td>
<td>702.3</td>
<td>195.4</td>
<td>4.8</td>
<td>¥3,352.9</td>
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<tr>
<td>2016</td>
<td>1,917.5</td>
<td>3,025.9</td>
<td>812.2</td>
<td>195.8</td>
<td>4.8</td>
<td>¥4,057.6</td>
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<tr>
<td>2015</td>
<td>1,954.1</td>
<td>3,055.7</td>
<td>828.5</td>
<td>197.0</td>
<td>4.8</td>
<td>¥4,035.6</td>
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<tr>
<td>2014</td>
<td>1,985.6</td>
<td>3,082.3</td>
<td>836.0</td>
<td>197.2</td>
<td>4.8</td>
<td>¥4,092.1</td>
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<tr>
<td>2013</td>
<td>2,014.0</td>
<td>3,107.8</td>
<td>836.2</td>
<td>197.3</td>
<td>4.8</td>
<td>¥4,058.0</td>
</tr>
<tr>
<td>2012</td>
<td>2,037.5</td>
<td>3,132.6</td>
<td>836.4</td>
<td>197.3</td>
<td>4.8</td>
<td>¥4,044.4</td>
</tr>
</tbody>
</table>

#### Total Operating Income (Billions of yen)

<table>
<thead>
<tr>
<th>Year</th>
<th>Regional Communications</th>
<th>Long Distance and International Communications</th>
<th>Data Communications</th>
<th>Business</th>
<th>Other Businesses</th>
<th>Total INCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>662.5</td>
<td>913.1</td>
<td>278.6</td>
<td>36.6</td>
<td>13.9</td>
<td>¥1,439.3</td>
</tr>
<tr>
<td>2016</td>
<td>662.9</td>
<td>918.2</td>
<td>278.9</td>
<td>37.2</td>
<td>13.9</td>
<td>¥1,436.1</td>
</tr>
<tr>
<td>2015</td>
<td>661.9</td>
<td>913.0</td>
<td>278.9</td>
<td>37.2</td>
<td>13.9</td>
<td>¥1,438.0</td>
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<tr>
<td>2014</td>
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<td>913.0</td>
<td>278.9</td>
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<td>13.9</td>
<td>¥1,438.0</td>
</tr>
</tbody>
</table>

### Major Subsidiaries’ Data

#### NTT East (JAPAN GAAP)

<table>
<thead>
<tr>
<th>Fiscal year ended March 31</th>
<th>Billions of yen</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>¥1,901.2</td>
</tr>
<tr>
<td>2015</td>
<td>¥1,912.0</td>
</tr>
<tr>
<td>2014</td>
<td>¥1,972.5</td>
</tr>
<tr>
<td>2013</td>
<td>¥2,043.2</td>
</tr>
<tr>
<td>2012</td>
<td>¥2,124.1</td>
</tr>
<tr>
<td>2011</td>
<td>¥2,215.7</td>
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<tr>
<td>2010</td>
<td>¥2,297.8</td>
</tr>
<tr>
<td>2009</td>
<td>¥2,379.3</td>
</tr>
<tr>
<td>2008</td>
<td>¥2,447.4</td>
</tr>
</tbody>
</table>

#### NTT West (JAPAN GAAP)

<table>
<thead>
<tr>
<th>Fiscal year ended March 31</th>
<th>Billions of yen</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>¥1,901.2</td>
</tr>
<tr>
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<td>2009</td>
<td>¥2,379.3</td>
</tr>
<tr>
<td>2008</td>
<td>¥2,447.4</td>
</tr>
</tbody>
</table>

### Debt-Related Data

#### Interest-Bearing Debt / D/E Ratio*

<table>
<thead>
<tr>
<th>Year</th>
<th>Interest-bearing debt (left scale)</th>
<th>D/E ratio (right scale)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>¥30.4 ¥33.0 ¥36.6 ¥39.2 ¥41.8 ¥44.4</td>
<td>0.68 0.69 0.70 0.71 0.72 0.73</td>
</tr>
<tr>
<td>2016</td>
<td>¥30.4 ¥33.0 ¥36.6 ¥39.2 ¥41.8 ¥44.4</td>
<td>0.68 0.69 0.70 0.71 0.72 0.73</td>
</tr>
<tr>
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<td>0.68 0.69 0.70 0.71 0.72 0.73</td>
</tr>
</tbody>
</table>

* D/E ratio = Interest-bearing debt / Shareholders’ equity x 100
Reference Information

Reconciliation of Capital Investment

<table>
<thead>
<tr>
<th></th>
<th>Billions of yen</th>
<th>2015</th>
<th>2016</th>
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</thead>
<tbody>
<tr>
<td>Payments for property, plant and equipment</td>
<td>¥1,588.1</td>
<td>¥1,488.7</td>
<td>¥1,444.9</td>
</tr>
<tr>
<td>Payments for acquisition of intangible fixed assets</td>
<td>446.6</td>
<td>416.6</td>
<td>358.2</td>
</tr>
<tr>
<td>Acquisition of intangible assets and other assets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>¥1,984.7</td>
<td>¥1,903.2</td>
<td>¥1,803.1</td>
</tr>
<tr>
<td>Differences between capital investment</td>
<td>14.7</td>
<td>10.5</td>
<td>(14.6)</td>
</tr>
</tbody>
</table>

Reconciliation of EBITDA Margin

<table>
<thead>
<tr>
<th></th>
<th>Billions of yen</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Income</td>
<td>¥1,252.0</td>
<td>¥1,213.7</td>
<td>¥1,084.6</td>
<td>¥1,348.1</td>
<td>¥1,039.6</td>
</tr>
<tr>
<td>Depreciation</td>
<td>1,899.2</td>
<td>1,988.3</td>
<td>1,928.0</td>
<td>1,786.3</td>
<td>1,942.3</td>
</tr>
<tr>
<td>Loss on Sales of Property, Plant and Equipment</td>
<td>106.2</td>
<td>98.3</td>
<td>108.6</td>
<td>130.7</td>
<td>107.4</td>
</tr>
<tr>
<td>Impairment Loss</td>
<td>96.8</td>
<td>11.9</td>
<td>42.2</td>
<td>32.7</td>
<td>73.9</td>
</tr>
<tr>
<td>EBITDA</td>
<td>3,244.2</td>
<td>3,204.2</td>
<td>3,063.4</td>
<td>3,277.9</td>
<td>3,183.3</td>
</tr>
<tr>
<td>Operating revenues</td>
<td>10,700.7</td>
<td>10,925.2</td>
<td>11,095.3</td>
<td>11,541.0</td>
<td>11,880.3</td>
</tr>
<tr>
<td>EBITDA margin</td>
<td>30.3%</td>
<td>29.3%</td>
<td>27.9%</td>
<td>28.4%</td>
<td>27.9%</td>
</tr>
</tbody>
</table>

Average monthly revenue per unit (ARPU)

Average monthly revenue per unit, or ARPU, is used to measure average monthly operating revenues on a per subscriber (user) basis. In the case of NTT Group’s fixed-line business, ARPU is calculated by dividing revenue items included in the operating revenues of NTT Group’s Regional Communications Business Segment (i.e., fixed-line (telephone subscriber lines plus INS-Net subscriber lines) and FLET’S Hikari) by the number of Active Subscribers to the relevant services. In the case of the mobile communications business, ARPU is calculated by dividing communications services revenue items included in operating revenues from NTT Group’s Mobile Communications Business Segment, such as revenues from LTE (Xi) mobile phone services, FOMA mobile phone services, and docomo Hikari services (with certain exceptions), by the number of active users to the relevant services. The calculation of these figures excludes revenues that are not representative of typical average usage, such as telecommunications equipment sales, activation fees, and universal service charges.

NTT believes that its ARPU figures calculated in this way provide useful information regarding the monthly average usage of its subscribers. The revenue items included in the numerators of NTT Group’s ARPU figures are based on its financial results comprising its U.S. GAAP results of operations.

Method of calculating ARPU

(a) NTT East and NTT West

NTT separately computes the following two categories of ARPU for the fixed-line business conducted by each of NTT East and NTT West, using the following measures:

• Aggregate Fixed-line ARPU (Telephone Subscriber Lines + INS-Net Subscriber Lines): Calculated based on revenues from monthly charges and call charges for Telephone Subscriber Lines and INS-Net Subscriber Lines, which are included in operating revenues from Voice Transmission Services (excluding IP Services), and revenues from FLET’S ADSL and FLET’S ISDN, which are included in operating revenues from IP Services.

• FLET’S Hikari ARPU: Calculated based on revenues from FLET’S Hikari (including FLET’S Hikari optional services), which are included in operating revenues from IP Services and Supplementary Business, revenues from monthly charges, call charges, and device connection charges for Hikari Drive, which are included in operating revenues from IP Services, and revenues from FLET’S Hikari optional services, which are included in Supplementary Business revenues.

(1) FLET’S Hikari includes B FLET’S, FLET’S Hikari Next, FLET’S Hikari Light, FLET’S Hikari Lightspeed, and FLET’S Hikari WiFi Access provided by NTT East; and B FLET’S, FLET’S Hikari Premium, FLET’S Hikari Mytown, FLET’S Hikari Next, FLET’S Hikari Light, and FLET’S Hikari WiFi Access provided by NTT West, and the Hikari Collaboration Model wholesale provision of services provided by NTT East and NTT West to service providers. FLET’S Hikari optional services include wholesale services provided to service providers by NTT East and NTT West.

(2) Revenues from interconnection charges are excluded from the calculation of Aggregate Fixed-line ARPU (Telephone Subscriber Lines + INS-Net Subscriber Lines) and FLET’S Hikari ARPU.

(3) For purposes of calculating Aggregate Fixed-line ARPU (Telephone Subscriber Lines + INS-Net Subscriber Lines), the number of subscribers is the number of subscribers for fixed-line services (telephone subscriber lines or INS-Net subscriber lines).

(4) In terms of the number of channels, transmission rate, and line use rate (base rate), INS-Net 1500 is in all cases roughly 10 times greater than INS-Net 64. For this reason, one INS-Net 1500 subscription is calculated as 10 INS-Net 64 subscriptions.

(5) For purposes of calculating FLET’S Hikari ARPU, the number of subscribers is determined based on the number of FLET’S Hikari subscribers (including B FLET’S, FLET’S Hikari Next, FLET’S Hikari Light, FLET’S Hikari Lightspeed, and FLET’S Hikari WiFi Access) provided by NTT East, and B FLET’S, FLET’S Hikari Premium, FLET’S Hikari Mytown, FLET’S Hikari Next, FLET’S Hikari Light, and FLET’S Hikari WiFi Access provided by NTT West, and the Hikari Collaboration Model wholesale services provided by NTT East and NTT West to service providers.

(6) Number of Active Subscribers used in the ARPU calculation of NTT East and NTT West is as below:

FY Results: Sum of number of Active Subscribers for each month from April to March

Active Subscribers = (number of subscribers at end of previous month + number of subscribers at end of current month) / 2

(b) NTT DOCOMO

NTT computes ARPU for NTT DOCOMO as follows:

Aggregate ARPU = Voice ARPU + Packet ARPU + docomo Hikari ARPU.

Voice ARPU: Voice ARPU-related revenues (basic monthly charges and voice communication charges) / Number of Active Users

Packet ARPU: Packet ARPU-related revenues (flat monthly fees and packet communication charges) / Number of Active Users

docomo Hikari ARPU: docomo Hikari ARPU-related revenues (basic monthly charges and voice communication charges) / Number of Active Users

The sum of Packet ARPU and docomo Hikari ARPU is referred to as “Data ARPU.”

(1) Number of Active Users used in the ARPU calculation of NTT DOCOMO is as below:

FY Results: Sum of number of Active Users for each month from April to March

Active Users = (number of users at end of previous month + number of users at end of current month) / 2

(2) The number of users used to calculate ARPU is the total number of subscriptions, excluding the subscriptions listed below:

Number of active users = subscriptions

a. Subscriptions of communication module services, Phone Number Storage, Mail Address Storage, docomo Business Transceiver and wholesale telecommunications services and interconnected telecommunications facilities that are provided to Mobile Virtual Network Operators (MVNOs); and

b. Data Plan subscriptions in the case where the customer contracting for such subscription in his / her name also has a subscription for Xi or FOMA services in his / her name.

Revenues from communication module services, Phone Number Storage, Mail Address Storage, docomo Business Transceiver and wholesale telecommunications services and interconnected telecommunications facilities that are provided to Mobile Virtual Network Operators (MVNOs) are not included in NTT DOCOMO’s ARPU calculation.
### Consolidated Balance Sheets

Nippon Telegraph and Telephone Corporation and its subsidiaries  
March 31

#### ASSETS

<table>
<thead>
<tr>
<th>Category</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current assets:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>¥ 1,088,275</td>
<td>¥ 925,213</td>
</tr>
<tr>
<td>Short-term investments</td>
<td>33,076</td>
<td>63,844</td>
</tr>
<tr>
<td>Notes and accounts receivable, trade</td>
<td>2,733,116</td>
<td>2,699,708</td>
</tr>
<tr>
<td>Allowance for doubtful accounts</td>
<td>(45,236)</td>
<td>(48,626)</td>
</tr>
<tr>
<td>Accounts receivable, other</td>
<td>473,192</td>
<td>505,146</td>
</tr>
<tr>
<td>Inventories</td>
<td>414,581</td>
<td>365,379</td>
</tr>
<tr>
<td>Prepaid expenses and other current assets</td>
<td>469,629</td>
<td>573,170</td>
</tr>
<tr>
<td>Deferred income taxes</td>
<td>260,446</td>
<td>228,990</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td>¥ 5,426,979</td>
<td>¥ 5,312,423</td>
</tr>
<tr>
<td><strong>Property, plant and equipment:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telecommunications equipment</td>
<td>11,586,812</td>
<td>11,046,115</td>
</tr>
<tr>
<td>Telecommunications service lines</td>
<td>15,670,097</td>
<td>16,064,732</td>
</tr>
<tr>
<td>Buildings and structures</td>
<td>6,069,437</td>
<td>6,147,869</td>
</tr>
<tr>
<td>Machinery, vessels and tools</td>
<td>1,906,989</td>
<td>2,032,389</td>
</tr>
<tr>
<td>Land</td>
<td>1,273,209</td>
<td>1,292,685</td>
</tr>
<tr>
<td>Construction in progress</td>
<td>382,196</td>
<td>421,819</td>
</tr>
<tr>
<td><strong>Accumulated depreciation</strong></td>
<td>37,178,649</td>
<td>37,005,609</td>
</tr>
<tr>
<td><strong>Net property, plant and equipment</strong></td>
<td>¥ 9,551,501</td>
<td>¥ 9,719,021</td>
</tr>
<tr>
<td><strong>Investments and other assets:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investments in affiliated companies</td>
<td>515,716</td>
<td>484,596</td>
</tr>
<tr>
<td>Marketable securities and other investments</td>
<td>447,247</td>
<td>495,290</td>
</tr>
<tr>
<td>Goodwill</td>
<td>1,229,208</td>
<td>1,314,645</td>
</tr>
<tr>
<td>Software</td>
<td>1,212,482</td>
<td>1,209,485</td>
</tr>
<tr>
<td>Other intangible assets</td>
<td>391,977</td>
<td>453,918</td>
</tr>
<tr>
<td>Other assets</td>
<td>1,486,840</td>
<td>1,492,076</td>
</tr>
<tr>
<td>Deferred income taxes</td>
<td>746,681</td>
<td>768,871</td>
</tr>
<tr>
<td><strong>Total investments and other assets</strong></td>
<td>¥ 6,587,031</td>
<td>¥ 6,218,891</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>¥ 21,035,931</td>
<td>¥ 21,250,325</td>
</tr>
</tbody>
</table>

#### LIABILITIES AND EQUITY

<table>
<thead>
<tr>
<th>Category</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current liabilities:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short-term borrowings</td>
<td>¥ 129,656</td>
<td>¥ 227,207</td>
</tr>
<tr>
<td>Current portion of long-term debt</td>
<td>476,777</td>
<td>681,904</td>
</tr>
<tr>
<td>Accounts payable, trade</td>
<td>1,572,797</td>
<td>1,612,996</td>
</tr>
<tr>
<td>Current portion of obligations under capital leases</td>
<td>14,711</td>
<td>14,430</td>
</tr>
<tr>
<td>Accrued payroll</td>
<td>430,248</td>
<td>443,308</td>
</tr>
<tr>
<td>Accrued taxes on income</td>
<td>249,356</td>
<td>239,755</td>
</tr>
<tr>
<td>Accrued consumption tax</td>
<td>83,481</td>
<td>76,083</td>
</tr>
<tr>
<td>Advances received</td>
<td>290,132</td>
<td>324,342</td>
</tr>
<tr>
<td>Other</td>
<td>493,970</td>
<td>512,368</td>
</tr>
<tr>
<td><strong>Total current liabilities</strong></td>
<td>¥ 3,741,128</td>
<td>¥ 4,131,393</td>
</tr>
<tr>
<td><strong>Long-term liabilities:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term debt (excluding current portion)</td>
<td>3,546,203</td>
<td>3,168,478</td>
</tr>
<tr>
<td>Obligations under capital leases (excluding current portion)</td>
<td>27,630</td>
<td>26,568</td>
</tr>
<tr>
<td>Liability for employees’ retirement benefits</td>
<td>1,688,611</td>
<td>1,599,381</td>
</tr>
<tr>
<td>Accrued liabilities for point programs</td>
<td>89,003</td>
<td>103,047</td>
</tr>
<tr>
<td>Deferred income taxes</td>
<td>166,547</td>
<td>166,751</td>
</tr>
<tr>
<td>Other</td>
<td>491,630</td>
<td>497,132</td>
</tr>
<tr>
<td><strong>Total long-term liabilities</strong></td>
<td>¥ 6,009,624</td>
<td>¥ 5,660,357</td>
</tr>
<tr>
<td><strong>Redeemable noncontrolling interests:</strong></td>
<td>49,037</td>
<td>50,819</td>
</tr>
<tr>
<td><strong>Equity:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nippon Telegraph and Telephone Corporation (“NTT”) shareholders’ equity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common stock, no par value—Authorized—6,192,920,000 shares</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Issued—2,096,394,473 shares in 2016 and 2017</td>
<td>937,950</td>
<td>937,950</td>
</tr>
<tr>
<td>Additional paid-in capital</td>
<td>2,879,580</td>
<td>2,862,035</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>5,074,234</td>
<td>5,636,155</td>
</tr>
<tr>
<td>Accumulated other comprehensive income (loss)</td>
<td>(57,055)</td>
<td>1,562</td>
</tr>
<tr>
<td>Treasury stock, at cost—</td>
<td>(883)</td>
<td>(375,223)</td>
</tr>
<tr>
<td>Total NTT shareholders’ equity</td>
<td>¥ 8,833,806</td>
<td>¥ 9,052,479</td>
</tr>
<tr>
<td><strong>Noncontrolling interests</strong></td>
<td>2,426,276</td>
<td>2,455,277</td>
</tr>
<tr>
<td><strong>Total equity</strong></td>
<td>11,240,082</td>
<td>11,507,756</td>
</tr>
<tr>
<td><strong>Commitments and contingent liabilities:</strong></td>
<td>4,613,154</td>
<td>4,613,154</td>
</tr>
<tr>
<td><strong>Total liabilities and equity</strong></td>
<td>¥ 121,035,931</td>
<td>¥ 121,250,325</td>
</tr>
</tbody>
</table>
## Consolidated Statements of Income

**Nippon Telegraph and Telephone Corporation and its subsidiaries**

### Consolidated Statements of Income

<table>
<thead>
<tr>
<th>Year ended March 31</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating revenues:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile voice related services</td>
<td>¥1,441,383</td>
<td>¥1,320,963</td>
<td>¥1,233,985</td>
</tr>
<tr>
<td>Mobile data related services</td>
<td>¥872,062</td>
<td>¥837,818</td>
<td>¥869,293</td>
</tr>
<tr>
<td>IP / packet communications services</td>
<td>¥3,672,157</td>
<td>¥3,757,846</td>
<td>¥3,806,972</td>
</tr>
<tr>
<td>Sale of telecommunication equipment</td>
<td>¥966,996</td>
<td>¥955,022</td>
<td>¥806,493</td>
</tr>
<tr>
<td>System integration</td>
<td>¥2,623,786</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>¥1,420,983</td>
<td>¥1,596,847</td>
<td>¥1,634,786</td>
</tr>
<tr>
<td><strong>Total operating revenues</strong></td>
<td>¥11,055,317</td>
<td>¥11,340,997</td>
<td>¥11,391,016</td>
</tr>
</tbody>
</table>

### Consolidated Statements of Comprehensive Income

**Year Ended March 31, 2017**

<table>
<thead>
<tr>
<th></th>
<th>Common stock</th>
<th>Additional paid in capital</th>
<th>Retained earnings</th>
<th>Accumulated other comprehensive income (loss)</th>
<th>Treasury stock at cost</th>
<th>Total</th>
<th>Noncontrolling interests</th>
<th>Total equity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net income</strong></td>
<td>¥737,738</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Less—Net income attributable to noncontrolling interests</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Net income attributable to NNT shareholders</strong></td>
<td>¥518,066</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Year Ended March 31, 2016**

<table>
<thead>
<tr>
<th></th>
<th>Common stock</th>
<th>Additional paid in capital</th>
<th>Retained earnings</th>
<th>Accumulated other comprehensive income (loss)</th>
<th>Treasury stock at cost</th>
<th>Total</th>
<th>Noncontrolling interests</th>
<th>Total equity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net income</strong></td>
<td>¥705,179</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Less—Net income attributable to noncontrolling interests</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Net income attributable to NNT shareholders</strong></td>
<td>¥503,499</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Year Ended March 31, 2015**

<table>
<thead>
<tr>
<th></th>
<th>Common stock</th>
<th>Additional paid in capital</th>
<th>Retained earnings</th>
<th>Accumulated other comprehensive income (loss)</th>
<th>Treasury stock at cost</th>
<th>Total</th>
<th>Noncontrolling interests</th>
<th>Total equity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net income</strong></td>
<td>¥675,169</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Less—Net income attributable to noncontrolling interests</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Net income attributable to NNT shareholders</strong></td>
<td>¥422,152</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Notes to Consolidated Financial Statements

- **Overview**
- **Strategy**
- **ESG**
- **Operation**
- **Innovation**

*Changes in the redeemable noncontrolling interest are not included in the table.*
### Consolidated Statements of Cash Flows

Nippon Telegraph and Telephone Corporation and its subsidiaries

#### Year ended March 31

#### Current Year

<table>
<thead>
<tr>
<th>Period</th>
<th>Net Income</th>
<th>Cash flows from operating activities</th>
<th>Cash flows from investing activities</th>
<th>Cash flows from financing activities</th>
<th>Net cash provided by operating activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>¥ 675,169</td>
<td>¥ 1,462,235</td>
<td>¥ 378,348</td>
<td>¥ 1,970,157</td>
<td>¥ 3,386,606</td>
</tr>
<tr>
<td></td>
<td>¥ 800,201</td>
<td>¥ 1,462,235</td>
<td>¥ 378,348</td>
<td>¥ 1,970,157</td>
<td>¥ 3,386,606</td>
</tr>
</tbody>
</table>

#### Adjustments to reconcile net income to net cash provided by operating activities:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depreciation and amortization</td>
<td>¥ 1,827,988</td>
</tr>
<tr>
<td>Impairment losses</td>
<td>¥ 42,203</td>
</tr>
<tr>
<td>Deferred taxes</td>
<td>¥ 32,504</td>
</tr>
<tr>
<td>Losses on disposals of property, plant and equipment</td>
<td>¥ 104,718</td>
</tr>
<tr>
<td>Gains on sales of property, plant and equipment</td>
<td>¥ 34,191</td>
</tr>
<tr>
<td>Equity in (earnings) losses of affiliated companies</td>
<td>¥ 5,889</td>
</tr>
<tr>
<td>Increase (decrease) in notes and accounts receivable, trade</td>
<td>¥ 126,453</td>
</tr>
<tr>
<td>Increase in inventories</td>
<td>¥ 12,044</td>
</tr>
<tr>
<td>Increase in other current assets</td>
<td>¥ 89,839</td>
</tr>
<tr>
<td>Decrease (increase) in accounts payable, trade and accrued payroll</td>
<td>¥ 21</td>
</tr>
<tr>
<td>Increase (decrease) in accrued consumption tax</td>
<td>¥ 99,661</td>
</tr>
<tr>
<td>Increase (decrease) in advances received</td>
<td>¥ 32,481</td>
</tr>
<tr>
<td>Increase (decrease) in accrued liabilities on income tax</td>
<td>¥ 123,694</td>
</tr>
<tr>
<td>Increase (decrease) in other current liabilities</td>
<td>¥ 8,141</td>
</tr>
<tr>
<td>Decrease (increase) in liability for employees' retirement benefits</td>
<td>¥ 38,753</td>
</tr>
<tr>
<td>Increase (decrease) in long-term liabilities</td>
<td>¥ 2,598</td>
</tr>
</tbody>
</table>

#### Other

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>¥ 38,621</td>
</tr>
</tbody>
</table>

#### Net cash provided by operating activities

<table>
<thead>
<tr>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>¥ 3,386,606</td>
</tr>
</tbody>
</table>

#### Cash flows from investing activities:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payments for property, plant and equipment</td>
<td>¥ 1,444,917</td>
</tr>
<tr>
<td>Payments for intangibles</td>
<td>¥ 358,209</td>
</tr>
<tr>
<td>Proceeds from sales of property, plant and equipment</td>
<td>¥ 54,424</td>
</tr>
<tr>
<td>Payments for purchases of non-current investments</td>
<td>¥ 21,097</td>
</tr>
<tr>
<td>Proceeds from sales and redemptions of non-current investments</td>
<td>¥ 27,478</td>
</tr>
<tr>
<td>Acquisitions of subsidiaries, net of cash acquired</td>
<td>¥ 42,217</td>
</tr>
<tr>
<td>Payments for purchases of short-term investments</td>
<td>¥ 61,264</td>
</tr>
<tr>
<td>Proceeds from redemptions of short-term investments</td>
<td>¥ 34,754</td>
</tr>
</tbody>
</table>

#### Other

<table>
<thead>
<tr>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>¥ 83,321</td>
</tr>
</tbody>
</table>

#### Net cash used in investing activities

<table>
<thead>
<tr>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>¥ 1,088,576</td>
</tr>
</tbody>
</table>

#### Cash flows from financing activities:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proceeds from issuance of long-term debt</td>
<td>¥ 615,335</td>
</tr>
<tr>
<td>Payments for settlement of long-term debt</td>
<td>¥ 496,729</td>
</tr>
<tr>
<td>Proceeds from issuance of short-term debt</td>
<td>¥ 5,891,664</td>
</tr>
<tr>
<td>Payments for settlement of short-term debt</td>
<td>¥ 5,889,243</td>
</tr>
<tr>
<td>Dividends paid</td>
<td>¥ 190,770</td>
</tr>
<tr>
<td>Proceeds from sales of payments for acquisition of treasury stock, net</td>
<td>¥ 338,399</td>
</tr>
<tr>
<td>Acquisitions of shares of subsidiaries from noncontrolling interests</td>
<td>¥ 175,089</td>
</tr>
<tr>
<td>Other</td>
<td>¥ 125,706</td>
</tr>
</tbody>
</table>

#### Net cash used in financing activities

<table>
<thead>
<tr>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>¥ 1,088,311</td>
</tr>
</tbody>
</table>

#### Effect of exchange rate changes on cash and cash equivalents

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net increase (decrease) in cash and cash equivalents</td>
<td>¥ 1,088,275</td>
</tr>
</tbody>
</table>

#### Cash and cash equivalents at beginning of year

<table>
<thead>
<tr>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>¥ 849,174</td>
</tr>
</tbody>
</table>

#### Cash and cash equivalents at end of year

<table>
<thead>
<tr>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>¥ 1,938,275</td>
</tr>
</tbody>
</table>

#### Cash paid during the year:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest</td>
<td>¥ 44,795</td>
</tr>
<tr>
<td>Income taxes, net</td>
<td>¥ 543,354</td>
</tr>
<tr>
<td>Capital lease obligations incurred during the year</td>
<td>¥ 20,987</td>
</tr>
<tr>
<td>Cancellation of treasury stock</td>
<td>—</td>
</tr>
<tr>
<td>Assets acquired through exchange of buildings</td>
<td>¥ 18,719</td>
</tr>
</tbody>
</table>

#### Cash and cash equivalents at end of year

<table>
<thead>
<tr>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>¥ 925,213</td>
</tr>
</tbody>
</table>

#### Year ended March 31

#### Current Year

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Income</td>
<td>¥ 675,169</td>
</tr>
<tr>
<td>Adjustments to reconcile net income to net cash provided by operating activities</td>
<td></td>
</tr>
</tbody>
</table>
Operating and Financial Review

The fiscal year ended March 31, 2017, compared with the fiscal year ended March 31, 2016
Billions of yen

<table>
<thead>
<tr>
<th>Fiscal year ended March 31</th>
<th>2016</th>
<th>2017</th>
<th>Change</th>
<th>Percent change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating revenues:</td>
<td>¥11,541.0</td>
<td>¥11,391.0</td>
<td>(150.0)</td>
<td>(1.3)%</td>
</tr>
<tr>
<td>Fixed voice-related services</td>
<td>1,330.0</td>
<td>1,233.9</td>
<td>(96.1)</td>
<td>(7.2)%</td>
</tr>
<tr>
<td>Mobile voice-related services</td>
<td>637.8</td>
<td>685.3</td>
<td>47.5</td>
<td>7.3%</td>
</tr>
<tr>
<td>P / Packet communications services</td>
<td>3,757.8</td>
<td>3,800.0</td>
<td>42.2</td>
<td>1.1%</td>
</tr>
<tr>
<td>Sales of telecommunications equipment</td>
<td>963.0</td>
<td>806.5</td>
<td>(156.5)</td>
<td>(15.4)%</td>
</tr>
<tr>
<td>System integration</td>
<td>3,063.5</td>
<td>3,041.6</td>
<td>(21.9)</td>
<td>(0.7)%</td>
</tr>
<tr>
<td>Other</td>
<td>1,598.8</td>
<td>1,634.8</td>
<td>36.0</td>
<td>2.2%</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>10,192.8</td>
<td>9,851.2</td>
<td>(341.6)</td>
<td>(3.4)%</td>
</tr>
<tr>
<td>Operating income</td>
<td>1,348.1</td>
<td>1,539.8</td>
<td>191.7</td>
<td>14.1%</td>
</tr>
<tr>
<td>Other operating expenses</td>
<td>(18.9)</td>
<td>(12.0)</td>
<td>6.9</td>
<td>36.4%</td>
</tr>
<tr>
<td>Income before income taxes and equity in earnings (losses) of affiliated companies</td>
<td>1,329.3</td>
<td>1,527.8</td>
<td>200.9</td>
<td>13.9%</td>
</tr>
<tr>
<td>Income tax expense (benefit)</td>
<td>354.8</td>
<td>486.4</td>
<td>131.6</td>
<td>39.9%</td>
</tr>
<tr>
<td>Equity in earnings (losses) of affiliated companies</td>
<td>5.8</td>
<td>5.0</td>
<td>(0.8)</td>
<td>-3.4%</td>
</tr>
<tr>
<td>Net income</td>
<td>980.2</td>
<td>1,059.4</td>
<td>77.2</td>
<td>8.1%</td>
</tr>
<tr>
<td>Less—Net income attributable to noncontrolling interests</td>
<td>242.5</td>
<td>259.2</td>
<td>16.7</td>
<td>6.9%</td>
</tr>
<tr>
<td>Net income attributable to NTT</td>
<td>737.7</td>
<td>800.1</td>
<td>62.4</td>
<td>8.5%</td>
</tr>
</tbody>
</table>

■ Expenses for Purchase of Goods and Services and Other Expenses

In the fiscal year ended March 31, 2017, expenses for purchase of goods and services and other expenses decreased 1.1% from the previous fiscal year to ¥5,612.0 billion. This decrease was mainly due to efforts to improve operational efficiency leading to reduced expenses in the regional communications business segment, long-distance and international communications business segment, mobile communications business segment and elsewhere, despite an increase in the number of consolidated overseas subsidiaries.

■ Depreciation and Amortization Expenses

Depreciation and amortization expenses in the fiscal year ended March 31, 2017 decreased 17.2% from the previous fiscal year to ¥1,462.2 billion. This decrease was mainly due to the change in NTT Group’s method for calculating depreciation of property, plant, and equipment from the declining-balance method to the straight-line method, in addition to improved efficiency in capital investments in the regional communications business and mobile communications business.

Operating Income

As a result of the foregoing, operating income for the fiscal year ended March 31, 2017 increased 14.2% from the previous fiscal year to ¥1,539.8 billion.

■ Other Operating Revenues and Expenses

 Other Income (Expenses)

Other expenses for the fiscal year ended March 31, 2017 decreased to ¥12.0 billion, from ¥16.8 billion in the previous fiscal year.

■ Income before Income Taxes and Equity in Earnings (Losses) of Affiliated Companies

Net income before income taxes in the fiscal year ended March 31, 2017 amounted to ¥1,527.8 billion, an increase of ¥529.5 billion from the previous fiscal year. This increase was primarily the result of, among other things, an increase in the amount of accounts receivable collected in the fiscal year ended March 31, 2017, compared to the fiscal year ended March 31, 2016.

■ Income Tax Expense (Benefit)

Net income attributable to NTT (excluding the portion attributable to non-controlling interests) for the fiscal year ended March 31, 2017 increased 8.5% from the previous fiscal year to ¥800.1 billion.

■ Liquidity and Capital Resources

Financing, Capital Resources and Use of Funds

Net cash provided by operating activities during the fiscal year ended March 31, 2017 amounted to ¥2,917.4 billion, an increase of ¥205.5 billion from ¥2,711.8 billion in the fiscal year ended March 31, 2016. This increase was primarily the result of, among other things, an increase in the amount of accounts receivable collected in the fiscal year ended March 31, 2017, compared to the fiscal year ended March 31, 2016. This increase was due to, among other things, a ¥64.3 billion increase in payments for investments in property, plant, and equipment and in intangible assets computed on a cash basis, in addition to a ¥228.4 billion increase in expenditures on acquisitions. The increase in payments for investments in property, plant and equipment and in intangible assets for the fiscal year ended March 31, 2017 resulted from, among other things, an increase in capital expenditures due to measures to consolidate facilities and increase existing facility capacity in the mobile communications business and the expansion of the scope of large-scale projects in the data communications business, despite a reduction in fiber-optic-related capital expenditures in the regional communications business. For the fiscal year ended March 31, 2017, capital investments amounted to ¥1,700.0 billion on an accrual basis, of which ¥583.4 billion was invested in the regional communications business and ¥975.1 billion was invested in the mobile communications business. Net cash used in financing activities during the fiscal year ended March 31, 2017 amounted to ¥2,049.3 billion, an increase of ¥329.5 billion from ¥1,719.8 billion in the fiscal year ended March 31, 2016. This decrease was mainly due to efforts to improve operational efficiency leading to reduced expenses in the regional communications business. The actual amount of capital investments may vary from expected levels, since capital investments may be influenced by trends in demand, the competitive environment and other factors, and is therefore difficult to predict.

Liquidity

As of March 31, 2017, NTT Group had cash and cash equivalents balance including short-term investments with principal maturities of less than three months of ¥502.5 billion, a decrease of ¥143.1 billion compared to the balance of ¥645.6 billion as of March 31, 2016. Cash equivalents represent a temporary cash surplus used to repay debts and make capital investments, among other things, and are used as working capital. Accordingly, the balance of cash and equivalents fluctuates each fiscal year depending on particular funding and working capital requirements.
Overview

Strategy

ESG

Operation

Innovation

Risks associated with the business environment and NTT Group’s corresponding business strategies

■ NTT Group’s business may be affected by both the global and Japanese economic situation.

■ NTT Group has operations all over the world. An economic slowdown or deceleration in the economic growth of any of these regions may have an adverse effect on the demand for the services that NTT Group provides.

■ NTT Group also owns investment securities and other financial assets. If the market value of these assets were to decline because of a recession in the stock and other financial markets, the resulting impairment losses may adversely affect NTT Group’s results of operations.

■ NTT Group’s pension investments may also be adversely affected by the global and Japanese economic situation.

In addition, although NTT Group evaluates its means of capital procurement, including issuing corporate bonds and obtaining loans, any substantial fluctuations in the financial markets may lead to increases in NTT Group’s financing costs.

As a result, NTT Group’s results of operations and financial condition may be adversely affected.

In response to these risks, NTT Group has established a risk management policy, and in accordance with this policy, hedges risks using derivative transactions including forward exchange contracts. In addition, NTT Group is working to diversify its procurement procedures and to secure low-interest and stable financing.

However, there can be no assurance that NTT Group’s efforts will ultimately prove to be successful.

■ NTT Group’s operating revenues may suffer from changes in market structure and increased competition.

With the growing popularity of smartphones, tablets and high-speed wireless broadband services, the efficient use of signals and low latency, with specifications formulated by the 3rd Generation Partnership Project, the use of cloud services, AI, Big Data and IoT “Internet of Things,” the concept that all things are connected wirelessly and can be controlled via the Internet is expanding. At the same time, the structure of the telecommunications services market is changing drastically even within traditional fixed-line telecommunications operators in the market, services provided by over-the-top content (“OTT”) (a content distribution service utilizing other companies’ communications infrastructure, allowing a service provider to distribute services without owning its own communications infrastructure) providers are expanding, and competition increases on a global level. Additionally, the combination of fixed and mobile telecommunications services has accelerated the development of 5G (fixed-mobile convergence) services. Competition remains active among telecommunications providers, and the competitive environment in which NTT Group operates is becoming more rigorous.

NTT Group expects the solutions business to be a major area of growth in the information services market, and hardware vendors and other players are also focused on this business. Moreover, NTT Group conducts a variety of business activities in markets outside of the information and communication sector, and in general, the market environment is changing resulting from structural changes.

If NTT Group is unable to respond appropriately to increased competition and other changes in the structure of the markets in which it operates, its operating revenues may decline. In the information communications market, NTT Group’s results of operations and financial condition could still be adversely affected if, despite these efforts, the number of subscribers that NTT Group acquires or retains fails to meet expected levels or if subscription ratios for various fixed/discount services, trends in the number of subscription transfers to flat-rate services, or other initiatives do not proceed as expected.

Moreover, in the information services market, the growth of information service companies in rapidly developing nations, such as India and China, is bringing about global competition. Intensified competition resulting from new competitors’ aggressive market entry may have an adverse effect on NTT Group’s results of operations and financial condition.

Furthermore, it is possible that each of NTT Group’s businesses in other markets will fail to achieve forecasted revenues, which may result in an adverse effect on NTT Group’s results of operations and financial condition.

In response to these risks, NTT Group has established a risk management policy, and in accordance with this policy, hedges risks using derivative transactions including forward exchange contracts. In addition, NTT Group is working to diversify its procurement procedures and to secure low-interest and stable financing.

However, there can be no assurance that NTT Group’s efforts will ultimately prove to be successful.

■ NTT Group’s growth in its global business may be lower than anticipated.

NTT Group is expanding its global business as a cornerstone of its operations, and has also implemented initiatives to accelerate profit creation in this area. However, if these efforts do not progress as anticipated, or the cloud services market does not grow as anticipated, or revenues do not grow as expected due to increased competition or other factors, NTT Group’s results of operations and financial condition may be adversely affected.

In response to these risks, and in order to deliver consistent growth of its overseas business operations, NTT Group will strengthen its sales bona and marketing efforts, such as by expanding its global accounts and further promoting its up-selling and cross-selling efforts, while strengthening the entire NTT Group’s services and products.

In addition, stringent cost-efficiency initiatives are also underway in each of the Group’s companies to, among other things, improve efficiency, optimize services and operations, and lower procurement costs.

NTT Group also monitors the progress of these initiatives on a regular basis and responds to any related developments promptly when the need arises.

However, there can be no assurance that NTT Group’s efforts will ultimately prove to be successful.

■ NTT Group may not achieve anticipated cost savings.

NTT Group is working to generate profits by increasing capital expenditure efficiencies and reducing costs in the domestic fixed-line and mobile communications markets. However, it is possible that NTT Group will be unable to achieve the anticipated optimization of its capital expenditures or reductions in sales expenses, facility-related costs, and personnel and other costs due to changes in the competitive environment or due to the current state of progress in streamlining equipment or general business operations. Any such failure to achieve intended cost reductions could adversely impact NTT Group’s results of operations and financial condition.

In response to these risks, NTT Group is continuously working to reduce costs and is working to ensure simple yet highly productive business operations based on initiatives such as the conversion to the B2B2X model.

NTT Group also monitors the progress of these initiatives on a regular basis and responds to any related developments promptly when the need arises.

However, there can be no assurance that NTT Group’s efforts will ultimately prove to be successful.

■ NTT Group may be unable to obtain the licenses for third-party intellectual property necessary for the operation of its business.

In order for NTT Group and its business partners to carry out their business operations, they are at times required to obtain licenses and other rights to use the intellectual property and other rights of third parties. NTT Group and its business partners have entered into the necessary intellectual property licenses, and based on their experience as well as industry practice, NTT Group believes that it will continue to be able to obtain such licenses on reasonable terms. However, if NTT Group is unable to enter into or continue agreements with the holders of such rights on commercially acceptable terms, or NTT Group and its business partners may not be able to obtain the licenses that are necessary to conduct their business operations.

Operating and Financial Review
Further, as NTT Group’s global business expands, particularly through overseas acquisitions, claims of intellectual property infringement and other claims against NTT Group, particularly by foreign corporations, may become more frequent. In these situations, NTT Group may be required to develop new technologies, design new products, enhance its existing products or services, or incur costs to remove any infringement by others or to obtain licenses, which may result in reduced profitability. In this environment, NTT Group’s ability to hire and retain highly skilled personnel is crucial to the success of its business. If NTT Group experiences difficulties in hiring, retaining or otherwise attracting and retaining highly skilled personnel, it may experience difficulty maintaining its competitive position and profitability.

Overview

NIPPON TELEGRAPH AND TELEPHONE CORPORATION

and sophistication of services and technology have rapidly increased in the information and telecommunications market, in which the diversity and complexity of products and services continue to develop new technologies, design new products, enhance its existing products or services, or incur costs to remove any infringement by others or to obtain licenses, which may result in reduced profitability. In this environment, NTT Group’s ability to hire and retain highly skilled personnel is crucial to the success of its business. If NTT Group experiences difficulties in hiring, retaining or otherwise attracting and retaining highly skilled personnel, it may experience difficulty maintaining its competitive position and profitability.

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including currently active claims and pending claims, and responds to any related developments promptly when the need arises. However, there can be no assurance that NTT Group’s efforts will ultimately prove to be successful.

Risks associated with the Government, including rules, regulations and others

■ Changes or decisions regarding telecommunications regulations may affect NTT Group’s business. The regulation of the Japanese telecommunications industry has evolved in many areas, including amendments to telecommunications laws aimed at promoting competition, protecting service users and other purposes. Decisions relating to Government regulations and the resulting changes in the telecommunications industry may affect NTT Group’s results of operations and financial condition. In response to these risks, NTT Group is taking appropriate steps to obtain necessary information on developments relating to the Government’s information and telecommunications policies and regulations, and has also presented its views through public comments and hearings. However, there can be no assurance that NTT Group’s efforts will ultimately prove to be successful.

■ The frequencies that NTT Group can use are limited, and it is possible that it will not be able to secure adequate frequency spectrum for its operations. NTT Group has limited frequencies available for its services. While the number of subscribers and the traffic per subscriber are expected to increase in conjunction with the expanded use of devices such as smartphones and tablets, if NTT Group were unable to obtain the frequency spectrum required for unhindered operation or if the start of operations on a different band frequency did not progress as planned, NTT Group may suffer degradation of service quality and incur additional costs.

In addition, NTT Group may face constraints in providing wireless services or lose subscribers to competitors, which could have a material adverse effect on NTT Group’s results of operations or financial condition. In response to these risks, NTT Group is working to obtain new frequencies and implementing carrier aggregation with respect to its mobile communications networks to improve the efficiency of frequency usage. However, there can be no assurance that NTT Group’s efforts will ultimately prove to be successful.

■ NTT Group may be impacted by laws, regulations and systems relating to the environment, such as those relating to reduction of greenhouse gas emissions. NTT Group’s subject, both in Japan and overseas, to laws and regulations to the environment, such as those governing the reduction of greenhouse gas emissions, energy conservation, waste disposal and harmful substance removal. In the event that stricter laws and regulations and societal demands with respect to the environment materials in the future, or new laws and regulations are introduced, costs may increase, which may impact NTT Group’s financial condition and results of operations. In response to these risks, NTT Group is working to reduce the environmental burden on society by implementing a variety of forward-looking measures.
Glossary of Terms

Explanations of specialized terms as used in this annual report

**General Terms**

- **AI (Artificial Intelligence)**
- **Application**
- **AR (Augmented Reality)**
- **ARPU (Average Revenue Per User)**
- **382EX**
- **B2C (Business to Consumer)**
- **Big Data**
- **BPO (Business Process Outsourcing)**
- **Cloud/Cloud Services**
- **Connected Care**
- **Cross-Selling**
- **Cyber-Attack**
- **Data Center**
- **DDoS (Distributed Denial of Service) Attack**
- **Digital Signage**
- **Drone**
- **Edge Computing**
- **ERP (Enterprise Resource Planning)**
- **FTTH (Fiber To The Home)**
- **GEMS (Home Energy Management System)**
- **ICT (Information and Communications Technology)**
- **IoT (Internet of Things)**
- **SDGs (Sustainable Development Goals)**
- **Smart Stadiums**
- **Swarm**
- **User Experience (UX)**
- **VR (Virtual Reality)**
- **Wi-Fi**

**Terminology**

- **Business operation in which companies conduct transactions with general consumers and other companies.**
- **Business process to an external specialist contractor or similar organization.**
- **Business that supports and promotes the customer-based businesses of other companies.**
- **Business process to an external specialist contractor or similar organization.**
- **A new stadium scheme which allows fans to easily connect to Wi-Fi while also enjoying in-stadium content and services by using ICT and connecting them to local areas outside the stadium.**
- **Facility entrusted with servers and other systems by customers that provides access to the Internet and communicates among themselves for functions such as data processing and communication.**
- **Method of computer telecommunications in which data is sent and received as individual small packets.**
NIPPON TELEGRAPH AND TELEPHONE CORPORATION

Glossary of Terms

Terms Related to NTT Group Services

- **Araster Universal One**: VPN service for clouds provided by NTT Communications that enables flexible packaging of different telecommunications layers and access line qualities.
- **FLET’S**: Smartphone content marketplace operated by NTT DOCOMO.
- **d POINT**: A point service provided by NTT DOCOMO with no sign-up or annual fees that anybody can become a member of under a personal name.
- **FLET’S, FLET’S Hikari**: B FLET’S, FLET’S Hikari Premium, FLET’S Hikari Mycom, FLET’S Hikari Next, FLET’S Hikari Light, and FLET’S Hikari WiFi Access by NTT West.
- **FLET’S Hikari Collaboration Model**: A value-priced IP- and optical fiber-based telephone service using FLET’S Hikari.
- **FLET’S TV**: Service provided by NTT East and NTT West that enables subscribers to receive terrestrial / BS digital broadcasts using FLET’S Hikari optical fiber.

Stock Information  
(as of March 31, 2017)

Corporate Information

Company name  
NIPPON TELEGRAPH AND TELEPHONE CORPORATION

Date of establishment  
April 1, 1945

Head office  
Omachi First Square, East Tower, 5-1, Omachi-1-Chome, Chiyoda-ku, Tokyo, 100-8116, Japan

Telephone  
81 (3) 6838-5111

Common stock  
¥937,950,000,000

Total number of shares authorized to be issued by NTT  
6,192,920,000 shares

Total number of shares issued  
2,086,934,470 shares

Aggregate voting rights  
20,127,221

Number of shareholders  
867,301

Including holders of fractional shares

Stock Exchanges on Which the Company Is Listed

Tokyo (Stock Code: 9432)

New York (Ticker Symbol: NTT)*

Investor Relations

http://www.ntt.co.jp/ir/contact_e/

Telephone: 81 (2) 6838-5481

Depositary for NTT American Depositary Receipts ("ADR")

JPMorgan Chase Bank, N.A.

4 New York Plaza, Floor 12,

New York, NY 10004, U.S.A.

Inquiries

JPMorgan Service Center

P.O. Box 64504

St. Paul, MN 55164-0504, U.S.A.

Telephone: 1-800-395-1135 (General)

1-651-453-2128 (From outside the U.S.A.)

Stock Information  
(as of March 31, 2017)

Principal Shareholders

<table>
<thead>
<tr>
<th>Name</th>
<th>Number of Shares (Thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Minister of Finance</td>
<td>678,133</td>
</tr>
<tr>
<td>Japan Trustee Services Bank, Ltd. (Trust Account)</td>
<td>60,022</td>
</tr>
<tr>
<td>The Master Trust Bank of Japan, Ltd. (Trust Account)</td>
<td>70,940</td>
</tr>
<tr>
<td>JPMorgan Chase Bank, N.A.</td>
<td>47,360</td>
</tr>
<tr>
<td>Japan Trustee Services Bank, Ltd. (Trust Account)</td>
<td>28,108</td>
</tr>
<tr>
<td>Moody’s &amp; Co. LLC</td>
<td>27,079</td>
</tr>
<tr>
<td>Japan Trustee Services Bank, Ltd. (Trust Account)</td>
<td>26,700</td>
</tr>
<tr>
<td>Japan Trustee Services Bank, Ltd. (Trust Account)</td>
<td>21,540</td>
</tr>
<tr>
<td>Japan Trustee Services Bank, Ltd. (Trust Account)</td>
<td>21,143</td>
</tr>
<tr>
<td>JPMorgan Chase Bank, N.A.</td>
<td>23,604</td>
</tr>
</tbody>
</table>

Notes: 1. Number of shares held is rounded down to the nearest thousand.
2. NTT's holdings of treasury stock (61,026,480 shares) are not included in the above table.
3. Equity ownership percentages do not include treasury stock.

Breakdown of Shares by Shareholder

The number of shares is rounded down to the nearest thousand. The figures in parentheses represent percentage of total shares owned for each category of shareholder.

<table>
<thead>
<tr>
<th>Name</th>
<th>Number of Shares (Thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan Trustee Services Bank, Ltd. (Trust Account)</td>
<td>89,022</td>
</tr>
<tr>
<td>Moxley &amp; Co. LLC</td>
<td>27,079</td>
</tr>
<tr>
<td>Japan Trustee Services Bank, Ltd. (Trust Account)</td>
<td>26,700</td>
</tr>
<tr>
<td>Japan Trustee Services Bank, Ltd. (Trust Account)</td>
<td>21,143</td>
</tr>
<tr>
<td>JPMorgan Chase Bank, N.A.</td>
<td>23,604</td>
</tr>
</tbody>
</table>

Notes: 1. NTT's holdings of treasury stock (61,026,480 shares) are not included in the above table.
2. The percentages represent the ratio of shareholders' shares to the total number of issued shares excluding treasury stock.
3. “Other Corporations” above includes 28 thousand shares in the names of Japan Securities Depository Center.

Restrictions under the NTT Act

The NTT Act requires the government to own at least one-third of the total number of issued shares. Pursuant to the NTT Act, the proportion of voting rights of foreign nationals and foreign corporations is limited to less than one-third of the total voting rights.

As of the end of March 2017, 6,025,841 of the voting rights were owned by foreign nationals and foreign corporations.

For the time being, pursuant to Article 13 of the NTT Act, any increase in the number of shares attributable to the issuance of new shares is restricted in calculating the total number of issued shares for the purposes of the NTT Act.

NTT’s Share Price on the Tokyo Stock Exchange

<table>
<thead>
<tr>
<th>Year</th>
<th>(Points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>1,312.10</td>
</tr>
<tr>
<td>2001</td>
<td>1,341.80</td>
</tr>
<tr>
<td>2002</td>
<td>1,371.90</td>
</tr>
<tr>
<td>2003</td>
<td>1,402.30</td>
</tr>
<tr>
<td>2004</td>
<td>1,433.70</td>
</tr>
<tr>
<td>2005</td>
<td>1,465.80</td>
</tr>
<tr>
<td>2006</td>
<td>1,498.70</td>
</tr>
<tr>
<td>2007</td>
<td>1,532.70</td>
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<tr>
<td>2008</td>
<td>1,567.70</td>
</tr>
<tr>
<td>2009</td>
<td>1,603.70</td>
</tr>
<tr>
<td>2010</td>
<td>1,639.70</td>
</tr>
<tr>
<td>2011</td>
<td>1,676.70</td>
</tr>
<tr>
<td>2012</td>
<td>1,714.70</td>
</tr>
<tr>
<td>2013</td>
<td>1,752.70</td>
</tr>
<tr>
<td>2014</td>
<td>1,791.70</td>
</tr>
<tr>
<td>2015</td>
<td>1,830.70</td>
</tr>
<tr>
<td>2016</td>
<td>1,869.70</td>
</tr>
<tr>
<td>2017</td>
<td>1,908.70</td>
</tr>
</tbody>
</table>

Notes: 1. NTT's stock price and TOPIX Index are the simple average closing prices on the last trading day every month.
2. NTT’s trading volume (lower left scale) to the number of NTT shares traded every month.
3. NTT conducted a 100-for-1 stock split of its common stock, with an effective date of January 4, 2009, and a 2-for-1 stock split of its common stock, with an effective date of July 1, 2015. NTT’s share prices have been adjusted to reflect the impact of these stock splits.