

Integrated Report 2019



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#### **Editorial Policy**

NEC has published integrated annual reports containing both financial and non-financial information since 2013. Starting in 2018, having defined its materiality, NEC has changed the name of the report to the "Integrated Report."

Integrated Report 2019 comprises four chapters, respectively titled Business Strategy and Vision, Business Activities, Management Foundation, and Corporate Data.

Business Strategy and Vision describes the progress of the Mid-term Management Plan 2020 and our initiatives to create value, such as implementation of our priority themes from an Environmental, Social and Governance (ESG) perspective, or "materiality." Business Activities includes a message from the CFO along with an overview from each of our segments and an introduction of our principle international locations. Management Foundation introduces the Company's initiatives in support of sustainable management.

NEC will keep endeavoring to provide increasingly transparent and continuous information while incorporating feedback from various stakeholders.

#### Reporting Period

April 1, 2018 to March 31, 2019 (hereinafter referred to as "Fiscal 2019." Any other fiscal years are referred to similarly) This report also includes information obtained after this reporting period.

#### Scope of Report

NEC Corporation and its consolidated subsidiaries

#### Reference Guidelines

- ISO 26000
- GRI Standards
- United Nations Global Compact
- International Integrated Reporting Council's "International Integrated Reporting Framework"
- Japan's Ministry of Economy, Trade and Industry's "Guidance for Collaborative Value Creation"



NEC is a signatory to the United Nations Global Compact.



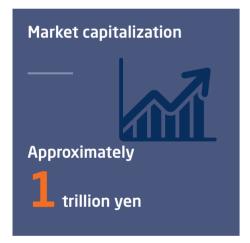
#### Other Related Information

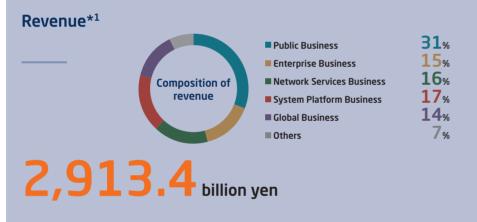
- Earnings Releases/Annual Securities Report
- Corporate Governance Report
- Sustainability Report
- Information Security Report

# What's NEC





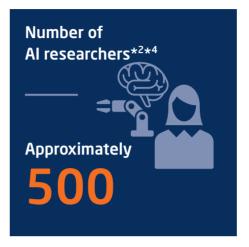








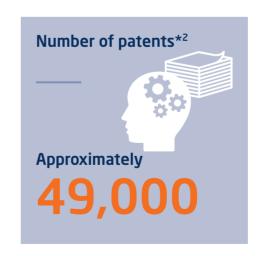


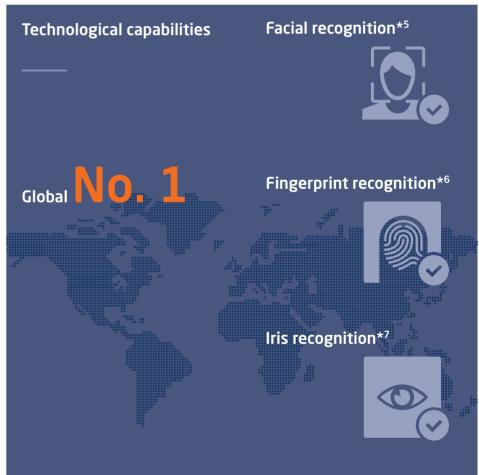












- \*1 Actual results for the fiscal year ended March 31, 2019
- \*2 As of March 31, 2019
- \*3 Ratio of employees returning to work who started childcare leave in fiscal 2017
  \*4 For NEC Corporation on a standalone basis

- \*5 Ranked 1st four consecutive times in task assessment sponsored by the U.S. National Institute of Standards and Technology (NIST)
- \*6 Ranked 1st eight times in task assessment sponsored by NIST
- \*7 Ranked 1st in task assessment sponsored by NIST

## **NEC's Value Creation Journey**

Company name NEC Corporation

**Founded** July 17, 1899 NEC established as Japan's first venture with foreign capital (joint venture with U.S. firm Western Electric Company) Started business in import and sale of telephones and switching systems

\* Renamed NEC Corporation, effective April, 1983, both expressed as NEC hereafter

#### Nippon Electric Company, Ltd. established\*



**Founding spirit:** "Better Products, Better Service,"

Create a company that provides customers with world-class products and take responsibility for them through after-sales service

**C&C** announced



The integration of computer and communications technologies

"Early in the 21st century, it will become possible for people to talk to each other and see each other anytime, anywhere"

1977

#### Corporate Philosophy

NEC strives through C&C to help advance societies worldwide toward deepened mutual understanding and the fulfillment of human potential.

Formulation of Brand Statement

## Orchestrating a brighter world

NEC brings together and integrates technology and expertise to create the ICT-enabled society of tomorrow. We collaborate closely with partners and customers around the world,

orchestrating each project to ensure all its parts are fine-tuned to local needs. Every day, our innovative solutions for society contribute to greater safety, security, efficiency and equality, and enable people to live brighter lives.

120th Founding **Anniversary** 

2014



1899



Nippon Electric Company, Ltd.



1928
Transmitted scenes of Imperial Accession Ceremony of Emperor



International satellite TV broadcasts of the Tokyo Olympics



Japan's first satellite,





Ultra-compact radio communications system PASOLINK secured top returned to Earth global market share



installation reaches over 250,000km, enough to encircle the earth six times





Begins Developed the first domestically produced NEAC-2201 computer

The ACOS Series 77 mainframe computer

Started manufacturing

optical submarine

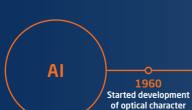
relay equipment

The PC-9801 The Earth Simulator, the world's fastest supercomputer system for resolving global personal computer

**Built ICT infrastructure** 

Contributed to

NEC's strengths developed to date



recognition (OCR)

Fully automated postal sorting system



No. 1 in fingerprint matching services

No. 1 in facial

in 70 countries in total

Biometrics solutions adopted

\*1 Ranked 1st eight times in task assessment sponsored by the U.S. National Institute of Standards and Technology (NIST) \*2 Ranked 1st four consecutive times in task assessment sponsored by NIST

## **Message from the President**

I will transform NEC's culture and mindset to survive in an era of dramatic change

Takashi Niino President and CEO

July 2019

September 1954 Born in Fukuoka Prefecture, Japan March 1977 Graduated from the Faculty of Engineering of Kyoto University April 1977 Joined NEC Corporation April 2008 Senior Vice President April 2010 Executive Vice President June 2011 Executive Vice President and Member of the Board April 2012 Senior Executive Vice President and Member of the Board April 2016 President and CEO (Representative Director) (to present)

#### **Continue Providing Value as a Social Value Innovator**

NEC was founded in 1899 and marked its 120th anniversary on July 17, 2019. Over these 120 years, the value that customers and society have expected from us has been constantly changing. We have survived because of our efforts to engage in solving issues facing customers and society, providing better value by making use of our strong technological capabilities based on our founding spirit of "Better Products, Better Service." NEC has demonstrated its own approach to each era, adopting the concept of "C&C (the integration of computer and communications)" in 1977, followed in 2014 by "Orchestrating a brighter world." The common thread running through all these concepts is NEC's constant commitment to providing better value to society.

In 2005, NEC became a signatory to the United Nations Global Compact (UNGC), a global initiative aimed at sustainable growth for society and companies. In our corporate activities we now observe the compact's 10 principles pertaining to the fields of human rights, labor, the environment, and anti-corruption. In addition, in July 2018, we declared our agreement with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Environmental issues around the world are growing increasingly severe, and the solutions will be costly. NEC will work actively to resolve these issues, considering both risks and opportunities.

Moreover, to maximize the economic and social value that we create, in 2018 we defined our materiality-priority management themes from an ESG perspective. This outlines the approach to social value creation that we have practiced since our foundation and connects our business strategies with ESG initiatives as a new declaration to our various stakeholders of our commitment to achieving the mutual growth of NEC and society. To promote the sustainable growth of society and NEC, we engage in dialogue with diverse stakeholders, including customers, and promote initiatives together with them with a view to contributing to the achievement of the Sustainable Development Goals (SDGs) set by the United Nations.



\* NEC Initiatives for Contributing to the Achievement of the SDGs

https://www.nec.com/en/global/sdgs/

#### Towards Achieving the Mid-term Management Plan 2020

Now I will discuss our progress on the three themes of the Mid-term Management Plan 2020, which was formulated in January 2018 with targets for fiscal 2021. The three themes are "Reform of profit structure," "Achievement of growth," and "Restructuring of execution capabilities."

#### **Mid-term Management Targets**

(Billions of yen)	FY2018/3 Results	FY2019/3 Results	FY2020/3 Forecasts	FY2021/3 Targets
Revenue	2,844.4	2,913.4	2,950.0	3,000.0
Operating profit	63.9	58.5	110.0	150.0
(Operating profit ratio)	2.2%	2.0%	3.7%	5.0%
Adjusted operating profit	72.5	69.9	125.0	165.0
(Adjusted operating profit ratio)	2.5%	2.4%	4.2%	5.5%
Net profit attributable to owners of the parent	45.9	40.2	65.0	90.0
Adjusted net profit	50.3	47.0	74.0	99.0
Free cash flows	115.8	-12.4	65.0	100.0
Return on equity (ROE)	5.3%	4.6%	_	10%

Note: Forecasts and targets are as of April 26, 2019

#### **Reform of Profit Structure**

First, regarding our progress on "Reform of profit structure," NEC needs to constantly take the lead in transforming itself in order to be company that anticipates social changes and leads the new era. In reforming our profit structure, we have been working to reduce selling, general and administrative (SG&A) expenses and to reform our business structure.

To reduce SG&A expenses, during fiscal 2019 we implemented voluntary early retirement and a reorganization of production bases. The reason for these measures is that NEC has a relatively high level of SG&A expenses compared with other companies, and we were strongly aware of the danger of missing the wave of change in the market environment and being eliminated. To build up a strong profit structure able to support continuous investment for transformation, we will continue working to reduce fixed costs and promoting improvements in our business structure to make it globally competitive.

In business structure reforms, we are promoting transformation of the wireless solutions business, the energy business, and the electrode business. In the wireless solutions business, we worked to improve profitability as our top priority by implementing structural reforms, selecting orders, and unifying models. We also aimed to reduce R&D costs through collaboration with Ceragon Networks Ltd. Through these initiatives, we aim to achieve profitability in fiscal 2020, and to continue business advancements. In the energy business, we secured orders that match the scale of a top global group, but we continued to encounter issues with profitability. Going forward, we will execute profit improvement measures and seek to form partnerships in fiscal 2020. The sale of the electrode business was also completed during fiscal 2019 as planned.

	Voluntary early retirement	Conducted in December 2018	
SG&A reduction	Reorganization of production bases	Concentrated production bases, ended operations at Tsukuba Research Laboratories, optimizing international bases	
	Cost-cutting	Optimization of real estate expenses	
	Wireless solutions business	Collaboration with Ceragon Networks Ltd./selection of orders and model unification	
Business structure reforms	Energy business	Profitability a continuing issue despite expansion in orders	
	Electrode business	Sold the shares of NEC Energy Devices, Ltd. and Automotive Energy Supply Corporation	

#### Achievement of Growth

Next, we turn to "Achievement of growth." Under NEC Safer Cities, we acquired KMD Holding ApS (KMD), the largest IT company in Denmark. KMD has the top share in the local and central government solutions market in Denmark, which is one of the most advanced countries in terms of digital government. By incorporating KMD's superb recurring business model and world-leading expertise in digitization of government, capitalizing on synergies with Northgate Public Services Limited (NPS), which was acquired in fiscal 2018, and expanding the value we provide through additional M&As through NPS and KMD, we will accelerate our growth towards our fiscal 2021 target for international revenue of 200 billion yen and an operating profit ratio of 5%.

At the same time, in Japan we have leveraged our major strength in facial recognition technology in a growing number of model cases, such as a solution that enables airline passengers to move through the stages from check-in to boarding using only facial recognition for authentication, and smooth authentication procedures for entry into international sports event venues. These initiatives will help to drive further growth from fiscal 2020 onward.

In the field of 5G, we are proceeding with joint development of base station equipment with Samsung Electronics Co., Ltd. aiming at realizing commercial services. We have been in discussions with Samsung Electronics with an eye to expanding our solutions beyond Japan to the global market. As we move forward, we will look to expand our business through joint proposals to global carriers.

	International	Acquisition of KMD Receipt of orders through the partnership between NPS and NEC
NEC Safer Cities	Japan	Adoption of facial recognition system for "One ID" check-in procedures at Narita International Airport  Adoption of authentication systems at international sports events
	Collaboration with Samsung Electronics	Agreement to provide base station equipment in Japan Discussing international expansion
5G	Rakuten	Selection as prime IT vendor, including OSS <sup>*1</sup> and BSS <sup>*2</sup> Finalized decision on provision of 3.7 GHz base station radio units
	Co-creation trial cases	AR for sports spectators, advanced emergency transport, remote operation of construction equipment, etc.
	SDN, OSS/BSS	Large-scale order from a tier 1 European carrier
Others	Submarine cable systems	Record high level of orders (over 100 billion yen in FY2019)
	Digital shift	Establishment of Digital Business Platform Unit and Cross-Industry Unit

<sup>\*1</sup> OSS: Operation Support System

<sup>\*2</sup> BSS: Business Support System

#### **Restructuring of Execution Capabilities**

Finally, with regard to "Restructuring of execution capabilities," we have adopted a two-pronged approach of reinforcing business development capabilities and transforming NEC's culture.

In reinforcing business development capabilities, we will break away from the closed innovation mindset, which has been an issue for us, and create new value beyond existing frameworks in order to accelerate monetization of the latest technologies. Our first step in this regard was the establishment of dotData, Inc., which develops and sells software that uses artificial intelligence (AI) to automate data analyzing processes for big data that would require a massive amount of time even for experienced data scientists. dotData is steadily achieving results, with over 20 companies now using its products on a commercial or trial basis. In addition, NEC has decided to enter into the drug development business. Together with our work using the latest technologies in the medical system business, we will drive value creation in the healthcare domain.

In our initiatives for transforming NEC's culture, we are targeting the following measures under the Mid-term Management Plan 2020 to enable employees to maximize their capabilities and realize an organization with the capacity to carry out actions to completion: "Define management's responsibilities and authorities more clearly," "Encourage innovative actions and challenges," and "Accelerate diversification of the NEC Group."

In our initiatives towards this transformation, we started by revamping our evaluation system for executive officers and re-clarifying their responsibilities and authority. We moved to

Define management's responsibilities

and authorities more clearly

one-year mandate contracts to make executive officers more responsible for results. Another reason for the change was so that our executive officers could lead by example when we introduced a new evaluation system for employees.

To change the culture of a company such as NEC, I believe that each individual employee must accept the transformation and reflect it in their own actual conduct. To gain the acceptance of individual employees, I visited every workplace to conduct town-hall meetings with employees, shared my own thoughts about the transformation with them and listened to their opinions from the front line. I will continue to conduct this activity, following on from fiscal 2019, when we ran dozens of town-hall meetings worldwide, with over 10,000 employees participating. In the meetings, I felt that there are more issues to be dealt with on the front lines of our businesses around the world than I had originally thought, such as internally focused work hours, unclear allocation of responsibility, and lack of speed. In other words, if we attempt to change things, there are factors that impede us. Also, I thought that while many people are aware of issues, they are waiting for changes to happen around them. We must transform our culture into one that leads the way autonomously and takes action.

On the other hand, I was heartened by the many employees that I saw who had positive ambition, including young employees. We will draw on the opinions of individual employees on how we can make improvements, and promote a cultural transformation that will lead to the growth of NEC and its employees.

## Encourage innovative actions and challenges

Accelerate diversification of
the NEC Group

Strengthening of business development	dotData	Conducting trials with over 20 companies
	NEC X	New business development based in Silicon Valley
capabilities	Healthcare	Full-scale entry into drug development business
Enable employees to maximize their capabilities	Introduction of new evaluation system	Introduce for corporate officers then for employees
	Revamp executive officer system	Shift to one year mandate contracts
	Town-hall meetings with employees	Over 10,000 participants

#### Transformation is Essential to NEC's Survival

Looking back over 120 years since NEC's foundation, NEC grew for the first 100 years by riding the waves of social change. In the last 20 years, however, the situation has reversed, with NEC finding itself under pressure from huge changes. It is possible that the next 10 years, will bring even greater changes than the previous 120. NEC's strength lies in having technologies in both IT and networks, including AI, biometric authentication, security, and wireless. By blending these technologies, NEC can create unique value in the form of safety, security, efficiency, and equality through initiatives such as NEC Safer Cities and NEC Value Chain Innovation. However, to ensure that NEC can survive sustainably over the next 50 and 100 years, we must develop the ability to respond to change. Moreover, while responding to changes in society, NEC must build new core businesses that it can use to compete globally.

To create those new core businesses, we have established the Digital Business Platform Unit as an organization tasked with concentrating NEC's strong technologies such as AI, biometric authentication, and security, and deploying them in the market as new businesses. The reason we have included the word "digital" in the name of the unit is to express our determination that NEC itself will undergo a transformation in response to the steady changes in the world as the digital shift penetrates every part of society with increasing speed.

To create and deliver services and solutions of value to society with optimal timing, the creator must be deeply immersed in the market, understand what is needed, make, and then market it. In addition, rather than working top-down, each front-line individual must think and act with careful consideration. In other words, the NEC of the past will not survive. Our survival depends on transforming NEC's culture, developing the capability to respond to changes on the front lines, and acting quickly.

I see fiscal 2020 as the year for a comprehensive turnaround – not only in our business performance, but also in transforming NEC's culture. In fiscal 2019, we changed various systems and structures to create an environment that will enable this transformation. Fiscal 2020 is the year for transforming NEC's culture and mindset, setting the stage for achieving growth under the Mid-term Management Plan 2020 and beyond.



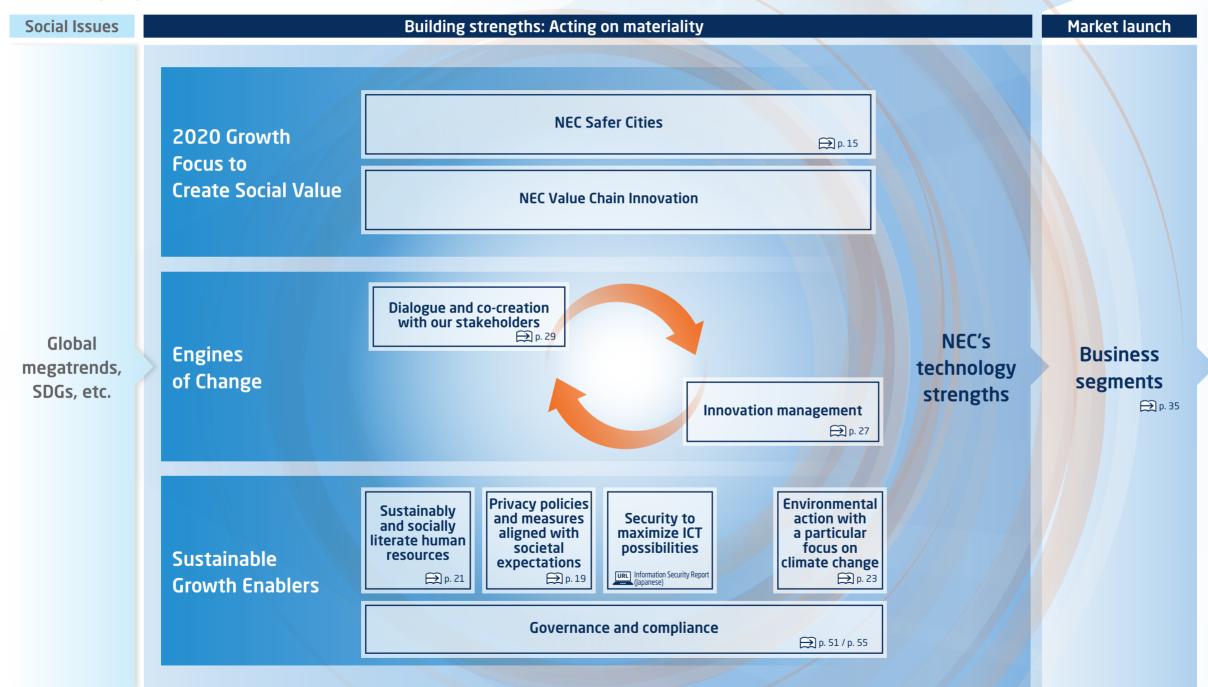
Dialogue with employees

NEC Corporation Integrated Report 2019

#### **Value Creation Process**

NEC's purpose is to help advance societies worldwide toward deepened mutual understanding and the fulfillment of human potential through the provision of better products and services. To realize advanced societies, NEC must build its strengths, such as technologies, and create economic and social value through the activities of each business segment. We do this by implementing ESG initiatives, which form the basis of sustainable value creation for both society and NEC, and by acting on our materiality, a selection of priority management themes from an ESG perspective. Through the creation of such value, we will realize our aspiration of orchestrating a brighter world and contribute to the achievement of the SDGs.

# Orchestrating a brighter world





#### **Economic value**

Fiscal 2021 targets for further growth Adjusted operating profit ratio

5%



NEC Corporation Integrated Report 2019 NEC Corporation Integrated Report 2019

### **Feature**

# **NEC Safer Cities**

#### Vision

As populations rapidly concentrate in urban areas, new value is created through economic growth and the diversification of life and culture; At the same time, cities also face a wide range of social challenges, such as increasing levels of crime and terrorism. NEC will contribute to realizing safe, secure, efficient and equal cities where individuals can exhibit their potential to the full and live better lives, by utilizing cutting-edge technology such as biometric authentication, Al, and the IoT.

#### Social Value to be Realized

Since fiscal 2018, we have been using business examples to highlight specific examples of the social values of safety, security, efficiency, and equality that we are providing through NEC Safer Cities in an effort to measure our progress on expanding value.

Currently, we are looking at some of our businesses in public safety and digital government (solutions for police forces and local governments) and examining ways to show the social values provided by these businesses quantitatively. In promoting our businesses in fiscal 2019, we posited that we would be able to contribute to the achievement of SDG targets 16\*1 and 11\*2, as well as increase the happiness of the communities living in the areas where we operate. Then, we referenced the statistics of the UN and other sources to consider their correlations.

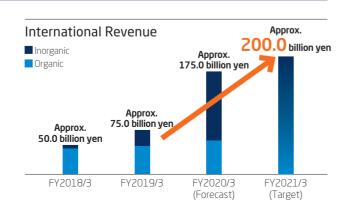
The results of this investigation showed that the lower the crime rate in an area, and the more digitalized the government of an area, the higher the level of happiness tends to be among the residents.

Moving forward, we will continue to promote the realization of social value and work to spread it wider to even more regions, while giving full consideration to human rights issues such as privacy. In doing so, we will strive to expand our role in increasing the happiness of people living in these areas, aiming to achieve both social and economic value.

- \*1 Target 16.a: "strengthen relevant national institutions, including through international cooperation, for building capacities at all levels, in particular in developing countries, for preventing violence and combating terrorism and crime"
- \*2 Target 11.3: "by 2030 enhance inclusive and sustainable urbanization and capacities for participatory, integrated and sustainable human settlement planning and management in all countries"

#### Economic Value to be Realized

NEC will shift to a business model with high revenue growth and a high profit margin. Our targets for international markets in fiscal 2021 are revenue of 200.0 billion yen, an operating profit ratio of over 5%, and EBITDA ratio of over 20%



#### Digital Public Smart Government Safety ransportation 0 City Digital Creating Cities Healthcare Management that are Safe, Secure, Efficient, and Equal **NEC Smart Connectivity** NEC the WISE **IIII** Bio-IDiom Cyber Security

#### **Digital Government**

#### Realizing People-Friendly Societies through Digitalization and Social System Reforms

Digitalization can make administrative services more efficient and completely reform social systems, helping to create new services through cooperation between public and private sectors and create a society that is amenable for everyone -consumers, governments, and companies.

#### **Public Safety**

#### Realizing a Safe, Secure Society

NEC ascertains the status of people, things, and all manner of movement to provide advance warning of crime, disasters, and other events, and provide support after the events. We will support the creation of safe. secure cities

#### **Smart Transportation**

#### Realizing safe, comfortable travel experiences

We will realize convenient, comfortable travel environments, offering simple, seamless connections between all modes of transportation, safely, securely, and with optimal routes and cost.

#### **Digital Healthcare**

#### Realizing a society where people enjoy good health and vitality

By using ICT, we provide solutions to various issues related to healthcare, while aiming to realize a healthy, long-living society where people enjoy good

#### **City Management**

#### Supporting the Creation of Smart, Comfortable Cities

With promotion of city digitalization and data utilization platform services, we will realize collaboration across public and private sectors on data use and services.

#### **Initiatives for Creating Value**

In our NEC Safer Cities initiative, we give top priority to privacy and human rights considerations in our business activities, including formulation of the NEC Group AI and Human Rights Principles and firm compliance with the legal systems of each country, such as the General Data Protection Regulation (GDPR).

These activities form the foundation for developing businesses predicated on our strengths in the "NEC the WISE" line up of advanced AI technologies, "Bio-IDiom" biometrics, "NEC Smart Connectivity" for providing smart connections between all manner of data, and "Cyber Security." Moreover, with a view to expanding

our business, we acquired U.K.-based Northgate Public Services Limited (NPS) in fiscal 2018, and Denmark-based KMD Holding ApS (KMD) in fiscal 2019. Through these acquisitions, we obtained the two companies' assets in terms of platforms, customer bases, business models, and cultures.

By cultivating synergies with NEC's existing strengths and these new assets, while actively engaging in dialogue and co-creation with stakeholders, we will create social and economic value, helping to realizing cities that are safe, secure, efficient, and equal.

#### Expanding the Provision of Value through Synergies with Northgate Public Services Limited and KMD Holding ApS

NEC aims to expand its businesses and increase its earnings by promoting development of core technologies and solutions while acquiring new customer bases, delivery resources, core technologies, and business models through M&As and collaborative partnerships.

#### Northgate Public Services Limited



NPS develops software and services for the public sector, mainly in the U.K., and employs approximately 1,400 software engineers throughout the U.K. and India. NPS works closely with the British police and government organizations to deploy a common business platform across a broad client base that includes local police forces, tax collection offices, social security offices and housing authorities.

#### KMD Holding ApS



KMD mainly provides software and IT services in Denmark through business models that generate profit continuously on a recurring basis, such as software as a service (SaaS) offerings. Specifically, KMD has a strong customer base among central and local governments and has a wide variety of software for supporting the digitization of Denmark, which was the top ranking country in the "UN E-Government Survey 2018," announced by the United Nations Department of Economic and Social Affairs. In addition, KMD has a successful track record of executing strategic M&A, which has broadened its service offering in a number of key verticals.

#### Town-Hall Meeting at KMD

In February 2019, NEC Corporation Executive Vice President Yamashina conducted a town-hall meeting with the employees of KMD.

Over 1,000 people attended the meeting, offering various opinions and questions about matters such as NEC's technologies and business direction, differences in culture between European and Asian companies, and communication for learning NEC's technologies.



Town-hall meeting at KMD Head Office

**Using Synergies** between Different **Cultures to Create Business Capabilities** 

> Masakazu Yamashina Executive Vice President



NEC and KMD are from different countries with different corporate cultures. Through this dialogue, I had a strong sense of the extremely positive attitude and high level of expectation among KMD employees about becoming a member of the NEC Group. Denmark is a global leader in the application of digital government, and KMD has supported the Danish government's digitalization. We will use the knowledge that we acquire from KMD to promote the digital government business in Japan and other regions.

#### Dialogue Session: Social Value Created by NEC Safer Cities

In April 2019, we asked a group of external experts in the fields of sustainable management, investment, and human rights to share their opinions on the theme of what social value is created by NEC Safer Cities and how that value can be measured. The participants in the dialogue included Executive Vice President Yamashina as a representative for the business divisions, along with the CMO and the general manager of the Digital Trust Business Strategy Division, to present examples of NEC Safer Cities businesses and explain the NEC Group AI and Human Rights Principles, which were announced in 2019. The experts commented that other cultures incorporated through acquisitions help to foster understanding of diversity and social tolerance, which will become strengths for NEC. They also noted that the social value created by NEC would be of an even higher level if it incorporated the human rights concepts of keeping people safer while ensuring humaneness and livability. In addition, they said that while it was best to quantify non-financial indicators where possible, the first priority should be to present a story explaining what the Company will invest in over the medium and long term, what assets will be invested, and how they will be allocated. Using the AI and human rights principles as a starting point, we will leverage consideration for diversity and high social tolerance as strengths to expand the social value provided by NEC Safer Cities.



Photograph from left: Peter David Pedersen,

Co-Founder, Next Leaders' Initiative for Sustainability (NELIS)

#### Hirovuki Horii

Executive Officer, Chief Stewardship Officer Sumitomo Mitsui Trust Asset Management Co., Ltd.

#### Asako Nagai

BSR™ (Business for Social Responsibility)

Further details can be found in Sustainability Report 2019 "Social Value Created by NEC Safer Cities."

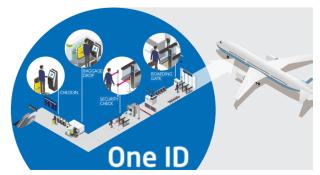
#### **Example: Improving Safety and Convenience at Airports Using Biometrics**

While the number of travelers is increasing rapidly around the world, the boarding procedure at airports is expected to become even more complex and time-consuming. NEC will use biometrics such as facial recognition to reduce burdensome procedures such as presenting a passport at multiple points, thereby enabling smooth boarding and arrival procedures. Furthermore, by increasing the identification accuracy in each procedure, the systems are expected to enable even better prevention of terrorist attacks and so forth. In addition, as labor shortages become a bigger challenge, automation of procedures will help to reduce labor needs, enabling operations to continue with fewer.

In Japan, Narita International Airport Corporation has decided to adopt NEC's facial recognition system for its new One ID boarding procedure. The system will begin rolling out from spring 2020. Internationally, NEC's systems have been introduced at a number of airports, helping to make them safe and comfortable to use.

In the future, we will look to expand the applications of biometrics beyond airports to enable provision of comfortable, smooth services in various facilities and services in towns, such as shopping payment and duty free processing, admission into sightseeing facilities, and swift, accurate healthcare services.

We will contribute to the creation of new experiences and value by connecting multiple airports with one another, and expanding into additional off-airport areas.



Computer generated image showing smooth boarding procedures using "One ID" at Narita Airport

# Initiatives to Ensure Respect for Human Rights Such as Privacy Policies and Measures Aligned with Societal Expectations

Amid the rapid spread of smartphones and other mobile devices driven by advances in ICT, public interest in respect for human rights, personal information protection, and privacy considerations is also growing. Failure to consider these issues would be a serious risk for NEC as a provider of safe, secure, efficient, and equal products and services. On the other hand, by considering these issues we can provide highly reliable services and solutions to society, including our customers.

NEC therefore positions these personal information protection initiatives and "Privacy policies and measures aligned with societal expectations" as part of its "materiality," a selection of priority management themes from an ESG perspective, and places the highest priority on respect for human rights in its business operations.

## Promoting Business Operations Placing the Highest Priority on Consideration for Privacy and Respect for Human Rights

While social implementation of AI and utilization of biometrics and other data ("AI utilization") enriches our lives, it may also lead to human rights issues such as the invasion of privacy and discrimination, depending on how it is utilized. In addition to responding to the General Data Protection Regulation (GDPR) that came into force in the EU in May 2018, NEC also seeks to maximize social value as well as to minimize the negative impact on society, by developing and providing products and services that consider privacy issues, which can be perceived differently depending on country, region or culture, and human rights issues, such as discrimination problems that may be aggravated by the use of AI.

In promoting business operations related to Al utilization, in fiscal 2019 we established the Digital Trust Business Strategy Division as an organization to create and promote strategies based on respect for human rights, and in April 2019 we formulated the NEC Group Al and Human Rights Principles ("the Principles"). The

Principles will guide the NEC Group's corporate officers and employees in recognizing respect for human rights as the highest priority in each stage of our business operations in relation to Al utilization and enable them to take action accordingly.



The Digital Trust Business Strategy Division played a leading role in formulating the Principles, developing them in collaboration with its internal business divisions, including the Technology, Sustainability, Risk Management, and Marketing divisions, as well as external stakeholders, such as industry experts and non-profit organizations.

#### **Internal Awareness Raising and External Cooperation and Collaboration**

In business operations related to AI utilization, to raise awareness and understanding about consideration for privacy and respect for human rights, we undertook proactive initiatives to raise internal awareness and to promote external coordination and collaboration.

To raise awareness internally, we conducted an online education program, and invited external experts (specialists such as university professors and lawyers) to give lectures on themes of Al and data utilization, privacy, and human rights. We also held dialogues through panel discussions and question and answer sessions. In external cooperation and collaboration, we held dialogues on the

themes of AI utilization, privacy, and human rights with external experts (specialists such as university professors, lawyers, and so forth) including a discussion on the theme of social value created by NEC Safer Cities (p. 18).

In addition, in our individual proposal activities and promotion activities, the Digital Trust Business Strategy Division played a leading role in providing individual advice and support to each business division to ensure that their activities are highly acceptable to society. Thus, the entire NEC Group works together to promote its business operations while placing the highest priority on consideration for privacy and respect for human rights.

#### Dealing with Issues throughout the Value Chain

In 2015, NEC formulated the NEC Group Human Rights Policy to guide its initiatives on issues related to consideration of privacy and respect for human rights. Under this policy, we will promote initiatives on respecting human rights across the entire value chain from procurement to sales through dialogue and consultation with stakeholders and by implementing human rights due diligence.

In fiscal 2019, a task force comprised of the Legal Division, Procurement Division, Human Resources Division, and

Sustainability Promotion Division formulated a companywide framework for implementing human rights due diligence. We comply with the UN's Guiding Principles on Business and Human Rights and have started work on evaluating the human rights impact of our main businesses, and those of our consolidated subsidiaries.

Looking ahead, we will identify key human rights issues based on the results of the human rights impact evaluation and examine schemes for addressing these issues, among other measures, as we continue to implement human rights due diligence.

#### **Initiatives to Prevent Modern Slavery**

As part of its initiatives to prevent modern slavery, NEC has published a statement on measures to prevent modern slavery based on the UK Modern Slavery Act.

Section 54 of the Act requires UK corporations as well as foreign commercial organizations that meet certain criteria to publish a statement on measures to prevent modern slavery within the organization and across its supply chain. With the approval of the Board of Directors, NEC Corporation published a statement on behalf of the NEC Group in fiscal 2019.

Our main initiatives in fiscal 2019 are as follows.

#### Initiatives within the NEC Group

■ Lectures were held by external experts for executives and global business management, and online training was conducted for all corporate officers and employees. Into these lectures, we incorporated the background and objectives of the UK Modern Slavery Act and NEC Corporation's response, and took steps to deepen understanding of the act within the Company.

#### Initiatives across the NEC Group's Supply Chain

■ At CSR/Information Security Measures briefings for suppliers, we explained the objectives and content of the UK Modern Slavery Act, as well as revisions made to the NEC Group Procurement Policy and Supply-Chain CSR Guidelines based on the act and the Company's response, and we requested prevention of modern slavery.



CSR/Information security measures briefing

■ With cooperation from around 200 major suppliers, we conducted a human rights survey to confirm the status of initiatives on respecting human rights in relation to labor, including prevention of forced labor. We incorporated inspection points relating to the presence of forced labor for Supplier Visit Records (SVR), which involve onsite inspection of the status of compliance with sustainable procurement requirements at suppliers.



For further information, please refer to Sustainability Report 2019 "Personal Information Protection and Privacy," "Respect for Human Rights," and "Supply Chain Management."

#### Sustainably and Socially Literate Human Resources

Recognizing that people are the Company's most significant resource, NEC believes "sustainably and socially literate human resources" are important for providing true value to customers and society.

We have positioned this as part of our "materiality," a selection of priority management themes from an ESG perspective, and we are enhancing education programs for understanding social issues and promoting inclusion and diversity aimed at understanding and accepting different values and cultures. In addition, we are taking steps to reform our personnel systems and work styles in order to realize an organization that enables employees to maximize their capabilities and has the capacity to carry out actions to completion.

#### **Programs for Developing Sustainably and Socially Literate Human Resources**

Since fiscal 2017, NEC has conducted the NEC School for Social Value Creation training program led by the president of NEC Corporation with the aim of developing the next generation of leaders.

The fiscal 2019 program for candidate executives had 32 participants globally. They investigated the NEC's reason for existence and its social value creation, and considered its management concepts.

In programs for front line leaders, 94 participants were divided into 20 teams to construct business models that will create social value and to conduct actual front-line business hypothesis testing.

In fiscal 2020, we have established a new program for all employees called the "Sense Program" for human resource development through experience of social issues, which will provide opportunities for a wider band of employees to learn about social issues.

#### Start of the Transformation Initiative "Project RISE"\*

To enable employees to maximize their capabilities and realize an organization with the capacity to carry out actions to completion, in 2018 we started Project RISE as an initiative for radically transforming the Group's management, strategy, and organization, as well as employees' values and conduct.

The Group formulated the "Code of Values" as a standard of conduct required in this era, and set up fair talent evaluation and development systems focused not only on performance, but also on values. In addition, the president conducted face-to-face dialogues with over 10,000 employees at the Group's main locations globally, at which he explained the importance of transformation as well as listening to employees explain issues they had recognized as well as their ideas for transformation.

Furthermore, we are taking proactive measures to realize smart work. These include identifying work that can be reduced at the frontline level, undertaking half-yearly activities in each organization to thoroughly eliminate waste in order to make operations more efficient, and promoting innovative work styles aimed at realizing growth of the Company and the growth and happiness of employees. In addition, once every three months, we collect surveys on employees' actual perceptions of transformation to promote transformation in a way that reflects their feedback. We will continue



The president engaged in dialogue with employees



Code of Values

to listen to feedback from various stakeholders, including employees and customers, as we accelerate our transformation going forward.

#### **Promoting Inclusion and Diversity**

The NEC Group is promoting inclusion and diversity. This means we will work to build up each person's capabilities and experience value, not only through business activities, but also through our Company systems and training programs, aiming to create a culture in which people can help one another to grow, with a view to facilitating business growth.

As part of this, even before the 1985 Equal Employment Opportunity Act came into effect, NEC Corporation was already keen to hire and promote people regardless of their gender, and the proportion of female new employees was around 30% in FY2019.

Young Employees Active on the Global Stage

### "I'd like to spread NEC's technology around the world and contribute to solving social issues"



NEC Global Relations Division Akari Saek

In my first year after joining the Company, I was responsible for supporting the introduction of an electronic money platform in Africa and a facial recognition system at the main airport of Bangladesh. After that, I began my current role as a coordinator between international organizations such as the United Nations Industrial Development Organization (UNIDO) and the International Organization for Migration (IOM), the governments supported by them, and NEC. My work is the embodiment of SDG No. 17, "Revitalize the global partnership for sustainable development."

Projects of international institutions involve a large number of stakeholders and require the capability to seize the initiative to drive projects forward. My division has a culture where each individual can take on challenges in various kinds of work, regardless of age, gender, or nationality. Recently, I was given the major responsibility for the presentation of collaboration between NEC and international institutions at the Japan Week held at UNIDO Headquarters.

I hope to continue working with various partners to promote NEC's technology and solutions around the world, and to contribute to solving social issues.

#### **Inclusion and Diversity Experience**

#### **NEC Boccia Club**

Boccia is an official sport in the Paralympic Games, designed for people with severe cerebral palsy or similar functional disabilities affecting their limbs. It can be enjoyed by people of all ages and genders, regardless of disabilities.

The NEC Boccia Club was established as an in-house club in 2017 to deepen understanding of Paralympic sports and inclusion and diversity.



Taking second place in the Boccia Tokyo Cup

In fiscal 2019, the club entered the Boccia Tokyo Cup, in which Japan's national Boccia teams, Hinotama Japan also participated. Japanese representative Team A and Team B participated, and our NEC Boccia Club team defeated Team B to place second. Looking forward, we will continue to promote inclusion and diversity through the NEC Boccia Club's activities, aiming to create a culture that enables respect for individuality and mutual growth.



For further information, please refer to Sustainability Report 2019 "Human Resources Development and Training," "Inclusion and Diversity," and "Creating a Diverse Work Style Environment."

<sup>\*</sup> Project RISE is a general name for the NEC Group's internal transformation project.

#### **Environmental Action with a Particular Focus on Climate Change**

The diverse impacts of climate change include an increase in natural disasters caused by abnormal weather, depletion of water resources, and effects on the demand and supply balance of food. NEC believes it can use ICT to alleviate the impacts of these environmental issues and contribute to the realization of a safe, secure society with a robust ability to withstand risks.

At NEC, we have positioned "Environmental action with a particular focus on climate change" as part of its "materiality," a selection of priority management themes from an ESG perspective. We are engaged in efforts to reduce CO<sub>2</sub> emissions from our business activities by implementing thorough energy-saving measures and switching to renewable energy, while also developing and supplying solutions that contribute to climate change mitigation and adaptation.

#### Aiming to Reduce the Company's CO<sub>2</sub> Emissions to "Effectively Zero" by 2050

In July 2017, NEC formulated "quidelines on climate change measures from a long-term perspective up to 2050," aiming to strengthen its sustainable management base and promote creation of a sustainable society together with customers.

Under theses guidelines, NEC aims to reduce CO<sub>2</sub> emissions (Scope 1 and Scope 2) from its business operations to effectively zero by 2050.

#### Guidelines on Climate Change Measures from a Long-Term Perspective up to 2050



#### NEC's Greenhouse Gas Emission Reduction Targets Approved by the Science Based Targets Initiative

NEC's greenhouse gas emissions targets were approved by the Science Based Targets (SBT) initiative as being "science-based" for achieving the 2°C target of the Paris Agreement. Toward achieving these targets, NEC set a new target of increasing its use of renewable energy in fiscal 2019 by 75 times compared to fiscal 2018, and started initiatives toward this goal

#### The NEC Group's SBTs

Scope 1 + 2*1	Reduce greenhouse gas emissions by 33% compared to FY2018 by FY2031
Scope3*2	Reduce greenhouse gas emissions from products sold by 34% compared to FY2018 by FY2031



#### Milestones for the 2050 Guidelines

NEC has established the NEC Group Environmental Management Action Plan 2020/2030 as a milestone for realizing its guidelines for 2050. As part of this, we are aiming to contribute to reducing CO<sub>2</sub> emissions from our customers and society through the provision of IT solutions as a measure for climate change

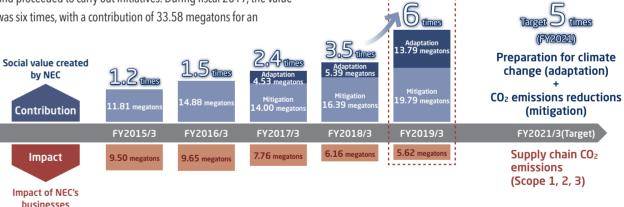
mitigation, targeting a reduction of 23 megatons by fiscal 2021, expanding to 50 megatons by fiscal 2031. Moreover, we will reduce CO<sub>2</sub> emissions from our own business operations by improving efficiency and shifting to renewable energy.

#### NEC Group Environmental Management Action Plan 2020/2030 Fiscal 2021 Fiscal 2030 1 Reduction in overall CO<sub>2</sub> emissions of customers and society through 23 megatons 50 megatons provision of IT solutions 2. Improvement in product energy efficiency 30% improvement 80% improvement (compared to products in fiscal 2014) 3. Preparing for the impacts of climate change through the provision of Strengthen competitive power of solutions for social issues and expand contribution through business activities Solutions for Society 4. Improvement in CO₂ emission intensity through efficiency of energy use 30% improvement 18% improvement (compared to fiscal 2013) 5. Conversion to renewable energy (compared to fiscal 2012) 10 times

#### **Climate Change Mitigation Target for 2020**

In line with this action plan, in 2014 we set the target of "achieving a five-fold increase in value created in terms of climate change countermeasures through the provision of NEC products and services compared to the CO<sub>2</sub> emissions from NEC's supply chain," and proceeded to carry out initiatives. During fiscal 2019, the value was six times, with a contribution of 33.58 megatons for an

environmental load of 5.62 megatons, representing a significant improvement from 3.5 times in fiscal 2018. This reflects a stronger approach to our suppliers and an increase in provision of disaster measure-related solutions by domestic subsidiaries.



#### **Agreement with TCFD Recommendations**

Climate change will have a major impact on management in terms of both risks and opportunities, and there are increasing calls for companies to disclose information related to their response to climate change. In light of this situation, in July 2018 NEC expressed support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). In line with the TCFD recommendations, we will evaluate transition risks, such as changes in policies and

markets, as well as physical risks due to disasters, and so forth, and discuss countermeasures for them. In addition, we will hold ongoing discussions with business divisions aimed at expanding the value they provide by treating climate change as an opportunity. Finally, we will reflect the results of these discussions in our business plans and enhance our disclosure of information to stakeholders.

<sup>\*1</sup> Total of Scope 1 (direct greenhouse gas emissions from sources that are owned or controlled by the Company) and Scope 2 (indirect greenhouse gas emissions from consumption of purchased electricity, heat or steam)

<sup>\*2</sup> Scope 3 (indirect emissions for all companies not included in Scope 1 + Scope 2 (the supply chain))

## Dialogue with Stakeholders for Improving Management from an Environmental Perspective

NEC Corporation has been holding dialogues with stakeholders since 2016, aiming to promote understanding of its environmental initiatives and to ascertain the opinions of external experts and the ESG information that investors require with a view to improving its initiatives and information disclosure going forward.

## Dialogue with External Experts Regarding Environmental Action with a Particular Focus on Climate Change

In March 2019, NEC conducted a dialogue with experts to find out what is needed to make environmental action with a particular focus on climate change into one of the Company's sustainable growth enablers. The dialogue included the Senior Executive Vice President and CFO of NEC Corporation, the Senior Vice President and CSCO, who is responsible for promoting environmental management, and the person responsible for promoting global business. They talked with the external experts about sustainable management, finance, and responsible investment. The dialogue clarified issues such as treating environmental issues as management priorities and a recommendation to share best practices for contributing to environmental issues internally and disseminating information outside the company.





Photograph from left:

#### Toshiyuki Imamura

Managing Director, Responsible Investment Department Nomura Asset Management Co., Ltd.

#### Mariko Kawaguchi

Chief Researcher Daiwa Institute of Research

#### Peter David Pedersen,

Co-Founder, Next Leaders' Initiative for Sustainability (NELIS)

#### Dialogue with CDP\* Executive Chairman Paul Dickson

In June 2019, we conducted a dialogue between Executive Chairman Paul Dickson, who is one of CDP founders and NEC Corporation's Executive Vice President (CHRO) and Senior Vice President (CSCO). With regard to NEC Corporation's activities to reduce CO<sub>2</sub> emissions throughout its supply chains and the actual examples of climate change countermeasures through its business, Mr. Dickson commented that NEC would have an increasing number of opportunities to contribute to climate change issue by using its IT solutions and NEC could play a role in leading the activities globally going forward.



Photograph front left:

Paul Dickson
CDP Executive Chairman

#### **Examples of Providing Environmental Value through Business**

#### Forest Fire Monitoring and Management System in Indonesia

In Indonesia, forest fires caused by burning off fields have led to atmospheric CO<sub>2</sub> emissions and loss of forests, as well as harming the health of the public due to haze, including in surrounding countries. They also cause financial losses due to delayed flights and shipping. Reducing such damage and preventing forest fires has become an urgent priority.

NEC has been collaborating with Sumitomo Forestry Co., Ltd. since November 2017 on a private-sector technology promotion project of the Japan International Cooperation Agency (JICA). We are working with the University of Palangka Raya and the Central Kalimantan Regional Disaster Management Agency to promote the project as the "Collaboration Program with the Private Sector for Disseminating Japanese Technologies by JICA." The project supports a total range of functions from the detection of fire outbreaks and the identification of their location to the dispatch and management of firefighting teams. In fiscal 2019, the project system was evaluated using a mock fire to verify its effectiveness. Local firefighters confirmed that they could use the system to detect the fire outbreak, dispatch firefighting teams, and grasp the progress of firefighting.

Based on the results of the implementation evaluation, we will improve the system and its operation, with a view to full-scale introduction and expansion in fiscal 2020.



Fire detection screen image using infrared camera



A group photograph with local participants in the

#### Optimizing Supply and Demand to Resolve Food Loss and Waste

By 2050, the global population is expected to increase by 30% to over 9 billion, with demand for food set to increase by 70%. Meanwhile, 1/3 of global food production, some 1.3 billion tons, is currently disposed of without being eaten. Japan wastes 6.43 million tons of food annually, of which over half is due to business-related losses such as overproduction or unsold items in the distribution process (manufacturing, wholesale and logistics, and retail.)\*

\* Ministry of Agriculture, Forestry and Fisheries "Food Loss Amount (Estimate for Fiscal 2016)" (April 12, 2019)



NEC provides the "supply and demand optimization platform," a system for optimizing the supply chain by using ICT, especially AI, to reduce food loss and waste. Conventional demand prediction was conducted separately by the food manufacturing and retail businesses; however, the supply and demand optimization platform not only optimizes individual processes, but also collects data over the entire value chain and uses AI to increase the accuracy of demand prediction, enabling production, inventory and orders to be optimized across the value chain.

Collaborating with the Japan Weather Association from February 2018 and the INTAGE Inc. from June 2018, NEC has started developing a business for optimizing supply and demand across the entire value chain of manufacturing, wholesale and logistics, and sales in diverse industries and sectors.

Looking ahead, we will make efficiency gains across the entire value chain by using the supply and demand optimization platform. In doing so, we will contribute to SDG 12 target 12.3\* and help to reduce consumption of energy and resources.

<sup>\*</sup> Target 12.3: "By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses."



Further details can be found in Sustainability Report 2019 "Environmental Management Initiatives."

<sup>\*</sup> CDP: An international NGO that studies, evaluates, and discloses environmental initiatives of companies and municipalities

#### **Innovation Management**

Technologies in demand change as society changes. However, NEC seeks to provide technologies that create social value by conducting management with an appropriate grasp of the changing times. Under the direction of our Chief Technology Officer (CTO), we have formulated a technology strategy for the next stage of growth in social value innovation. We continuously allocate approximately 4% of our revenue to R&D, concentrating our investment in proprietary No.1/Only 1 core technologies.

Moreover, we regard intellectual property as an essential business resource supporting the NEC Group's competitiveness and stability, as well as for contributing to co-creation with our customers. We constantly strive to strengthen and protect our rights.

In addition, we will actively promote commercialization of technologies across our conventional business framework and global open innovation, working to accelerate monetization of competitive technologies.

#### **Concentrated Investment in Strong Technology Areas**

We are concentrating investment in two areas where we have many unique and competitive assets: data science, and ICT platforms.

In the area of data science, we are developing Al technologies that contribute to the creation of new value by carrying out visualization, analysis, and control/guidance of real-world data. In the area of ICT platforms, we are developing computing and network technologies that can adapt dynamically and in real-time to changes in the real world, and security technologies that allow social systems to operate securely and stably.

As part of these efforts, we are strengthening our "NEC the WISE"

line up of advanced IT technologies and our comprehensive brand for biometric products and services, "Bio-IDiom," which covers six biometrics technologies for face, iris, fingerprint and palmprint, finger vein, voice, and ear acoustic.

In April 2019, we established a new brand, "NEC Smart Connectivity," that leverages NEC's strengths in network technologies. In addition to technologies for visualization, analysis and control/guidance of the real world, networks that connect a large volume of data will also play a significant role in providing value to customers going forward.



# Enhancing Diversity and Developing Human Resources to Strengthen Core Technologies

We are working toward enhancing diversity and concentrating our human resources in our key business areas in order to strengthen the core technologies that contribute to solutions for society, as well as to sustain our technological capabilities.

Specifically, we have been expanding our human resources under a policy of increasing the number of data science researchers at the Central Research Laboratories to double the number in fiscal 2016. Our overseas research laboratories are

actively recruiting top local talent while our research labs in Japan are stepping up recruitment of doctoral degree holders. In fiscal 2020, we are continuing with our policy of hiring applicants with PhDs at around 50% of new hires, and will be recruiting more graduates from overseas universities such as the Indian Institute of Technology and other notable institutions. As a result of these policies, 30–40% of our new recruits are now classified as "global human resources."

#### **Major Research Achievements**

NEC's Strengths	Result	Client/Application
Logical thinking Al	Developed Al technology to support stable operation of social infrastructure	Social infrastructure such as plants
Time-series data model free analysis technology	Developed status recognition technology through Al-driven time-series data analysis, aiming for application in the operational monitoring of social infrastructure	Social infrastructure such as plants
Two-dimensional small displacement analysis technology	Developed two-dimensional small displacement measurement technology that enables satellite radar to inspect aging roads, buildings and infrastructure in urban areas	Infrastructure such as roads and buildings
Tamper detection technology	Developed 4-kilobyte tamper detection technology applicable to IoT devices in plants	loT devices
Automatic cyberattack risk identification technology	Developed technology for automatically identifying cyberattack risk of systems using simulations	Plants
High-speed camera object recognition technology	Developed high-speed-camera object recognition technology contributing to efficient inspection operations on production lines	Production lines
Rare event discovery technology	Developed efficient technology for discovery of rare critical events by merging Al and simulation technologies	Product quality and safety, infrastructure operations, etc.
Stress detection technology	Development of technology that enables early detection of increase in chronic stress of employees from physiological information	Employee health management, etc.
Person reidentification technology	Developed technology that is capable of matching images of people whose figures are partially hidden from cameras, even if the image is taken from behind or from the side	Public safety and security
Local expertise in India and big data technology	Started development of solutions for emerging countries and R&D in India	Transport, logistics, public safety, digital government, cashless payment

#### **Intellectual Property Strategy**

NEC strives to strengthen and protect not only its patents and knowhow but also the designs and trademarks that support its global brand.

To create and develop social value, we are not only building IP-based barriers to entry and securing competitive advantage, but

also building and using our IP portfolio to strengthen and protect collaborations with customers and partners.

NEC owns some 49,000 patents worldwide (including approximately 22,000 Japanese patents) as of March 2019.

#### **Accelerating New Business Development**

In July 2018, NEC announced the establishment of a new company, NEC X, Inc., in Silicon Valley, U.S.A. NEC X aims to create an ecosystem centered on the advanced technologies of NEC's talent and research laboratories and to promote co-creation of

solutions involving Silicon Valley entrepreneurs and venture capital firms. As part of its mission, it has started the NEC Accelerator Program, which will start up new businesses in as little as one year, aiming to accelerate new business development.



For further information, please refer to Sustainability Report 2019 "Innovation Management.

NEC Corporation Integrated Report 2019

#### Dialogue and Co-Creation with Our Stakeholders

Values are constantly changing for our customers and society. To supply products and services that deliver real value, NEC is incorporating processes for dialogue and co-creation with stakeholders into its corporate activities at all times. Through dialogue with stakeholders, we will develop insights into the issues customers and society face and their opinions regarding NEC's activities, while developing partners with whom to engage in the co-creation of value. By connecting these activities to co-creation, we aim to realize the world described by NEC's aspiration of "Orchestrating a brighter world." The following are examples of our initiatives in fiscal 2019.

#### **Contributing to Solutions for Developing Countries through Co-Creation with International Organizations**

In March 2019, Yasuhiro Imanaka of NEC Corporation's Global Relations Division represented private-sector companies as a panelist at "FAO's Contribution to Achieving SDGs and Japan's Role," a public event held by the Ministry of Foreign Affairs and the Food and Agriculture Organization (FAO).

NEC will continue to form partnerships with international organizations such as the United Nations and engage in co-creation through business development and other initiatives, with a view to contributing to solutions for a range of issues in developing countries.





Introducing initiatives in Mozambique

## Orchestrating a brighter world

Social values achieved by co-creating with customers







and top management.





#### Sharing Global Experience with Major Players in the Era of SDGs

NEC seeks to provide the four values of safety, security, efficiency, and equality to society through its business activities. An opportunity to communicate these ideas to the next generation of young people who will strive to achieve the SDGs arose in November 2018. The Executive Specialist of the Global Relations Division at the time, Masahiro Yoshikawa, was invited to give a special lesson to junior high school students.

Further details can be found in Sustainability Report 2019
"Dialogue with Our Diverse Stakeholders - Case Examples."



Sharing experience of doing business

#### Using Insight from Dialogue with Shareholders and Investors to Improve Management and Corporate Value

NEC Corporation actively engages in investor relations (IR) activities, including meetings with shareholders, quarterly financial results briefings and business briefings conducted mainly by its CEO, CFO and Investor Relations (IR) Office, a department within the Corporate Communication Division. Meanwhile, IR staff proactively relay shareholder and investor feedback to management, and periodically report to the Board of Directors. In fiscal 2019, we held a dialogue on Materiality to exchange opinions on determining our priority management themes from an ESG perspective and our vision, which were decided in July 2018.



Dialogue on Materiality

Integrated Report 2019 page 18 "Dialogue Session" in "Feature: NEC Safer Cities." and page 25 "Dialogue with Stakeholders for Improving Management from an Environmental Perspective" Sustainability Report 2019 "Dialogue with Experts on Materiality"

#### Using Insights from "NEC Social Entrepreneurship School" Collaboration Project with NPO to Develop Employees

In 2002, NEC and the NPO ETIC, collaborated to start the "NEC Social Entrepreneurship School" as a project to nurture young entrepreneurs. The project has been involved in developing 62 social entrepreneurship groups tackling a variety of social issues, including the SDGs. Many of the graduates from the program have established business models and are beginning to accelerate social transformation.

Transforming into a Highly Transparent and Motivated Organization

through Direct Dialogue between Top Management and Employees

page 21, "Start of the Transformation Initiative 'Project Rise'," in "Sustainably and Socially Literate Human Resources."

NEC provides opportunities for direct dialogue between employees, who are key stakeholders,

For details, refer to Integrated Report 2019
page 17, "Town Hall Meeting at KMD," in "Feature: NEC Safer Cities" and

In fiscal 2019, NEC supported two organizations: Nihon Shougai Shikkan Kazoku Shien Kyoukai (Care Land), which operates an online community for people with illnesses and disabilities, and their families, and Helte Co., ltd which is working

Sixty-two organizations have graduated from the NEC Social Entrepreneurship School since its establishment in 2002

to accelerate businesses on the theme of links between Japanese seniors and Southeast Asian students. Currently, NEC collaborates with alumni from NEC Social Entrepreneurship School in activities such as joint research and testing, and solutions development.

Furthermore, NEC is using the insight and expertise gained from the NEC Social Entrepreneurship School in the Group's next-generation leader development program, NEC School for Social Value Creation, as well as work-study programs, and pro bono projects with social entrepreneurs.

#### **Contributing to Regional Revitalization through Pro Bono Initiatives Using Employees' Professional Skills**

In 2010, NEC became the first company in Japan to conduct pro bono activities, using the employees' professional skills to solve social issues in collaboration with the NPO Service Grant. We have continued these activities since then as part of the NEC Group's corporate citizenship initiative, "NEC Make-a-Difference Drive."

In fiscal 2019, NEC conducted projects in collaboration with four local governments. Among these, in a community creation project undertaken with Kakegawa City, Shizuoka Prefecture, we worked on strategic measures to expand the use of traditional local textiles called Kappu in order to preserve local traditional industries and pass them on to the next generation.



A workshop run at the Kakegawa City Hall

NEC also has been engaged in Tohoku reconstruction support activities through the NEC "TOMONI" Project since 2011. Through this project, employees conduct volunteer activities in the areas affected by the Great East Japan Earthquake. In 2015, NEC concluded a reconstruction cooperation agreement with the town of Minamisanriku and is conducting various support activities such as a monthly "Fukkou (reconstruction support market)" to assist the recovery.

#### Message from the CFO



Takayuki Morita Senior Executive Vice President, CFO (Chief Financial Officer) and Member of the Board (Representative Director)

#### We will maintain a sound financial structure, improve earnings capacity and increase corporate value through appropriate capital allocation

In the fiscal year ended March 31, 2019, the first year under the Mid-term Management Plan 2020, the Company recorded onetime expenses totaling 50.0 billion yen, including 35.0 billion yen for business structure improvements to improve profitability and 15.0 billion yen for optimizing assets, such as impairment in the Global Business.

We also expanded NEC Safer Cities by acquiring KMD Holding ApS for 136.0 billion yen with a view to achieving growth. The acquisition is in line with our existing strategy, as we can expect this acquisition to contribute to earnings, and it is in a field where NEC can leverage its strengths. With this acquisition and that of Northgate Public Services Limited in the fiscal year ended March

31, 2018, we have executed the M&A investment target of 200.0 billion yen set out in the previous mid-term management plan of the fiscal year ended March 31, 2017. These two M&As have generated expenses for amortization of intangible fixed assets in terms of accounting, however, we can expect them to contribute to cash flow generation. Starting from the fiscal year ended March 31, 2019, we have decided to disclose adjusted operating profit (loss)\*1 and adjusted net profit (loss)\*2 to clearly show the underlying profitability of the Company including the M&As.

For future M&As, we will maintain our existing policy of using free cash flow to fund the acquisitions and continue to consider them as long as they do not impact the Company's financial base.

Adi	ustments	to	Operating	Profit
, , , ,	astilicits		Operating	

(Billions of yen)	FY2018/3 Results	FY2019/3 Results	FY2020/3 Forecasts
Operating profit	63.9	58.5	110.0
Adjusted items	8.7	11.4	15.0
Amortization of intangible assets through acquisition	7.5	9.7	
M&A related expenses	1.2	1.8	
Adjusted operating profit	72.5	69.9	125.0
Net profit attributable to owners of the parent	45.9	40.2	65.0
Adjusted items	4.4	6.7	9.0
Adjusted items			

#### Cash Generation for Investment in Fields Required for Growth

Next, with regard to enhancing capital efficiency, over the past few years our improvement in CCC\*3 has leveled off. Improving this situation is an important priority for us. In February 2019, we established the CCC Improvement Office specifically to tackle this issue. It will be challenging, but we will generate cash by

streamlining our working capital and allocating resources to investments in fields required for our growth, including M&As, R&D, and capital expenditures. Through these efforts we will drive further improvement in our corporate value.

#### Operating Cash Flows, Investment Cash Flows, Free Cash Flows



#### **Approach to Capital Allocation**

We are planning to pay an annual dividend of 60 yen per share in the fiscal year ending March 31, 2020, the same level as the fiscal year ended March 31, 2018. In addition, to ensure the expected profits for shareholders, we have decided to recommence payment of an interim dividend, ending a 12-year hiatus.

NEC Corporation considers it important to increase its corporate value over the long term and to achieve capital gain. As CFO, in allocating capital I will seek a balance between growth investments, a sound financial structure, and shareholder returns. I will strive to increase our profitability over the long term while increasing corporate value.

<sup>\*1 &</sup>quot;Adjusted Operating profit (loss)" = "IFRS Operating profit (loss)"-"Adjusted items" Adjustment items

Ámortization of intangible assets recognized as a result of M&A

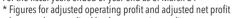
<sup>•</sup> Expenses for acquisition of companies (financial advisory fees, etc.)

<sup>\*2</sup> Adjustments related to operating profit, taxes and non-controlling interests are excluded from IFRS net profit.

<sup>\*3</sup> Cash Conversion Cycle: Days inventory outstanding + Days sales outstanding - Days payable outstanding = Number of days from payment for raw materials until receive of payment for products and services

#### **Performance Highlights**

NEC Corporation and Consolidated Subsidiaries For the fiscal years ended or year-end as of March 31





5 p 2 m 3 m 5 p 2 m 3 m										
										(Millions of yen)
	2010	2011	2012	2013 IGAAP	2014	2015	2016	2017	2018 RS	2019
Revenue	¥3,583,148	¥3,115,424	¥3,036,836	¥3,071,609	¥3,043,114	¥2,935,517	¥2,824,833	¥2,665,035	¥2,844,447	¥2,913,446
International revenue	712,886	479,349	481,492	483,118	569,172	586,844	603,135	570,967	740,179	689,101
International revenue ratio (%)	19.9	15.4	15.9	15.7	18.7	20.0	21.4	21.4	26.0	23.7
Operating profit	50,905	57,820	73,742	114,647	106,193	128,084	91,418	41,838	63,850	58,465
Adjusted operating profit	-	_	_	_	-	-	_	_	72,530*	69,927
Net profit (loss) attributable to owners of the parent	11,428	(12,518)	(110,267)	30,434	33,742	57,302	75,923	27,310	45,870	40,195
Adjusted net profit	-	-	-	-	-	-	-	-	50,395*	47,026*
Cash flows from operating activities	134,816	33,660	83,857	143,748	94,124	87,917	97,829	92,525	129,981	64,235
Cash flows from investing activities	(41,241)	(146,244)	(49,706)	(101,742)	(38,893)	(47,510)	(32,202)	6,425	(14,231)	(76,675)
Free cash flows	93,575	(112,584)	34,151	42,006	55,231	40,407	65,627	98,950	115,750	(12,440)
R&D expenses	275,970	176,514	161,968	151,676	142,723	134,205	123,602	109,319	108,093	108,100
Capital expenditures (property, plant and equipment)	83,098	52,850	41,980	45,614	98,708	37,425	36,347	31,472	45,391	62,688
Depreciation (property, plant and equipment)	111,167	62,097	53,306	51,167	45,167	48,518	50,493	49,853	63,831	64,405
Per share data (in yen):										
Net profit (loss) attributable to owners of the parent	5.04	(4.82)	(42.44)	11.71	12.99	22.05	29.22	10.51	176.54*	154.75*
Cash dividends	4.00	0.00	0.00	4.00	4.00	4.00	6.00	6.00	60.00*	40.00*
Total assets	2,937,644	2,628,931	2,557,570	2,580,966	2,505,329	2,620,652	2,528,904	2,683,996	2,821,351	2,950,639
Owner's equity	790,904	757,054	656,956	710,666	695,949	823,650	769,827	854,264	880,833	859,583
Return on equity (%)	1.6	_	_	4.5	4.8	7.5	9.5	3.4	5.3	4.6
Owner's equity ratio (%)	26.9	28.8	25.7	27.5	27.8	31.4	30.4	31.8	31.2	29.1
Interest-bearing debt	729,548	675,798	692,734	603,451	575,151	520,778	479,523	466,946	520,743	552,519
Debt-equity ratio (times)	0.92	0.89	1.05	0.85	0.83	0.63	0.62	0.55	0.59	0.64
Number of consolidated subsidiaries	310	283	265	270	258	232	217	238	303	327
Number of employees	142,358	115,840	109,102	102,375	100,914	98,882	98,726	107,729	109,390	110,595
CO <sub>2</sub> emissions reduction by providing IT solutions (thousand tons)	1,900	2,120	2,310	2,980	2,290	2,540	2,620	2,630	4,220	5,300
Improvement in energy efficiency of products (%)	44	53	66	64	75	91	97	17	35	74

#### **Key Management Measures**

- Measures to optimize business portfolio
   Measures to grow business and strengthen financial foundation

#### Fiscal year ended March 31, 2011

1 Made NEC Electronics Corporation, a semiconductor business, currently Renesas Electronics Corporation, into an equity-method affiliate

#### Fiscal year ended March 31, 2012

2 Made the consumer PC business into an equity-method affiliate

#### Fiscal year ended March 31, 2013

 Acquired the business support system business of U.S.-based Convergys Corporation

#### Fiscal year ended March 31, 2014

3 Divested all of NEC's stakes in NEC Mobiling, Ltd., currently MX Mobiling Co., Ltd., a mobile phone sales

#### Fiscal year ended March 31, 2015

4 Divested all of NEC's stakes in NEC BIGLOBE, Ltd., currently BIGLOBE Inc., an internet service provider in March, 2014

#### Fiscal year ended March 31, 2016

■ Transferred administrative staff functions and shared IT assets from NEC to NEC Management Partner, Ltd. (Business Process Optimization Project)

#### Fiscal year ended March 31, 2017

Consolidated Japan Aviation Electronics Industry, Limited

#### Fiscal year ended March 31, 2018

6 Acquired U.K. company Northgate Public Services Limited

#### Fiscal year ended March 31, 2019 (The fiscal year under review)

- Established dotData, Inc. in the U.S.
- Established NEC X, Inc. in the U.S.
- Acquired Danish company KMD Holding ApS
- 8 Sale of shares in electrode business

Notes: 1. Net profit (loss) attributable to owners of the parent per share is calculated based on the weighted-average number of shares outstanding during each period.

- 2. Owner's equity = Equity attributable to owners of the parent 3. The debt-equity ratio is calculated by dividing interest-bearing
- debt by owner's equity.
- 4. Improvement in energy efficiency of products is based on a comparison with the fiscal year ended March 31, 2006.
- \* The amounts reflect a share consolidation (with a ratio of 10 shares to 1 share) that took effect on October 1, 2017.

#### At a Glance

**NEC Corporation and Consolidated Subsidiaries** 

Revenue, adjusted operating profit (loss), and composition of revenue are financial results for the fiscal year ended March 31, 2019 (IFRS).

(Note) Figures for revenue, adjusted operating profit (loss), and composition of revenue for the fiscal year ended March 31. 2019 are restated to conform with the new segments, which have not been audited by the accounting auditors.

#### Revenue

# 2,913.4





#### Adjusted operating profit

# billion ven

#### Adjusted net profit

#### Free cash flows

#### **Public Business**

Revenue

908.0 billion yen

Adjusted operating profit

52.6 billion ven

■ Maintenance and Support

Maior Products and Services

- Systems Integration (Systems Implementation, Consulting)
- Outsourcing/Cloud Services

**Public Solutions** 

System Equipment

### **Enterprise Business**

#### Revenue

Adjusted operating profit

Maior Products and Services

- Systems Integration
- Maintenance and Support
- Outsourcing / Cloud Services

#### **Public Infrastructure**

Examples of Major Customers and Main Solutions Main Solutions

Public:

Firefighting Command, Firefighting Emergency Radio Systems, Disaster Prevention, Traffic Control, Railroad Communication, Local Government

Healthcare:

Electric Medical Record, Regional Healthcare Information Network

Regional Industries: Backbone Service

Major Consolidated Subsidiaries

NEC Nexsolutions, Ltd.

## Examples of Major Customers and

Government:

Social Security and Tax, Fingerprint Identification, Air Traffic Control, Satellite Communications/Earth Observation, Outdoor Communication, School/ Education, Postal Tracking, Infrastructure Surveillance/Energy Management

Media:

TV Program Production/ News Production/Transmission, Digital TV Transmitters

Major Consolidated Subsidiaries

- NEC Network and Sensor Systems, Ltd.
- NEC Space Technologies, Ltd.
- | Japan Aviation Electronics Industry, Limited

- (Systems Implementation, Consulting)

#### Examples of Major Customers and Main Solutions

Manufacturing: Global SCM, Product Lifecycle Management, Production Management,

Sales Management Retail and Services: Retail Systems for Stores and Head Offices,

Logistics Management Finance:

Banking, Business Branch Systems, Insurance and Securities Infrastructure, Insurance and Securities Channel

Major Consolidated Subsidiaries

ABeam Consulting Ltd.

#### **Network Services** Business

#### Revenue

460.3 billion yen

Adjusted operating profit

#### Maior Products and Services

- Network Infrastructure: Core Network, Mobile Phone Base Stations. Optical Transmission Systems, Routers/Switches
- Systems Integration: (Systems Implementation, Consulting)
- Services & Management OSS\*1/BSS\*2, Services/Solutions
- Hardware: Wireless LAN Routers
- Enterprise Network Solutions: IP Telephony Systems, WAN/Wireless Access Equipment. LAN Products

Major Consolidated Subsidiaries

■ NEC Networks & System Integration

\*1 OSS: Operation Support System \*2 BSS : Business Support System

Corporation

## Business

**System Platform** 

#### Revenue

Adjusted operating profit

#### Major Products and Services

- Hardware:
- Servers, Mainframes, Supercomputers, Storage, Business PCs, POS, ATMs, Control Equipment, Wireless LAN Routers
- Software:
- Integrated Operation Management, Application Servers, Database Software

Major Consolidated Subsidiaries

Services: Maintenance Services

■ NEC Platforms, Ltd.

■ NEC Embedded Products, Ltd.

NEC Fielding, Ltd.

## **Global Business**

Adjusted operating profit (loss)

**-22.5** billion yen

#### Maior Products and Services

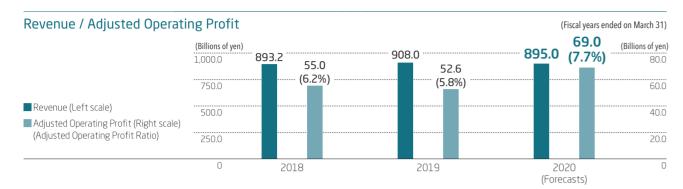
- Safer Cities:
- (such as Public Safety, Digital Government)
- Software Services for Service Providers: (OSS/BSS, SDN\*3 / NFV\*4)
- Network Infrastructure: Submarine Systems (Submarine Cable Systems, Ocean Observation Systems), Wireless Backhaul
- System Devices: Displays, Projectors
- Energy Storage Solutions \*3 SDN: Software-Defined Networking

Major Consolidated Subsidiaries

- NEC Display Solutions, Ltd.
- OCC Corporation
- NEC Energy Solutions, Inc.
- Netcracker Technology Corporation
- Northgate Public Services Limited
- KMD Holding ApS

#### **Review of Operations**

#### **Public Business**



#### Public Business Comprised of Two Areas

Public Business consists of "Public Solutions," which is responsible for business involving regional sales functions, local governments, and medical institutions, and "Public Infrastructure," which manages business involving government organizations and enterprises supporting national and social infrastructure.

Based on the new organization established in April 2017, Public Solutions considers both local needs and required policy seeds. In

this area NEC works together with regional stakeholders, such as local governments, universities, and enterprises, to accelerate the development of new regional businesses, such as smart cities and the utilization of the Social Security and Tax Number System ("My Number"), and healthcare. Based on NEC's many years of achievements gained in supporting government agencies, the Public Infrastructure area further improves the social infrastructure we provide to support safe and comfortable lifestyles for everyone.

#### [STRENGTHS]

- Strong track record gaining high credibility, advanced technologies, and high market share in Japan in delivering systems for governmental organizations, local governments, broadcasters, power companies, as well as in cyber security.
- Ability to propose concepts for customers' future based on "domain knowledge," specifically operational expertise and deep understanding of the data acquired and handled through many years of working with customers.
- Provision of vertically integrated solutions with the "NEC the WISE" lineup of Al technologies, "Bio-IDiom" biometrics, IT and networks including security, and full-layer ICT, including sensing technology.

#### [WEAKNESSES AND COUNTERMEASURES]

- Need for continuous investment to maintain advanced technology and reliability.
- Need for handling complex project management for large-scale projects and the issues inherent in system development using cutting-edge technology to control the impact of additional costs on operating results,.

#### [OPPORTUNITIES]

- Digitalization of government services with the Japanese government's "Digital Government Action Plan", and wider use of the My Number System.
- Safe, secure, efficient administration of the Olympic and Paralympic Games Tokyo 2020 and further investment to prepare for the increasing number of tourists visiting Japan.
- Transmission between generations and renewal of systems in the Social Infrastructure Business (electric power, broadcasting, roads, etc.).
- Expansion in demand for strengthening of systems and monitoring services for cyber security.
- Increased investment toward the utilization of ICT, such as Al and IoT across a variety of domains, such as healthcare and education.

#### [THREATS AND COUNTERMEASURES]

- Declining tax revenues due to the falling population in Japan have created a need for solutions that increase government efficiency and performance.
- Need for a new business structure that can cope with changes in the market environment, such as the trend towards broadcasting via IP and transformation of the viewer rating and advertising models.
- Need for constant improvement of quality and cost competitiveness in response to intensifying competition for orders, increasing the number of projects with difficult requirements in cost and quality.
- Need for a business strategy that anticipates changes in existing business fields due to the entry of new participants.

#### **Public Solutions**

# Digital Healthcare: Contributing to the Transformation of Healthcare and Society Using AI

Kitahara Neurological Institute (KNI) and NEC are engaged in co-creation to solve issues in healthcare and society through a trial using Al. The system predicts restless patient behavior 40 minutes in advance with 71% accuracy, and detects patients at high risk of aspiration pneumonia with 87% accuracy, enabling nursing staff to focus on the identified patients and administer preventive intervention. This is expected to help avoid protracted hospitalization for the patient and reduce the workload on medical staff. In addition, the system uses speech information classification and structuring technology to effectively reduce nurses record-keeping duties by 58%. NEC will use advanced ICT, such as Al and IoT, to create systems that support healthcare and people in the future.



Initiatives for digital hospitals

#### Public Infrastructure

# Investment into Advanced Technologies with an Eye to the Future —Taking on the Challenge of Control in the Aerospace Field

NEC has been involved many years in the development of advanced technologies aimed at resolving social issues, such as control technologies for unmanned aircraft, satellites, air traffic, satellite operation technology and electromagnetic wave monitoring technology.

#### **Satellite Operation**

In 2018, NEC Corporation initiated at space project offering comprehensive space solutions, including the development of satellites and ground systems, satellite control, mission operation, and image sales using its own earth observation satellites. This is the first instance in Japan that a manufacturer operates its own satellites. Going forward, we will contribute to solutions and services for social issues, such as ascertaining conditions following a disaster, as well as monitoring and managing environmental resources.

NEC Satellite Operation Center

#### **Flying Cars**

Flying cars hold strong potential in commuting, moving to remote islands or into mountainous areas, emergency transportation, and carrying supplies.

NEC Corporation concluded a sponsorship agreement with CARTIVATOR Resource Management, which develop flying cars in Japan for the first time, and participated the Public-Private Conference for the Future Air Mobility Revolution established by the Ministry of Economy, Trade and Industry and the Ministry of Land, Infrastructure, Transport and Tourism. NEC Corporation will supply flying control related technologies to contribute to realizing future air traffic control.

#### **Public Solutions Business**

# Expand business domain for solving social issues





## Providing Value across Industry Boundaries by Solving Social Issues

Japan is facing social issues arising from declining birthrates and an aging population, increasing social security costs, a declining work force, and reduced spending and economic power. NEC's job is to grasp these issues and address them firmly and create sustainable social value. Using our accumulated experience, the latest AI and biometrics technologies, and co-creation, we will take the lead on these issues and provide value across industry boundaries. In this way, we will contribute to sustainable growth and achievement of the company-wide profit target under the Mid-term Management Plan 2020.

#### Our Environment and New Market Opportunities

The domestic market has remained active, and business model innovation using AI and IoT (Digital transformation) is progressing rapidly beyond the conventional framework of ICT vendors. On the other hand, as the existing ICT market is contracting, our continued growth will require us to expand our business into new domains and contribute even further through solutions to social issues.

In this environment, under the Japanese government's Digital Government Action Plan In this environment, under the Japanese government's Digital Government Action Plan, the status of government itself has been reviewed with a view to digitalization, placing a priority on increasing convenience for citizens and business operators. NEC will contribute to realizing the Digital Government Action Plan by creating highly convenient services from the user perspective, making use of the My Number System and biometric

authentication in the area of government and in fields where government and the private sector are working together.

#### Digital Healthcare Using ICT

In the area of healthcare, NEC will contribute to dealing with labor shortages and curbing social security costs through measures that include the use of advanced technology to improve the quality of healthcare, such as an endoscopy diagnosis support system that uses AI, predictive simulation of health check results, and detection of advance signs of restless behavior. In this way, we will help to realize a healthy, long-living society where individually tailored, high-quality healthcare and medical services can be provided to people easily.

#### Renewing Social Infrastructure

In the lead up to the Olympic and Paralympic Games Tokyo 2020, we will ensure safety and security by providing public safety-related solutions such as biometrics and behavior detection and analysis, as well as providing wireless networks for administration use and urban operation centers. Furthermore, the games will serve not only to invigorate the domestic market in the short term, but also as a major turning point for the renewal of social infrastructure, much of which was installed during Japan's high economic growth period. The new infrastructure will need to embody not only safety and security, but also place greater emphasis on the values of efficiency and equality to solve Japan's social issues going forward. NEC will help to realize this infrastructure using advanced ICT such as Al and IoT.

The Public Solutions Business will focus on these NEC Safer Cities themes in order to build an infrastructure that supports abundant living for people.

#### **Public Infrastructure Business**

# Establishing Stable Profitability and Investing in Advanced Technologies to Prepare for the Future

Noritaka Taguma

Executive Vice President



## Supporting Key National Infrastructure and Establishing Stable Profitability

In the public infrastructure business, we support the stable running of mission critical operations in the field of national security using ICT for customers including governments, governmental agencies, broadcasters and power companies. By supporting these key national infrastructures over the long term, we will establish stable profitability. Under the Mid-term Management Plan 2020, we will generate stable operating profit and an operating profit ratio in excess of companywide targets as an earnings base for the whole company.

## Investment in Advanced Technologies to Prepare for the Future

I am responsible for the public infrastructure business, which is where many of NEC's largest individual projects with long development lead times take place. Many of these projects involve key national infrastructure, making it important to maintain our leading position through continuous technology development and to secure resources. To achieve this, we will improve our profitability through measures such as streamlining our costs, including cost reduction, strengthening our project management capabilities, and achieving appropriate sale prices. By securing resources in this way, we will conduct continuous investment into advanced technologies. The strengths that we have developed in this business include biometric authentication offering world-leading accuracy developed in the law enforcement and justice fields, cutting-edge cyber-security, and achievements in the field of space, carrying out missions in

uncharted places in the harsh environment of space, such as "Hayabusa 2." These technologies currently represent NEC throughout the world in businesses conducted across a variety of fields.

Going forward, we will continue to invest in advanced technologies to ensure our technological advantage as we reinforce our foundations in the public infrastructure field.

#### Expanding Business over the Medium- to Long Term

To support business expansion over the medium to long term, we will leverage our advanced technologies to contribute to the creation of a safe and secure society. We will focus on fields such as security ICT, including cyber-security, image analysis, and accident prediction solutions, as well as biometrics solutions used in boarding and customs procedures at airports. We are also making a significant contribution in the field of 4K and 8K satellite broadcasts, which commenced in December 2018, helping the Japan Broadcasting Corporation, key commercial TV stations, and other broadcast stations to realize next-generation broadcasts. Other areas of activity have included trials of a Virtual Power Plant (VPP), which has drawn increasing attention just before the legal separation of power generation and transmission systems to be implemented in 2020, a space utilization service business that makes use of satellites and other technologies, Al-based visualization and analysis of learning status in primary, middle, and secondary school level education, a highlevel air traffic control system using GPS and quasi-zenith satellites, and the start of discussions on "Future Air Mobility Revolution" as a joint publicprivate initiative. By leveraging NEC Corporation's advanced technologies, we will drive the creation of new value and expand our business.

### Enterprise Business

# Creating Social Value through NEC Value Chain Innovation





#### Initiatives in the Medium- to Long-Term

Our society faces various kinds of social issues, such as food waste, labor shortages, changes in the consumption environment, and diversifying threats. NEC's Enterprise Business aims to realize a world where cutting-edge digital technologies are used to address these issues and new value is created through co-creation with customers, connecting people, goods, and processes, reaching across the boundaries between enterprises and industries in a process that we call NEC Value Chain Innovation (VCI). To support a more sustainable planet, sustainable growth for companies, and a society where people can live in abundance, NEC is working to promote five values: "Connected Manufacturing," which will usher in industrial innovation from the manufacturing sector by fusing digital technology with frontline systems; "Intelligent Logistic & Mobility," which will use intelligent ICT to make human mobility more comfortable and optimize the flow of physical goods; "Smart RetailCX," which will drive innovation in operations and customer experience (CX) and lead the digital shift and beyond; "Smart VenueCX," which will use the links between the senses and digital technology to deepen the bonds between people, communities, and society; and "Digital Finance," which will provide financial services to people and industries using the power of digital technology.

## Achievements toward Medium-to Long-term Targets in Fiscal 2019

For many years, the Enterprise Business has provided IT services to customers in the finance, manufacturing, logistics, retail, and service industries, and in fiscal 2019 our growth outpaced the market. As we continue to respond strongly to our base business fields, we have already started to provide social value through VCI, and we are now accumulating specific use cases such as the following:

- We started collaborating with INTAGE Inc. on a business for optimizing supply and demand across the entire value chain to help solve the issue of food loss and waste. By pairing NEC's data distribution platform with INTAGE's various data and analysis expertise, we aim to increase the accuracy of demand forecasting and make use of this to provide a product demand forecasting service.
- NEC has provided a facial recognition authentication system that uses NEC's facial recognition authentication Al engine, NeoFace, and a POS system that uses image recognition for X-Store, a future convenience store opened by President Chain Store Corporation (7-Eleven Taiwan). The system offers shoppers a new purchasing flow and a more efficient way to pay.
- Mitsui Sumitomo Financial Group, Inc. has introduced dotData, analysis software that automates data science processes. The software was developed by dotData, Inc., a Silicon Valley venture of NEC established through a carve out. The software is helping to increase the sophistication of data analysis throughout Mitsui Sumitomo Financial Group companies. In fiscal 2020, we will strengthen our initiatives, aiming to expand our provision of social value even further.

#### Revenue / Adjusted Operating Profit (Fiscal years ended on March 31) - 39.0 430.0 36.2 431.8 35.8 405.2 (9.1%)(8.9%) (8.3%)375.0 37.5 Revenue (Left scale) 250.0 25.0 Adjusted Operating Profit (Right scale) (Adjusted Operating Profit Ratio) 12.5 125.0 2018 2019 2020

#### [STRENGTHS]

- Reliability and achievements cultivated over many years of providing IT services to domestic clients in the manufacturing, retail and service, and financial industries.
- Ability to integrate advanced technology and business to create value and respond bimodally to customers' needs.
- The knowledge and expertise we have developed in manufacturing innovation at our own plants in the manufacturing industry, as well as supply chain management transformation for global corporations.

#### [WEAKNESSES AND COUNTERMEASURES]

(Forecasts)

- To solve social issues, we need to strengthen initiatives throughout society across the boundaries between enterprises and industries.
- Securing IT talent to work in new fields in response to market demand.
- In order to achieve further growth, we need to transform to a business model that can consolidate knowledge and resources accumulated for each industry and client across the organization and make use of them.

#### [OPPORTUNITIES]

Our society faces various kinds of social issues, such as global food waste and energy consumption, as well as changes in the human resources environment due to labor shortages, diversification of consumption patterns with an emphasis on CX and a shift towards cashless societies, and fraudulent transactions involving internet banking. Solutions involving use of AI, IoT, and other advanced ICT are expected to play a growing role in solving these social issues.

#### [THREATS AND COUNTERMEASURES]

Although the private sector market in IT is expanding, the acceleration in adoption of cloud computing and the penetration of AI and IoT are bringing dramatic change to NEC's business environment in terms of customers' investment fields and competitors. Amid this, we expect a decrease in existing solutions businesses in the medium term, and we must therefore create new business models and strengthen our capability to support customers' digital transformation.

#### Initiatives to Solve Labor Shortages

As labor shortages become more acute in the retail sector, there is a need to increase the efficiency of store operations. At the same time, the sector also needs to improve CX with a limited workforce and build good relationships with customers.

To help address such issues, in 2018 we opened a labor-saving store with Seven Eleven Japan Co., Ltd., making use of NEC's Al and IoT technologies. The store features systems to provide comfort and convenience to customers, such as NEC's first implementation of payment by face recognition authentication in Japan and targeted advertising signage. It also has staff-support systems to reduce the number of staff required to run the store. These include facility operation monitoring, which



A labor-saving store using AI and IoT technologies

collects information about equipment such as refrigerators 24 hours a day to support stable operation, and ordering proposals that use Al.

NEC will continue to utilize cutting-edge digital technologies such as AI and IoT to provide systems that are designed for customers' businesses and market needs. In this way, we will contribute to service quality improvements and operational efficiency gains in the retail sector.

#### Network Services Business

# Leading Digital Transformation (DX) by Connecting Value



Atsuo Kawamura Executive Vice President

## Networks for the DX Era: The Importance of Connecting Value

In recent years, DX has been progressing in various industries to solve social issues such as environmental issues, labor shortages, and security threats.

DX links the real world with the cyber world through networks, which is the key to creating new value using digital technology. As the volume of information increases and networks become increasingly complex, reliable, fast connections are extremely important for realizing DX.

In addition, high-speed, large-capacity, low-latency communications enabled by the spread of 5G will open the door for services that require detailed control, such as automated driving, remote medical care, and remote construction.

NEC will lead DX by combining its strengths in networks cultivated in the telecommunications market, and high-level IT assets such as AI, security, and biometrics, with industry expertise to enable wide-ranging connectivity in the enterprise and public markets as well as the telecommunications market.

#### Initiatives in Fiscal 2019 and Fiscal 2020

NEC executed structural reforms in fiscal 2019, successfully shifting to a highly profitable structure. In fiscal 2020, we will continue to invest in the network services field for 5G and industry, which are key areas, while maintaining the structure we have achieved through structural reforms to expand highly profitable businesses. In particular, we will develop the globally

recognized OSS/BSS of Netcracker Technology Corporation, and increase profitability by expanding the maintenance and operation services field, making use of the expertise we have developed to date.

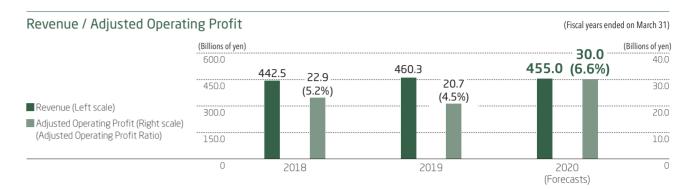
#### Towards Realizing 5G

With 5G, we will execute the timely launch of advanced wireless technologies, such as miniaturization, power-saving, and beamforming technology. In July 2019, we started shipping commercial 5G radio units to NTT DOCOMO, INC. Moreover, through a partnership with Samsung Electronics Co., Ltd. we will expand our product portfolio while also making joint proposals to global telecom carriers. Furthermore, starting with our selection as an equipment provider for Rakuten Mobile, Inc., which promotes "Open vRAN" with cloud native networks, NEC will expand our business with telecom carriers seeking to build open networks.

## Co-Creation in the Field of Network Services for Industry

In the field of network services for industry, NEC provides not only applications, but a comprehensive lineup of services from consulting to operation to realize optimal networks for business operations. By utilizing our strengths in both IT and networks, we will promote customers' DX while continuously engaging in co-creation between businesses and companies using 5G.

The Network Services Business will expand through connecting new value and contributing to DX.



#### [STRENGTHS]

- Among the best in Japan in terms of track record and accumulated expertise for delivering networks for telecom carriers and networks and IT systems for companies.
- Core technologies in the network area such as 5G, mobile, optical IP, operation & management, and IT.
- Large-scale mission-critical system integration capabilities cultivated in systems for telecom carriers.
- Formation of an ecosystem through achievement of Open-vRAN initiatives and links with vendors.

#### [OPPORTUNITIES]

- Diversification of needs and sophistication of networks, due to the advance of 5G technology.
- Increase in telecom carriers seeking open networks.
- Expansion of business opportunities due to connection of people, things, and contexts with DX at companies, including operational reforms.

#### [WEAKNESSES AND COUNTERMEASURES]

- Respond to need to expand product portfolio and strengthen price competitiveness in the commodity field by forming an ecosystem between network vendors.
- Expand assets that NEC does not possess, such as industrial equipment, including construction machinery, devices, and business applications, by forming partnerships with customers and vendors.
- To assist business expansion, it is essential to create new value and business models not only through standalone value creation by NEC, but also through co-creation with customers.

#### [THREATS AND COUNTERMEASURES]

- Capital investment by Japanese telecom carriers is in a transition period awaiting full-scale investment in 5G, and co-creation of 5G use cases with customers will drive the establishment of a market.
- In response to rising security threats, NEC will leverage its expertise and partnerships with network vendors to reduce customers' security risks by providing comprehensive solutions from hardware to operation services, and from wireless to fixed lines.

#### Initiatives for Leading DX

NEC is creating various services using 5G through co-creation with telecom carriers and industry partners. As part of this initiative, we are working on safe disaster recovery through remote control of construction machinery.

Restoration of social infrastructure is an urgent priority in disaster-affected areas. However, there is a need to ensure the safety of worksites by avoiding secondary disaster risks, such as landslides.

Together with Obayashi Corporation and KDDI Corporation, NEC carried out field experiments involving remote control of construction machinery using 5G.

Using 5G to transmit high-resolution images and sound data from cameras mounted on construction machinery in real time, we achieved operability equivalent to onboard operations in a remote control system.

NEC will contribute to the realization of new 5G services through various field tests.

Remote control of construction machinery using 5G

a from

### System Platform Business

# Platforms to Support Business Innovation through Digitalization

Tomoyasu Nishimura Executive Vice President



#### Helping Customers to Create Value

The System Platform Business does more than simply streamline customers' business operations by providing highly reliable ICT products, we also provide platforms that are both advanced and reliable to enable rapid start-up and stable operation of services. Our aim is to be a partner for customers seeking to reform their businesses through digital transformation (DX), and help them accelerate their value creation.

To this end, in the System Platform Business, we combine knowledge of cutting-edge digital technology and experience in dealing with a broad range of industries, the ability to develop a deep understanding of our customers and propose new value, and the optimal ICT technologies, products and services to realize these proposals. We provide these ICT technologies, products and services as needed with a high standard of quality as we continue to hone our ability to support the operation of reliable systems.

#### Medium- to Long-Term Policy

As customers seek to transform their businesses through DX, there is a rising demand for utilization of conventional IT assets and the data accumulated in them, as well as hybrid IT, which makes appropriate use of the considerably more flexible public and private cloud systems in each case, and rapid, highly accurate analysis of exponentially increasing data and the use of this analysis in business.

The System Platform Business has accumulated strengths in reliability, quality, and the ability to provide maintenance, operation, and support through our nationwide service center network. We will leverage these strengths while differentiating our platform through the use of hybrid IT, AI for data analysis, including image recognition technologies such as facial recognition, and accelerators such as vector computing technology.

#### Initiatives Up to Fiscal 2021

The System Platform Business is expected to see a continuing harsh business environment; however, we will make advances in streamlining existing businesses and expanding our focus businesses. During fiscal 2019, we carried out business structure reforms, such as reorganizing our factories in Japan in order to streamline our production system. In fiscal 2020, we will continue to improve our costs, while accelerating DX in our own development, production, and maintenance sites, with a view to increasing their efficiency.

On the other hand, in our focus businesses, we will expand our provision of hyperconverged systems\*1 and container platforms\*2 as an initiative to promote hybrid IT. We also focus on expanding the vector computing-based next-generation platform, SX-Aurora TSUBASA into new fields such as AI big-data analysis and resource exploration.

#### Revenue / Adjusted Operating Profit (Fiscal years ended on March 31) 38.0 480.0 (7.9%) 600.0 500.2 488.6 29.3 450.0 37.5 (6.0%)20.1 Revenue (Left scale) (4.0%)300.0 25.0 Adjusted Operating Profit (Right scale) (Adjusted Operating Profit Ratio) 150.0 12.5 2018 2019 2020

#### [STRENGTHS]

- Reliability and high quality cultivated under an intensely competitive domestic market; high share in Japan for IT platform products.
- Maintenance, operation and support services provided through a nationwide network of service centers throughout Japan.
- A distinguished group of technologies\* in fields such as AI and computing and the ability to provide value to customers by combining them.
- \* Image recognition technology including face recognition; vector computing technology, etc.

#### [WEAKNESSES AND COUNTERMEASURES]

(Forecasts)

- Relatively high costs compared with global mega-vendors due to differences in business scale; need to streamline development, production, maintenance, and other aspects through onsite DX.
- A need to realign the business towards sales of solutions for customers' business issues as a large proportion of the business comprises conventional sales for standalone hardware.

#### [OPPORTUNITIES]

- Expansion in needs for hybrid IT, combining conventional IT with public and private cloud systems, driven by an increase in customers seeking to expand their business through DX.
- Expansion in demand for platforms for gathering and accumulating data and Al/accelerators for rapid, highly accurate analysis driven by growth in customer needs for data utilization.

#### [THREATS AND COUNTERMEASURES]

- Need to increase added value through hybrid IT to counter growing global competition due to the advance of commoditization in the hardware domain.
- Need to establish differentiation factors by utilizing strengths in image technology including face recognition, vector computing technology, and so forth to counter an increase in companies entering the data utilization field, including companies from different industries, with the advance of digitalization, such as AI.

#### Next-Generation Platform, SX-Aurora TSUBASA

With the arrival of the big data era, there are growing needs for rapid, highly accurate processing of vast quantities of data generated in various fields.

SX-Aurora TSUBASA is a platform that provides high speed, high performance systems with models for a wide range of customer needs, from use in offices to data centers, by offering a vector processor previously only found in a super computer in a card format. The platform is helping to expand the range of applications for supercomputers beyond the traditional areas of weather and academia. In doing so, we will contribute to the realization of a safe, secure, highly efficient, and abundant society by promoting expansion in usage fields and applications including industrial fields such as manufacturing as well as Al and big data analysis.



<sup>\*1</sup> Integrated products that provide server, storage, networking, and virtualization software together in a single system.

<sup>\*2</sup> Platforms for integration and management of a container environment used to virtualize the application execution environment in a hybrid or multi-cloud.

#### **Global Business**

## **Profitable Growth - Strengthening Profitability to Achieve Sustainable Growth**



Akihiko Kumagai Senior Executive Vice President

#### Initiatives for Medium- to Long-Term Growth

Realizing "NEC Safer Cities" based on the safety business is the main growth engine for the Global Business. While globalization and technological advances have made life more convenient, there is a growing urgency to respond to global issues such as labor shortages, rapid urbanization, and the risk of terrorism spreading due to geopolitical factors. In addition to the area of public safety, where NEC's biometric authentication technologies have been used to provide safety and security, we will provide solutions that pursue efficiency and convenience not only for our customers, but also for their customers, such as ID solutions at airports.

Moreover, we acquired the U.K. company Northgate Public Services Limited in January 2018, and the Danish company KMD Holding ApS in February 2019, converting both into subsidiaries. Both countries' governments and local governments are leading the advance into digitalization of asset management, fee payments, and other operations. We will use the platforms developed by these companies as a base for enhancing our own solutions, while expanding our business in the digital government field.

NEC will contribute to the realization of a safe, secure, efficient, and equal society by applying advanced AI and biometric authentication technologies and strengthening our capabilities through M&As and partnership activities, while always placing top priority on respecting human rights and observing the laws and regulations of each country.

In the service provider markets, such as telecom carriers, investment into fields of software and services, such as customer, fee, and operation management systems, will increase their

operational efficiency, flexibility and rapid responses to new services based on digital transformation (DX). In addition to the strong competitive advantages of customer, fee, and operation management solutions offered by Netcracker Technology Corporation, we will offer new solutions that incorporate advanced virtualization technologies to meet the needs of the new era.

In the field of 5G networks, demand is expected to reach full scale going forward. Here, NEC will leverage its results as a leader in adoption of this new technology in Japan while looking to expand its business by enhancing its product portfolio with its accumulated virtualization technology and collaboration with partners.

#### Initiatives for Strengthening Profitability

To realize growth in the Global Business, our No. 1 priority in fiscal 2020 is achieving profitability in our operations.

In markets that are maturing or expected to see increased competition, such as wireless solutions, submarine cables, and displays, we will leverage our accumulated track record and technologies to maintain our business scale and strengthen profitability through partnering and business model transformation.

In the energy business, we have been focusing on the advanced U.K. and U.S. markets for energy storage systems, putting priority on expanding our track record. However, we will now prepare for further market growth, creating a profitable business structure by expanding solutions such as software and services in response to market changes such as deregulation of the electricity markets, as well as by further cost reduction.



#### [STRENGTHS]

- Safety business: World-leading biometric authentication technology and analysis technologies (status recognition, crowd behavior analysis, indication detection, etc.), and software platforms for the digital government field.
- Service providers: Product capabilities and advanced position in solutions provided for customer, fee, and operation management systems
- Strong presence and track record in the markets for network equipment (wireless solutions), submarine cable, displays and projectors.

#### [WEAKNESSES AND COUNTERMEASURES]

- Need to enhance structure in countries and regions to enable provision of solutions tailored to each customer, such as in the safety business.
- Need to accelerate shift of business model from equipment sales to a software and services business

#### [OPPORTUNITIES]

- Expansion in demand for safety solutions in countries where there is growing interest in safety and security
- Increase in demand in the field of software services related to DX for service providers and the field of 5G.
- Increase in demand for energy storage systems and further diversification of related service businesses associated with the deregulation of the electricity markets and the spread of renewable energy.

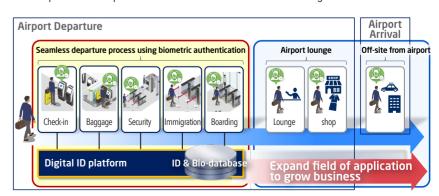
#### [THREATS AND COUNTERMEASURES]

- Aggressive approach by emerging-market vendors and others in the field of biometric authentication
- Need to strengthen profitability through partnering and business model transformation in response to increased price competition following the maturation of the markets for products such as wireless solutions and displays.

#### Airport ID Solutions Create a New Customer Experience

At airports, passengers are required to present their passports and boarding passes when checking in and dropping off baggage, and at each step in the boarding procedure. NEC has applied its world-leading biometric authentication technology\* to simplify this laborious procedure and make it seamless. The airport ID solution creates a new customer experience by reducing procedures for both travelers and airport staff and shortening waiting times. It will be provided to airports and airlines in various countries including the U.S.

We now plan to expand this business field by linking it to various services in and outside airports, such as airport lounges, aiming to increase customer value.



\* NEC's solution ranked first in performance on evaluation tasks conducted by the U.S. National Institute of Standards and Technology (NIST).

### **Main Locations Globally**

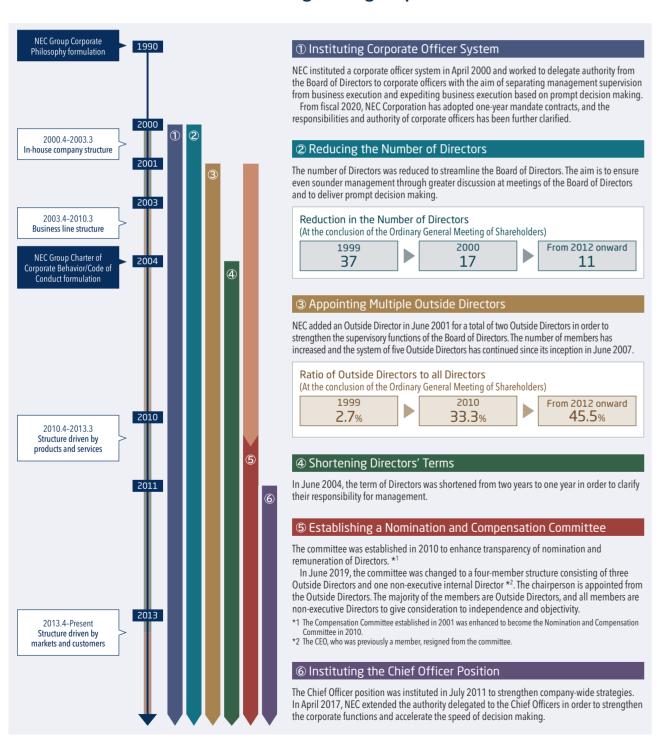
(As of March 31, 2019)



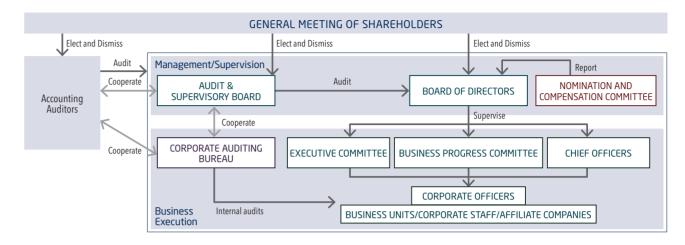
#### **Corporate Governance**

In recognition of the fact that reliable corporate governance is essential to the continuous creation of social value and the maximization of corporate value, NEC is committed to strengthening its corporate governance practices through (1) assurance of transparent and sound management, (2) realization of prompt decision making and business execution, (3) clarification of accountability and (4) timely, appropriate and fair disclosure of information.

#### **Main Initiatives for Strengthening Corporate Governance**



#### **Overview of the Corporate Governance Structure**



		Purpose and Activities	Members	Number of Meetings in Fiscal 2019
Board of Directors	The Board of Directors holds regular meetings basically once a month and extraordinary meetings as necessary to determine important matters related to business execution, including business realignment, funding plans and financing and investment, as well as matters concerning business plans.	Main Matters Discussed in Fiscal 2019  1. Activity reports from Chief Officers  2. Management plans and progress reports for each business segment  3. Implemented special measures to support career changes  4. Acquisition of KMD Holding ApS  5. Formulated the "NEC Group AI and Human Rights Principles"  6. Revised remuneration system for Directors, Audit & Supervisory Board Members (A&SBMs), and corporate officers	11 Directors  6 Inside Directors  5 Outside Directors (of which 4 are Independent Directors)	Attendance rate of Outside Directors: 96.9% Attendance rate of Outside A&SBMs: 97.4%
Executive Committee	as policies and strategies. This co- importance prior to putting them	es important NEC Group management issues such mmittee extensively discusses matters of particular forward to the meetings of the Board of Directors imittee enhances the deliberations and ensures	Around 20 corporate officers	11 times
Business Progress Committee	status of the NEC Group's busines respect to meeting budgets adop	e deliberates and reports on matters related to the ss execution, such as monitoring progress with ted by the Board of Directors, with the aim of n and promoting business execution efficiency.	Corporate officers and general managers of business units, etc.	12 times
Nomination and Compensation Committee	structure and the level of comper corporate officers with taking the	1. Revision of remuneration system for Directors 2. Nomination for Directors and A&SBMs 3. Succession planning for the President nairman of the Board, and the President and (ii) the insation for Directors, Representative Directors and business results of NEC and other conditions into irrspective. The committee reports the results of its	4 Directors  Outside Directors Takeshi Kunibe Kaoru Seto (Chair) Kuniharu Nakamura Inside Directors Nobuhiro Endo	5 times
Audit & Supervisory Board (KANSAYAKU-KAI) ("A&SB")	as necessary, decides on audit po matters, and receives status repo A&SBM.	s basically once a month and extraordinary meetings licies, standards, annual auditing plan and other rts on audits and on other matters from each	5 A&SBMs 2 Inside A&SBMs 3 Outside A&SBMs (All are Independent A&SBMs)	Attendance rate of Outside A&SBMs: 97.9%

#### Continued Strengthening and Improvement of the System

NEC adopts the Company with Audit & Supervisory Board Members (KANSAYAKU) corporate structure to provide a double-check process: the Board of Directors supervises business execution and the A&SB audits the legitimacy and appropriateness of NEC's decision making or activities. We have established a hybrid structure by utilizing the combination of a corporate officer system, multiple Outside Directors, and the Nomination and Compensation Committee, which we established voluntarily and is comprised of a majority of Outside Directors. In this way, we separate management supervision from business execution while striving to ensure management transparency and soundness.

NEC believes that its corporate governance is functioning adequately under the current system described above. However, NEC is focusing its efforts on enhancements and improvements of this system in order to realize more effective corporate governance responding to changes in the business environment.

#### Evaluation of the Effectiveness of the Board of Directors

With external advice on a method of effectiveness evaluation of the Board of Directors, NEC has conducted an analysis and evaluation on the effectiveness of the Board of Directors once a year to improve the function of the Board of Directors since fiscal 2016.

In fiscal 2019, based on the result of the analysis and evaluation on the effectiveness of the Board of Directors conducted in the previous fiscal year, NEC provided a separate opportunity outside of the Board of Directors meeting for Directors to discuss long-term management strategy. It also raised the pricing criteria of the standard for matters to be resolved at the Board of Directors, enhanced the information provided to Directors prior to meetings, and made further improvements to the format of materials for reports to the Board of Directors. These changes were intended to further enhance the discussion related to medium- to long-term management strategies in the Board of Directors. Furthermore, the Company continued its initiatives for reflecting the opinions and guidance received from Outside Directors in its business execution, and took steps such as providing opportunities for the Chairman of the Board, the President and the Outside Directors to exchange opinions freely on various themes.

#### Procedure of the analysis and evaluation

In fiscal 2019, NEC conducted a questionnaire of all of the Directors and A&SBMs. In addition, individual interviews were held based on the results of the questionnaire. In the questionnaire and interviews, participants were asked mainly for their opinions regarding the kind of governance structure that the Company should aim for (organizational design, director composition, etc.) and the roles, functions, and method of operation of the Board of Directors. Based on the analysis and evaluation of these opinions, the Board of Directors deliberated on a policy and improvement plan for strengthening governance going forward.

Improvements were also made to the questionnaire. In addition to the questions regarding the level of achievement of measures formulated based on the evaluation of effectiveness, evaluation items for confirming the degree of improvement from the previous fiscal year were added as part of improvements to the survey method.

#### ■ Summary of the evaluation result

A summary of the evaluation of the effectiveness of the Board of Directors for fiscal 2019 is as follows:

- In the Board of Directors, it can be evaluated that appropriate supervision of business execution has been conducted as lively discussion was held among the Directors regarding decision making on important business execution and other important matters of medium- to long-term management strategy;
- The current governance structure (organizational design, director composition, etc.) can generally be considered appropriate; however, operation of the Board of Directors has room for improvement, such as conducting discussions with an emphasis on broad, company-wide management strategies and governance; and
- NEC will continue working to enhance the information provided to Directors prior to meetings.

#### ■ Future challenges

Based on the above evaluation results, NEC will strengthen the Board of Directors' functions through the following initiatives:

- To further deepen discussions in the Board of Directors regarding broad, company-wide management strategies and governance, NEC will revise the setting of themes for the matters brought up for discussion by the Board of Directors and the annual discussion plan;
- For important and complex matters for discussion, NEC will aim to hold multiple meetings of the Board of Directors and to enhance prior explanation, etc.;
- For long-term management strategy and other such themes, NEC will combine use of the Board of Directors and other meetings to enable deeper discussion; and
- To enhance the provision of information to Outside Directors, NEC will hold worksite tours and provide guidance to newly appointed Directors, along with improving the Board of Directors materials in line with the new themes for discussion by the Board of Directors.

#### Remuneration for Directors and Audit & Supervisory Board Members (KANSAYAKU)

For the purpose of continuously improving corporate value and strengthening its competitiveness, NEC's basic policy on the remuneration for Directors and A&SBMs is to set a level and structure appropriate for a global company which enables NEC to secure excellent human resources and serves as an incentive to improve performance of the NEC Group. In order to ensure objectiveness and properness of the remuneration for Directors and A&SBMs, the level of the remuneration is determined on the result of the third party's investigation regarding the remunerations of other companies whose business contents and scale are similar to those of NEC.

#### Remuneration System

	Monthly remuneration	Bonuses (short-term incentive)	Stock compensation (mid-and long-term incentive)	
Inside Directors	O (57%)*	O(34%)*	O (9%)*	
Outside Directors	0	_	_	
A&SBMs	0	_	_	

<sup>\*</sup> Composition of remuneration of Inside Directors in fiscal 2019 (total amount)

#### Remuneration for Directors

			ced remuneration 0%)	Non-performance linked
		Short-term incentive (30%)*	Mid-and long-term incentive (30%)*	remuneration (50%)
1 Monthly remuneration	All Directors			0
2 Bonuses	Executive Directors	0		
3 Stock compensation	Inside Directors		O 3 -(a)	O 3 -(b)

<sup>\*</sup> The ratio of performance-linked remuneration and non-performance linked remuneration for Executive Directors. The ratio of bonuses and the Performance-based Stock Compensation is calculated based on a standard amount before reflecting the degree of achievement of the performance targets.

#### Basic remuneration

Basic remuneration is fixed-monthly payments that do not exceed the limit\* established by resolutions of the General Meetings of Shareholders, and is determined separately for each job title and for Inside Directors and Outside Directors.

However, for some Executive Directors basic remuneration increases or decreases depending on the performance of these individuals in each fiscal year. The Board of Directors determines for each job title the standard amount of basic remuneration and the range of fluctuations.

\* The maximum annual remuneration is 580,000,000 yen (approved at the 181st Ordinary General Meeting of Shareholders held on June 24, 2019)

Bonuses serve as short-term incentives to achieve performance targets in each fiscal year for the sustained growth of the NEC Group. Executive Directors are eligible to receive these bonuses. The limit for total payments of these bonuses is determined by a resolution of the General Meetings of Shareholders. Individual bonus payments are determined by adjusting the standard bonus amount determined for each job title of Directors to reflect the achievement level of performance targets.

\* The maximum annual remuneration is 800,000,000 ven (approved at the 181st Ordinary General Meeting of Shareholders held on June 24, 2019)

For further details on the corporate governance of NEC Corporation, please visit the following URL:

#### LIRL https://www.nec.com/en/global/about/governance.html

#### **■** Stock compensation

(a) The Performance-based Stock Compensation serves as a medium-to long-term incentive to further raise Directors' awareness for contribution to improvement in NEC's medium- and long-term performance and its corporate value, by clarifying the link between remuneration of Directors and NEC's performance as well as value of NEC shares. (b) The Fixed Stock Compensation further clarifies the link between remuneration for Directors and the value of NEC shares by increasing the ratio of stock compensation in the remuneration for Directors, and encourages Directors to operate the business with a higher consciousness of NEC's share price by sharing with shareholders not only the benefits of rising share prices but also the risks associated with falling share prices.

In these stock compensation systems, the shares are granted after three years from the beginning of the applicable period.

Note: The ratio of bonuses and the Performance-based Stock Compensation is calculated based on a standard amount before reflecting the degree of achievement of the performance targets.

#### Remuneration for A&SBMs

Remuneration for A&SBMs is only basic remuneration and does not include bonuses linked to the business results because the responsibility of A&SBMs is to audit execution of Directors' duties. Basic remuneration is a fixed monthly payment determined based on whether the recipient is a full-time A&SBM or not, to the extent of the maximum amount approved at the General Meeting of Shareholders.

\* The annual remuneration is 144,000,000 yen (approved at the 181st Ordinary General Meeting of Shareholders held on June 24, 2019)

#### [ Amounts of Remuneration for Fiscal 2019 ]

(Millions of yen)

	Tot	al amount by t	amount by type		
	Monthly remuneration	Bonuses	Stock compensation	Total amount	Headcount
Inside Directors	285	168	44	497	7
Inside A&SBMs	60	-	-	60	3
Outside Directors and A&SBMs	96	-	-	96	11

Among the above recipients, the following have a total remuneration amount of 100 million ven or higher Nobuhiro Endo: Total remuneration amount: 117 million ven

(basic remuneration: 69 million yen, bonus 48 million yen) Total remuneration: 67 million yen, bonus 48 million yen (basic remuneration: 71 million yen, bonus 48 million yen) Takashi Niino:

Notes: 1. The number of Directors (excluding Outside Directors) includes one Director who retired at the close of the 180th Ordinary General Meeting of Shareholders held on June 25,

- 2018. Moreover, six of the above number were eligible for stock-based compensation.

  2. The number of A&SBMs (excluding Outside A&SBMs) includes one A&SBM who retired at the close of the 180th Ordinary General Meeting of Shareholders held on June 25, 2018.
- The numbers of Outside Directors and Outside A&SBMs include two Outside Directors and one Outside A&SBM who retired at the close of the 180th Ordinary General

Meeting of Shareholders held on June 25, 2018.

#### **Ensuring Compliance**

Since its establishment in 1899, NEC has built its business based on the trust of society, including our customers. Under a sound, highly transparent governance system, every member of NEC, from executives to employees, puts compliance first, not just complying with laws and regulations, but conducting their daily business in accordance with social norms and common sense. Governance and compliance are part of NEC's materiality, a selection of priority management themes from an ESG perspective, and we will incorporate compliance into NEC's corporate culture.

#### Heads of Each Group Organization Take Ownership of Promoting Compliance

Previously at NEC Corporation, the corporate divisions led the implementation of compliance measures in each division.

From fiscal 2019, we aim to encourage executives and employees to make a strong sense of compliance their own responsibility and to foster a corporate culture that encourages people to practice conduct in accordance with the NEC Group Code of Conduct. Moreover, to strengthen each division's measures to address its different risks, we have adopted a policy of having the division general managers take

leadership and responsibility for discussing and carrying out the optimal measures for their divisions.

As part of risk management activities, every year we identify "Priority Risks" based on the results of a risk management survey and internal audits. In fiscal 2019, we selected "risks regarding personal information protection," "risks regarding bribery," "risks regarding violation of competition laws," and "risks regarding inappropriate cost accounting," and implemented countermeasures.

#### **Responsible Procurement**

NEC has formulated the NEC Group Procurement Policy and Supply-Chain CSR Guidelines based on the ISO 26000 international social responsibility guidance and the ISO 20400 international standard. As we learn together with our suppliers about critical social issues and the impact of business on society, we will continually engage in initiatives toward building a better supply chain.

To ensure sustainable procurement giving adequate consideration to the entire supply chain, we communicate our

requirements to suppliers based on the above policy and guidelines, confirming the status of their compliance and initiatives, and following up to ensure that appropriate remedial measures are taken as necessary. As part of this effort, in fiscal 2019, we started Supplier Visit Records (SVR), which involves the Procurement Division making an inspection of sustainable procurement requirements during its ordinary visits to suppliers and keeping records of the inspection.

#### A Continuous Culture of Quality since Our Founding

Maintaining and improving quality is also part of governance and

The Company introduced quality control in 1946, and has made company-wide efforts to increase quality, such as the ZD (Zero Defects)\*1 activities in 1965, the Company-wide quality-operation strategy to increase the "7 Qs"\*2 in 1972, and SWQC\*3 in 1981. Today, we are actively working on human resource development to realize safety and security. These efforts include practical education for improving product safety and quality, and establishing a system of awards for teams which demonstrate the significance of accomplishment and recovery in projects that have a high level of risk.

- \* 1 Activities designed to stimulate individual employees' autonomy and passion to eliminate defects from their work through creative thinking, reducing costs and improving quality
- $\mbox{\ensuremath{\star}}$  2 The 7 Qs apply to management, products and services, human behavior, workplace
- environment, relationships with the local community, business results, and corporate image \* 3 Software Quality Control. This refers to general quality management activities for software.

For further information, please refer to Sustainability Report 2019 "Compliance and Risk Management," "Promoting Fair Commercial Transactions," "Supply Chain Management," and "Ensuring Quality and Safety."

### Messages from an Outside Director and an Outside Audit & Supervisory Board Member

## **Visible Efforts to Make Meaningful Changes at NEC**



Noriko Iki

I have been an outside director of NEC for one year now. Over this time, NEC has made tireless efforts to create more profitable businesses while continuing to hone its advanced technologies. In addition, I have felt that the Company's various initiatives, such as international M&A, are gradually bearing fruit.

Furthermore, NEC has employees with high social sensitivity who will create innovation going forward, including employees from all over the world who are supporting the NEC brand globally, and a high ratio of employees who return to work following time off to raise children. These human resources have the power to drive NEC's transformation. With my experience in foreign diplomacy and labor administration, my role is to support these human resources so that they can realize even more of their potential.

However, in consideration of a rapid increase in investors making decisions based on a company's sustainability in terms of environmental, social, and governance (ESG) aspects, I feel that

NEC has to improve how it communicates the efforts and activities of its diverse workforce in the fields of environment and society. NEC has already been actively holding dialogues with investors globally, mainly on financial themes, and it needs to take further steps to communicate the transformation of NEC, including nonfinancial aspects. In particular, the Company is appointing diverse human resources to its executive division using a new remuneration plan that started from fiscal 2020, partly as a way to attract high-level talent that is essential for global business success. While making use of the abilities of its human resources, I expect to see NEC undergo a clear transformation.

Governance is another growing strength of NEC, including its Board of Directors, which hosts frank and vigorous discussions. I myself will study diligently each day to contribute to solving management issues and to play my role in NEC's steadfast governance.

#### **Emphasizing Discipline Based on** a Sense of Values





Outside Audit & Supervisory Board Member (KANSAYAKU)

When corporate misconduct occurs, governance problems are often picked up, but in most cases the root cause that gave rise to the situation is not illuminated. This shows how difficult it is to find objective evidence for the state of mind of the people involved, which is the essential cause of the misconduct, even if the facts are investigated. As a result, rather than identifying the essential cause and tackling the issues for resolving it, companies implement measures to prevent a recurrence in form only, and sometimes apply excessive systems and rules.

However, systems and rules do not work without discipline, which is controlled by people's states of mind. Governance also requires discipline based on a sense of values in order to function—not just systems and forms. It is of prime importance that each individual acts with discipline in fulfilling their respective roles, and that this kind of discipline is present

throughout every part of the organization.

I have served as an outside Audit & Supervisory Board member for three years. Over this time, compliance and ethics issues have increasingly been discussed by the Board of Directors. Moreover, as shown by initiatives to transform NEC's culture, there is increasing interest in the conduct of directors and employees, as well as in themes such as values and discipline. It is not easy to ensure that reforms and improvements reach every part of a large organization; however, NEC is making steady, positive efforts.

In the Audit & Supervisory Board, where I am active, we constantly recognize issues through our annual evaluation of effectiveness and by making efforts to promote reforms and improvements. As a Member of the Board, I will strive to contribute to improving NEC's governance.

### **Directors and Audit & Supervisory Board Members**

(As of July 1, 2019)

#### **Directors**



Nobuhiro Endo Chairman of the Board

Mr. Endo served NEC as President (Representative Director) from 2010 and as Chairman of the Board (Representative Director) from April 2016. Since June 2019, he has served as Chairman of the Board (Non-executive Director).



Takeshi Kunibe

Member of the Board Chairman of the Board Sumitomo Mitsui Financial Group, Inc.

Mr. Kunibe has extensive experience and deep insight with management of a bank.

 Attendance at meetings of the Board of Directors: 12 out of 13



Takashi Niino

President (Representative Director) and CEO (Chief Executive Officer)

After being engaged in the management of the financial solutions business and the NEC Group's management strategies, Mr. Niino has been engaged in the management of NEC as President resentative Director) and CEO since April 2016.



Kaoru Seto

Member of the Board Special Adviser, Yamato Holdings Co., Ltd.

Mr. Seto has extensive experience and deep insight as a manager of a logistics service company.

• Attendance at meetings of the Board of Directors: 11 out of 11



Takayuki Morita

Senior Executive Vice President, CFO (Chief Financial Officer) and Member of the Board (Representative Director)

After being engaged in the management of NEC's M&A and global business. Mr. Morita has been in charge of its global business strategy and in April 2018 was appointed as Representative Director and Senior Executive Vice President and Member of the Board.



Norihiko Ishiguro

Senior Executive Vice President and Member of the Board

Mr. Ishiguro has extensive experience and a track record relating to industrial policy and a trade policy through working at the Ministry of Economy, Trade and Industry. In addition, he has been in charge of global business strategy and external relations as Senior Executive Vice President since October 2016.



#### Hajime Matsukura

Executive Vice President, CHRO (Chief Human Resources Officer) and Member of the Board

After being engaged in the management of corporate strategies at the corporate departments and in the NEC Group's operational reform, Mr. Matsukura is now in charge of the NEC Group's culture building and human resources development.



Motoo Nishihara

Executive Vice President CTO (Chief Technology Officer) and Member of the Board

Mr. Nishihara serves as the Senior Vice President in charge of R&D, and is responsible the NEC Group's R&D and technology strategies.



Noriko Iki

Member of the Board President, Japan Institute for Women's **Empowerment & Diversity Management** 

Ms. Iki has abundant experience and deep insight in the fields of administration and diplomacy.

• Attendance at meetings of the Board of Directors: 11 out of 11



Masatoshi Ito

Member of the Board Chairman of the Board, Ajinomoto Co., Inc.

Mr. Ito has extensive experience as the manager of a manufacturing business and deep insight into marketing and corporate strategy.

(Appointed in June 2019)



Kuniharu Nakamura

Member of the Board Chairman of the Board of Directors, Sumitomo Corporation

Mr. Nakamura has extensive experience and deep insight, including with global business as the manager of a general trading company.

(Appointed in June 2019)



2. Attendance at meetings: the number of attendance at meetings (meetings of the Board of Directors or meetings of the Audit & Supervisory Board) out of the number of the meetings held in the fiscal year ended March 31, 2019

#### Audit & Supervisory Board Members (KANSAYAKU)



Haiime Kinoshita

Audit & Supervisory Board Member (full-time) Mr. Kinoshita has experience being in charge of the legal and internal control division for many years.



Isamu Kawashima

Audit & Supervisory Board Member (full-time) Mr. Kawashima has experience as the person responsible for accounting and financial affairs of the Company for many years.



Kazuvasu Yamada

Audit & Supervisory Board Member Certified Public Accountant

Mr. Yamada has a lot of auditing experience as a Certified Public Accountant and professional insight in finance and accounting.

• Attendance: At meetings of the Board of Directors: 13 out of 13 At meetings of the Audit & Supervisory Board:

16 out of 16



Taeko Ishii

Audit & Supervisory Board Member Attorney at Law

Ms. Ishii has a lot of experience and deep insight as an attorney at law in the fields of personnel affairs, labor and others.

 Attendance: At meetings of the Board of Directors: 11 out of 11 At meetings of the Audit & Supervisory Board: 12 out of 12

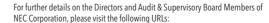


Nobuo Nakata

Audit & Supervisory Board Member (KANSAYAKU) Attorney at Law

Mr. Nakata has a lot of experience and deep insight as an attorney at law in the field of corporate law including M&A.

(Appointed in June 2019)



URL https://www.nec.com/en/global/about/executives/directors.html

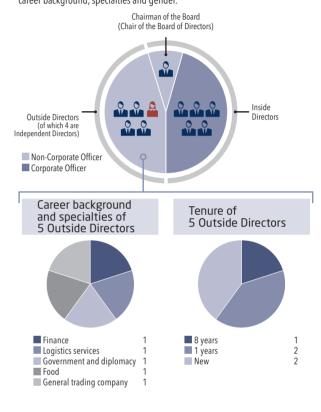
Audit & Supervisory Board Members (KANSAYAKU)

https://www.nec.com/en/global/about/executives/auditors.html

#### **Board of Directors**

#### 11 Directors

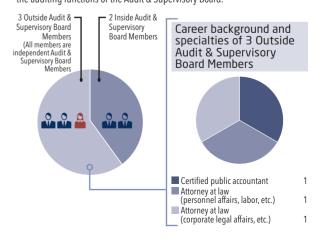
The Board of Directors makes important decisions regarding the Company's business execution, starting with deciding on its basic management policies. It also fulfills the responsibility of overall supervision of business execution, and therefore requires viewpoints based on broad knowledge, and the Board of Directors is comprised with consideration given to diversity in such factors as career background, specialties and gender.



#### Audit & Supervisory Board (KANSAYAKU-KAI)

#### 5 Audit & Supervisory Board Members

NEC appoints as Audit & Supervisory Board Members personnel who have the knowledge and experience necessary for audits, such as considerable expertise in finance and accounting or experience as an attorney at law, and who strengthen the auditing functions of the Audit & Supervisory Board.



## Cross-company Corporate Strategy Promotion Framework

(As of July 1, 2019)

NEC Corporation has introduced a chief officer system and is working to solve challenges from a company-wide perspective. In 2019, the Company set the term of office for corporate officers at one year and reformed its management system, seeking to establish mission clarity and greater responsibility for results. By having corporate officers work with urgency to complete their respective missions, NEC aims to increase its execution capability.

Here, the vice presidents, chief officers, and business unit heads who are in charge of proposing and executing strategy from a company-wide perspective explain the issues in their respective areas of responsibility and their initiatives to solve them.



#### Norihiko Ishiguro

Senior Executive Vice President

#### Creating a Suitable Environment for Growth as a Global Social Value Innovator

Systems and policies must evolve to keep pace with the progress of technology. Through negotiation and sales activities with global governments and international organizations and companies, I will work to establish a business environment that enables NEC to contribute to solutions to global issues as a Social Value Innovator and realize growth. I will also work to transform our organizational culture so that NEC can maximize value for customers even more quickly.



Takayuki Morita

Senior Executive Vice President, CFO (Chief Financial Officer)

#### Working towards Adjusted Operating Profit of ¥165.0 billion in Fiscal 2021

As CFO, I will lead, continue, and strengthen our various efforts to achieve the medium-term operating profit target that NEC has promised to the market. In particular, I will ensure that measures to improve the profitability of underperforming businesses are carried out and deliver results, while proactively pursuing alliances and partnerships to accelerate our businesses, including those in growth fields.



#### Akihiko Kumagai

Senior Executive Vice President, President of Global Business Unit

#### Aiming to Become a Truly Global Company

To compete in the global market, NEC needs to operate with greater speed, and take on new challenges, unhampered by fear of failure. As a first step in this direction, I will implement a new global HR strategy. Using NEC's global organization with its rich diversity, by focusing on global talent development and on creating a winning culture, I will work on establishing an environment where NEC employees in every country around the world can fully engage in their roles with pride and motivation.



Chikara Ishii

Executive Vice President, CDO (Chief Digital Officer)

#### Creating New Value for a New Digital Era

The rapid development of digital technology such as AI and IoT is not a passing trend; rather, it will fundamentally change society. As CDO, I am working to prepare for this new digital era, not only by advancing and promoting NEC's digital transformation (DX), but also by accelerating the building of an ecosystem that will continuously realize innovation by making maximum use of NEC's technologies and assets, such as AI and biometrics. In this way, I will work to drive the creation of new value.



Hajime Matsukura

Executive Vice President, CHRO (Chief Human Resources Officer)

#### **Executing Human Resource System and Culture Reforms**

My goal is to make NEC into an organization that will grow and succeed globally by focusing on securing and developing sustainably and socially literate human resources. If employees work with enthusiasm and grow independently, the company will also grow. I am confident that preparing an environment where employees can be active and reforming our corporate culture will lead to NEC's growth, and I will spend this year advancing human resource system and culture reforms.



#### Hiroshi Kodama

Executive Vice President, CIO (Chief Information Officer) and CISO (Chief Information Security Officer) President of Digital Business

#### Leading the Creation of a Digitally Inclusive Society

My goal is to realize a society where individual people can flourish through the benefits of digital technology. I am therefore engaging with the three challenges that form the priority themes of NEC's management strategy, and leading the creation of a digitally inclusive society.

1) Realize digital workplaces that draw out diverse capabilities

2) Build a real-time digital management base that can respond flexibly to transformation

3) Implement high-level cyber security countermeasures



Motoo Nishihara

Executive Vice President CTO (Chief Technology Officer) Head of Central Research Laboratories

#### Build a Competitive Technological Advantage to Form a Source of Business Value

Amid the acceleration in digital transformation (DX), NEC has the creative technological capability to generate significant social value and lead new businesses. On the other hand, there are also issues to be tackled, such as building up peripheral technologies, proactively in-licensing external technologies, and achieving commercialization speed comparable to a start-up. I will promote "eco-system style R&D" that makes flexible and dynamic use of internal and external human resources and funds, aiming to transform NEC by shifting its value creations speed up a gear.



Yutaka Ukegawa

Senior Vice President, President of Cross-Industry Unit

#### **Developing New Businesses through Public-Private Partnerships** and Cross-Industry Collaboration to Realize "Society 5.0"

In April 2019 we established a cross-industry unit to drive flexible and swift development of new businesses through public-private partnerships and cross-industry collaboration toward the realization of "Society 5.0". We are responsible for the phase from business verification to business development and up to initial business deployment. To begin, we will focus on business development in the fields of smart cities, mobility, fast travel, and public security networks.



**Makoto Enomoto** 

Senior Vice President, CMO (Chief Marketing Officer)

#### Establishing NEC's "Power of Transformation" in the Era of Digital Transformation (DX)

NEC enjoys strong brand recognition for being reliable, and for technological capability, which is its core competence. However, our brand has yet to achieve the desired level of recognition for "transformation capability." I will raise the level of recognition for NEC's transformation capability by promoting DX internally, while building up innovative case examples of DX through co-creation with customers and partners.



Shinobu Obata

Senior Vice President, CLCO (Chief Legal and Compliance

#### Raising the Integrity of the NEC Group through **Compliance Activities**

The NEC Group views compliance as its highest management priority. Management is constantly communicating its importance. In addition, in fiscal 2019 we have included compliance as an aspect of leadership, and we have reformed our system to give each organization head ownership over promotion and penetration of compliance within their respective organizations. I will strive to thoroughly ensure compliance so that employees and directors conduct their duties with a spirit of integrity at all times.



Osamu Fuiikawa

Senior Vice President. President of Business Innovation Unit

#### Tying NEC's Strong Assets to the Creation of **New Social Value**

In fiscal 2019, NEC undertook a completely new initiative with the establishment of dotData, Inc. and NEC X, Inc. in Silicon Valley. Furthermore, in 2019, we decided to enter the drug discovery business in the immunotherapy field using Al. Through these innovative steps, I will make a dedicated effort to build a pillar to support NEC's new growth by creating new businesses to solve social issues based on the outstanding technologies of our laboratories and increasing the value of those businesses.



Shigeki Shimizu

Senior Vice President, CSCO (Chief Supply Chain Officer)

#### Accelerating Growth with Sustainable Supply Chains

Supply chain risks are also opportunities. I will focus on increasing the efficiency of our supply chains and optimizing them, from end to end through collaboration and co-creation with all of the stakeholders involved. By building sustainable supply chains that take the environment and human rights into consideration, we will accelerate the growth of the NEC Group and increase product quality and safety.

For further details on NEC Corporation's corporate officers, visit the following URL.



## Financial Section (See notes to consolidated financial statements.)

NEC Corporation and Subsidiaries Years Ended March 31, 2018 and 2019

#### Consolidated Statements of Financial Position

	Millions	s of yen
	2018	2019
ssets		
Command accede		
Current assets	V 24/ 005	V 070 044
Cash and cash equivalents (Note 16)	¥ 346,025	¥ 278,314
Trade and other receivables (Note 15)	931,231	734,431
Contract assets (Note 25)	-	265,725
Inventories (Note 14)	220,254	234,621
Other financial assets	6,350	5,875
Other current assets	112,543	110,199
Subtotal	1,616,403	1,629,165
Assets held for sale (Note 17)	23,932	9,071
Total current assets	1,640,335	1,638,236
Non-current assets		
Property, plant and equipment, net (Notes 8 and 10)	399,590	408,821
Goodwill (Notes 9 and 10)	103,967	222,721
Intangible assets (Notes 9 and 10)	156,248	171,460
Investments accounted for		
using the equity method (Note 12)	67,747	72,421
Other financial assets	245,852	250,409
Deferred tax assets (Note 13)	142,402	150,511
Other non-current assets (Notes 10 and 21)	65,210	36,060
Total non-current assets	1,181,016	1,312,403
Total assets	¥2,821,351	¥2,950,639

	Millions	of yen
	2018	2019
Liabilities and Equity		
Liabilities		
Current liabilities		
Trade and other payables (Note 24)	¥ 512,115	¥ 482,59
Contract liabilities (Note 25)	-	184,05
Bonds and borrowings (Notes 16 and 20)	139,687	158,678
Accruals	171,434	178,91
Other financial liabilities	9,835	16,16
Accrued income taxes	13,844	8,29
Provisions (Note 23)	45,621	58,33
Other current liabilities (Note 22)	158,840	61,14
Subtotal	1,051,376	1,148,18
Liabilities directly associated with assets held for sale (Note 17)	11,689	9,07
Total current liabilities	1,063,065	1,157,25
Non-current liabilities		
Bonds and borrowings (Notes 16 and 20)	376,383	388,12
Other financial liabilities	9,118	47,41
Defined benefit liabilities (Note 21)	275,326	241,75
Provisions (Note 23)	13,754	23,16
Other non-current liabilities (Note 22)	29,420	32,59
Total non-current liabilities	704,001	733,06
Total liabilities	1,767,066	1,890,31
Equity		
Share capital (Note 18)	397,199	397,19
Share premium (Note 18)	138,704	138,82
Retained earnings (Note 18)	265,879	355,10
Treasury shares (Note 18)	(3,364)	(3,54
Other components of equity (Notes 18 and 21)	82,415	(27,99
Total equity attributable to owners of the parent	880,833	859,58
Non-controlling interests (Note 11)	173,452	200,74
Total equity	1,054,285	1,060,32
Total liabilities and equity	¥2,821,351	¥2,950,639

#### Consolidated Statements of Profit or Loss

Millions of yen			
- 2	2018		2019
¥2,	844,447	¥2	,913,446
2,	046,853	2	,083,517
	797,594		829,929
	729,855		742,336
	(3,889)		(29,128
	63,850		58,46
	29,553		21,989
	11,568		8,377
	5,106		5,916
	86,941		77,993
	26,784		25,543
¥	60,157	¥	52,450
	45,870		40,19
	14,287		12,25
¥	60,157	¥	52,450
	176 5/		154.7!
			154.7
	¥2,, 2,	2018 ¥2,844,447 2,046,853 797,594 729,855 (3,889) 63,850 29,553 11,568 5,106 86,941 26,784 ¥ 60,157 45,870 14,287	2018  ¥2,844,447  2,046,853  797,594  729,855 (3,889) 63,850 29,553 11,568 5,106 86,941 26,784  ¥ 60,157  ¥  45,870 14,287  ¥ 60,157  ¥  176.54

#### Consolidated Statements of Comprehensive Income

	Millions	of yen
_	2018	2019
Net profit	¥60,157	¥ 52,45
Other comprehensive income, net of tax		
Items that will not be reclassified to profit or loss		
Equity instruments measured at fair value through other comprehensive income (Note 18)	_	(3,03
Remeasurements of defined benefit plans (Notes 18 and 21)	3,368	(40,34
Share of other comprehensive income of associates (Note 18)	10	(37
Total items that will not be reclassified to profit or loss	3,378	(43,75
Items that may be reclassified subsequently to profit or loss		
Exchange differences on translating foreign operations (Note 18)	(6,434)	(61
Cash flow hedges (Note 18)	(92)	(6
Available-for-sale financial assets (Note 18)	8,462	
Share of other comprehensive income of associates (Note 18)	1,520	2
Total items that may be reclassified subsequently to profit or loss	3,456	(64
Total other comprehensive income, net of tax	6,834	(44,40
Total comprehensive income	¥66,991	¥ 8,05
Total comprehensive income attributable to		
Owners of the parent	51,599	(4,31
Non-controlling interests	15,392	12,36
Total	¥66,991	¥ 8,05

#### Consolidated Statements of Cash Flows

		Millions	of yen	
		2018		2019
Cash flows from operating activities				
Income before income taxes	¥	86,941	¥	77,99
Depreciation and amortization (Note 6)		96,037		99,08
Impairment loss (Notes 6 and 10)		1,530		12,60
Increase (decrease) in provisions		(7,450)		15,10
Financial income		(29,553)		(21,98
Financial costs		11,568		8,37
Share of (profit) loss of entities accounted for using the equity method		(5,106)		(5,91
Decrease (increase) in trade and other receivables		12,244		(41,47
Decrease (increase) in contract assets		-		(16,95
Decrease (increase) in inventories		(16,115)		(16,71
Increase (decrease) in trade and other payables		17,036		4,41
Increase (decrease) in contract liabilities		-		21,50
Others, net		(16,701)		(48,56
Subtotal		150,431		87,46
Interest and dividends received		6,076		7,58
Interest paid		(5,764)		(6,35
Income taxes paid		(20,762)		(24,46
Net cash provided by operating activities		129,981		64,23
Cash flows from investing activities				
Purchases of property, plant and equipment		(43,253)		(48,92
Proceeds from sales of property, plant and equipment		6,334		4,28
Acquisitions of intangible assets		(10,134)		(11,76
Purchases of available-for-sale financial assets		(2,336)		(11,70
Purchase of equity instruments measured at fair value		(2,330)		
through other comprehensive income		- 12,442		(7,37
Proceeds from sales of equity instruments measured		12,442		
at fair value through other comprehensive income		- (22 110)		2,29 (47,93
Purchase of shares of newly consolidated subsidiaries		(23,110)		(47,73
Acquisitions of subsidiaries, net of cash acquired  Proceeds from sales of shares of subsidiaries (Note 17)		228		20,23
Purchases of investments in affiliated companies				(1,14
Proceeds from sales of investments in affiliated		(471)		(1,14
companies (Note 17)		21,997 25,466		13,81 9
		(1,399)		(26
Others, net  Net cash used in investing activities		(14,231)		(76,67
		(14,231)		(70,07
Cash flows from financing activities Increase (decrease) in short-term borrowings, net				
(Notes 16 and 20)		8,214		48,23
Proceeds from long-term borrowings (Notes 16 and 20)		11,512		9,68
Repayments of long-term borrowings (Notes 16 and 20)		(65,864)		(157,77
Proceeds from issuance of bonds (Notes 16 and 20)		100,000		50,01
Redemption of bonds (Notes 16 and 20)		(40,000)		
Proceeds from sales of interests in subsidiaries to noncontrolling interests		-		18,81
Dividends paid (Note 19)		(15,586)		(15,58
Dividends paid to non-controlling interests		(4,258)		(4,26
Others, net		(1,257)		38
Net cash used in financing activities		(7,239)		(50,50
Effect of exchange rate changes on cash and cash equivalents		(2,447)		(1,27
Net increase (decrease) in cash and cash equivalents		106,064		(64,21
Cash and cash equivalents, at the beginning of the period		239,970		346,02
Decrease in cash and cash equivalents resulting from transfer to assets held for sale (Note 17)		(9)		(3,49
Cash and cash equivalents, at the end of the year (Note 16)	¥	346,025	¥	278,31

#### **Consolidated Statements of Changes in Equity**

				Million	s of yen			
		Ec	quity attributable to	owners of the paren	t		Non-	
	Share capital	Share premium	Retained earnings	Treasury shares	Other components of equity	Total	controlling interests	Total equity
As of April 1, 2017	¥397,199	¥147,879	¥235,601	¥(3,101)	¥76,686	¥854,264	¥161,802	¥1,016,066
Net profit	-	-	45,870	-	-	45,870	14,287	60,157
Other comprehensive income (Note 18)	-	-	-	-	5,729	5,729	1,105	6,834
Comprehensive income	-	-	45,870	-	5,729	51,599	15,392	66,991
Purchase of treasury shares (Note 18)	-	-	-	(271)	-	(271)	-	(271)
Disposal of treasury shares (Note 18)	-	(5)	-	8	-	3	-	3
Cash dividends (Note 19)	-	-	(15,592)	-	-	(15,592)	(4,258)	(19,850)
Put option, written over shares held by a non-controlling interest shareholder	-	(2,113)	-	-	-	(2,113)	-	(2,113)
Changes in interests in subsidiaries (Note 11)	-	(7,057)	-	-	-	(7,057)	516	(6,541)
Total transactions with owners	_	(9,175)	(15,592)	(263)		(25,030)	(3,742)	(28,772)
As of March 31, 2018	¥397,199	¥138,704	¥265,879	¥(3,364)	¥82,415	¥880,833	¥173,452	¥1,054,285

				Million	s of yen			
		Equity attributable to owners of the parent			Non-			
	Share capital	Share premium	Retained earnings	Treasury shares	Other components of equity	Total	controlling interests	Total equity
As of April 1, 2018	¥397,199	¥138,704	¥265,879	¥(3,364)	¥ 82,415	¥880,833	¥173,452	¥1,054,285
Impact of changes in accounting policies	-	-	64,619	-	(65,904)	(1,285)	-	(1,285)
Recalculated beginning balance	397,199	138,704	330,498	(3,364)	16,511	879,548	173,452	1,053,000
Net profit (loss)	-	-	40,195	-	-	40,195	12,255	52,450
Other comprehensive income (loss) (Note 18)	-	-	-	-	(44,506)	(44,506)	106	(44,400)
Comprehensive income	-	-	40,195	-	(44,506)	(4,311)	12,361	8,050
Purchase of treasury shares (Note 18)	-	-	-	(215)	-	(215)	-	(215)
Disposal of treasury shares (Note 18)	-	2	-	32	-	34	-	34
Cash dividends (Note 19)	-	-	(15,591)	-	-	(15,591)	(4,302)	(19,893)
Put option, written over shares held by a noncontrolling interest shareholder	-	836	_	-	-	836	-	836
Changes in interests in subsidiaries (Note 11)	-	(718)	-	_	_	(718)	19,231	18,5 13
Total transactions with owners	-	120	(15,591)	(183)	-	(15,654)	14,929	(725)
As of March 31, 2019	¥397,199	¥138,824	¥355,102	¥(3,547)	¥(27,995)	¥859,583	¥200,742	¥1,060,325

## Non-Financial Section – Achievements and Progress on ESG-Related Themes

We have compiled a lists of non-financial indicators for measuring our progress on Priority Management Themes from an ESG Perspective – Materiality. For the years ended or at year-end of March 31, 2018 and 2019 Items that do not have footnotes apply to NEC Corporation alone.

#### Environment field

#### Environmental Action with a Particular Focus on Climate Change \*NEC Corporation and 42 NEC Group Companies (Worldwide)

	2018	2019
Rate of contribution to CO <sub>2</sub> emission reductions across the whole supply chain	3.5 times	6 times
CO <sub>2</sub> emissions reduction by providing IT solutions (Each year)	4,220 thousand tons	5,300 thousand tons
Improvement in energy efficiency of products (Versus products in fiscal 2014)	35 %	74 %
Greenhouse gas emissions*1*2		
Scope 1	56 thousand tons	52 thousand tons
Scope 2	282 thousand tons	277 thousand tons
Scope 3	5,820 thousand tons	5,295 thousand tons

	2016	2019
Energy usage*2*3		
Electricity	5,685 TJ	5,712 TJ
Fuel (Gas)	984 TJ	931 TJ
Fuels (heavy oil and kerosene, etc.) and steam	119 TJ	103 TJ
Water usage*2	2,314 thousand m <sup>3</sup>	2,193 thousand m <sup>3</sup>
Industrial waste*2		
Emission volume (general waste + industrial waste)	42.6 thousand tons	38.3 thousand tons
Resource reuse rate	91.0 %	90.0 %

- \*1 Greenhouse gas refers to CO<sub>2</sub> (carbon dioxide), CH<sub>4</sub> (methane), N<sub>2</sub>O (nitrous oxide), HFCs (hydrofluorocarbons), PFCs (perfluorocarbons), SFs (sulfur hexafluoride), and NFs (nitrogen trifluoride). Greenhouse gas emissions are calculated based on the following categories stated by the Greenhouse Gas Protocol (GHG Protocol). Scope 1: Direct GHG emissions from sources that are owned or controlled by the Company Scope 2: Indirect GHG emissions from consumption of purchased electricity, heat or steam
- Scope 3: Other indirect emissions covering corporate upstream and downstream processes not included in Scope 2

  \*2 External assurance received. The scope of assurance includes NEC Corporation and consolidated subsidiaries
- subject to environmental governance.
  \* 3 TJ: Terajoule

#### Social field

#### Sustainably and Socially Literate Human Resources

	2018	2019
Ratio of employees who feel that the Company's direction has changed toward creating social value by accepting a diverse range of values	-	23 %
Number of employees by region		
Total*4	109,390 people	110,595 people
Japan	79,642 people	76,799 people
Asia Pacific	10,985 people	11,772 people
China/East Asia	4,739 people	4,614 people
EMEA	6,636 people	9,797 people
North America	2,710 people	2,769 people
Latin America	4,678 people	4,844 people
Ratio of outside directors to all directors	45.5 %	45.5 %
Number of female managers*5*6 (As of April 1 of each year)	372 people	359 people
Ratio of female managers*5*6 (As of April 1 of each year)	5.8 %	5.9 %
Ratio of female new employees	27.9 %	29.4 %

	2018	2019
Ratio of employees with disabilities (As of June 1 of each year)	2.22 %*6	2.33 %
Number of people utilizing childcare leave*5*6	358 people	381 people
Ratio of employees returning after childcare leave	-	97.3 %* <sup>6</sup>
Number of people utilizing nursing care leave*5*6	32 people	24 people
Average age of employees*5*6	43.4 years old	43.4 years old
Average length of employment*5*6	19.0 years	19.0 years

#### **Privacy Policies and Measures Aligned** with Societal Expectations

	2018	2019
Dialogue meetings with multiple stakeholders	_	5 times

- \*4 Scope: NEC Corporation and consolidated subsidiaries
  \*5 Excluding corporate officers, advisors, and non-permanent employees
- \*6 Externally assured figures
  \*7 Ratio of employees returning to work who started childcare leave in fiscal 2017

#### **G** overnance field

#### Governance/Compliance

	2018	2019
Number of cases of involvement with serious cartels and/or bid-rigging	-	0

#### **Security to Maximize ICT Possibilities**

\* We will promote minimization of risks and maximization of value, using minimization of the effects of serious security incidents and the promotion of reference cases as an indicator.



#### Dialogue and Co-creation with Our Stakeholders

\* We recognize that dialogues and co-creation of value are processes that NEC should incorporate into all business activities. For this reason, we do not specify non-financial indicators for this area.

#### **Innovation Management**

	2018	2019
R&D expenses*8	¥108.1 billion	¥108.1 billion
Number of patents*8	approx. 51,000	approx. 49,000

<sup>\*8</sup> Scope: NEC Corporation and consolidated subsidiaries

#### **NEC Safer Cities**

#### **NEC Value Chain Innovation**

\* We will study promoting model case analysis as a non-financial indicator for measuring progress.

#### **Corporate Overview**

**Company Name** NEC Corporation

7-1, Shiba 5-chome, Minato-ku, Address

Tokyo 108-8001, Japan

**Established** July 17, 1899

Number of Employees (As of March 31, 2019)

110,595

(NEC Corporation and consolidated subsidiaries)

Total Number of Shares Issued (As of March 31, 2019)

260,473,263 shares

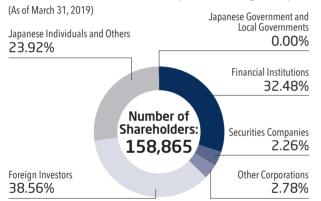
**Stock Exchange Listing** 

Tokyo (Securities Code: 6701)

**Shareholder Register Administrator** 

Sumitomo Mitsui Trust Bank, Limited 1-4-1, Marunouchi, Chiyoda-ku, Tokyo

#### Classification of Shareholders (Shareholding Ratio)



#### **Organization Chart**



#### Major Shareholders (Top 10) (As of March 31, 2019)

Name of Shareholders	Number of Shares Held (Thousands of Shares)	Shareholding Ratio
The Master Trust Bank of Japan, Ltd. (Trust Account)	18,928	7.28
Japan Trustee Services Bank, Ltd. (Trust Account)	15,688	6.04
NIHK A/C CLIENT (OWNED BY KKR FUNDS)	8,972	3.45
Japan Trustee Services Bank, Ltd. (Trust Account No.9)	7,080	2.72
STATE STREET BANK WEST CLIENT – TREATY 505234	6,391	2.46
Sumitomo Life Insurance Company	5,600	2.16
Japan Trustee Services Bank, Ltd. (Trust Account No.5)	5,075	1.95
NEC Employee Shareholding Association	4,762	1.83
BNYMSANV AS AGENT / CLIENTS LUX UCITS NON TREATY 1	4,470	1.72
Japan Trustee Services Bank, Ltd. (Trust Account No.7)	4,388	1.69

Note: The shareholding ratio is calculated by excluding the number of treasury stock (638,482 shares)

The information contained in Integrated Report 2019 is also available on NEC's website.

#### NEC home page

## https://www.nec.com

#### Sustainability

#### https://www.nec.com/en/global/csr/

The above link offers further details of NEC's approach to sustainable management based on ESG, "Sustainability Report 2019," and related information.



Sustainability Promotion Office, Corporate Communications Division

#### **Evaluation by External Parties**

(As of September 2019)

FTSF4Good Index Series MSCI ESG Leaders Indexes



MSCI ESG Leaders Indexes 44.CDb

(Climate Change and Water Security)

Ethibel Pioneer & Excellence

ISS ESG Corporate Rating Euronext Vigeo World 120



FTSE4Good

**EURONEXT** vigeoeiris

STOXX Global ESG Leaders Index



EcoVadis



#### **Investor Relations**

#### https://www.nec.com/en/global/ir

Posted on the NEC Investor Relations (IR) website are IR presentation materials and other documents, NEC's financial position and business results, stock and bond information, and much more. NEC constantly strives to enhance the disclosure on this website.





#### Cautionary Statement with Respect to Forward-Looking Statements

This material contains forward-looking statements regarding estimations, forecasts, targets and plans in relation to the results of operations, financial conditions and other overall management of the NEC Group (the "forward-looking statements"). The forward-looking statements are made based on information currently available to NEC and certain assumptions considered reasonable as of the date of this material. These determinations and assumptions are inherently subjective and uncertain. These forward-looking statements are not guarantees of future performance, and actual operating results may differ substantially due to a number of factors. The factors that may influence the operating results include, but are not limited to, the following:

- Effects of economic conditions, volatility in the markets generally, and fluctuations in foreign currency exchange and interest rate
- Trends and factors beyond the NEC Group's control and fluctuations in financial conditions and profits of the NEC Group that are caused by external factors
- Risks arising from acquisitions, business combinations and reorganizations, including the possibility that the expected benefits cannot be realized or that the transactions may result in unanticipated adverse consequences
- Developments in the NEC Group's alliances with strategic partners
- Effects of expanding the NEC Group's global business
- Risk that the NEC Group may fail to keep pace with rapid technological developments and changes in
- Risk that the NEC Group may lose sales due to problems with the production process or due to its failure to adapt to demand fluctuations
- Defects in products and services
- Shortcomings in material procurement and increases in delivery cost
- Acquisition and protection of intellectual property rights necessary for the operation of business

- Risk that intellectual property licenses owned by third parties cannot be obtained and/or are discontinued
- Risk that the NEC Group may be exposed to unfavorable pricing environment due to intensified competition
- Risk that a major customer changes investment targets, reduces capital investment and/or reduces the value of transactions with the NEC Group
- Risk that the NEC Group may be unable to provide or facilitate payment arrangements (such as vendor financing) to its customers on terms acceptable to them or at all, or risk that the NEC Group's customers are unable to make payments on time, due to the customers' financial difficulties or otherwise
- Risk that the NEC Group may experience a substantial loss of, or an inability to attract, talented personnel
- Risk that the NEC Group's ability to access the commercial paper market or other debt markets are adversely affected due to a downgrade in its credit rating
- Risk that the NEC Group may incur large costs and/or liabilities in relation to internal control, legal proceedings, laws and governmental policies, environmental laws and regulations, tax practice, information management, and human rights and working environment
- · Consequences of natural and fire disasters
- Changes in methods, estimates and judgments that the NEC Group uses in applying its accounting policies
- Risk that the NEC Group may incur liabilities and losses in relation to its retirement benefit obligations

The forward-looking statements contained in this material are based on information that NEC possesses as of the date hereof. New risks and uncertainties come up from time to time, and it is impossible for NEC to predict these events or how they may affect the NEC Group. NEC does not intend to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

#### Trademarks

- NEC is a registered trademark of NEC Corporation in Japan and other countries.
- All other names may be trademarks of their respective owners.

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