# **Review of Operations**

# **Public Business**



In the public business, we provide safe, secure and efficient social solutions for domestic and foreign governments, governmental agencies, local governments, public institutions, financial institutions and other organizations by combining our distinctive technology assets, including network and sensor technologies and analysis technology, with a broad expertise in systems integration.

Tomonori Nishimura

Executive Vice President

# Fiscal 2015 Performance

In the public business, sales were ¥821.9 billion, an increase of 11.3% year on year, due to large projects for government agencies including a field communication system, and high demand in wide-area disaster prevention digitization of firefighting emergency radio system.

Operating income improved ¥16.2 billion year on year to ¥74.8 billion, mainly owing to increased sales.

# Fiscal 2015 Main Accomplishments

In addition to responding to large projects and special demand, NEC strengthened technologies and productivity in growth areas and developed solutions to return concrete results.

## ▶ Strengthening Technical Capabilities and Productivity

Ranked first for facial recognition and fingerprint identification in the benchmark test by the U.S. National Institute of Standards and Technology (NIST)
Began operations at the Satellite Integration Center, where satellites are assembled, assessed and tested among other things
Commenced full-scale operations of the Cyber Security Factory to support the implementation and operation of cyberattack countermeasures to protect
customers' information assets

## ▶ Solutions Development

Launched network solutions supporting the Social Security and Tax Number System in preparation of local governments starting their procurements related to the system Launched the Water Leak Detection Service using cutting-edge technologies from collection and analysis of Big Data to detect leaks in water pipes rapidly and minutely Launched the NeoFace Monitor security software to prevent illegal access to PCs by requiring facial recognition to log on

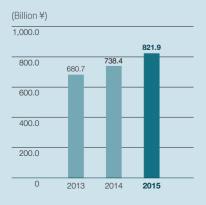
### Specific Results

Delivered the Predictive Monitoring and Diagnostics System to The Chugoku Electric Power Co., Inc. for use in the No. 2 reactor at the Shimane Nuclear Power Plant Delivered backbone network using SDN to West Nippon Expressway Company Limited (NEXCO-West)

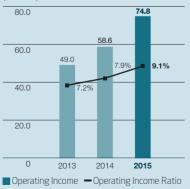
Provided an ID system for concert-goers using facial recognition technology

Built an integrated disaster-prevention system using the world's first crowd behavior analysis technology for Toshima City Office, Tokyo

# Sales



## Operating Income, Operating Income Ratio (Billion ¥)





Large-scale space chamber at the Satellite Integration Center



Cyber Security Factory

NeoFace Monitor, PC security software using facial recognition

## For Future Growth

## OPPORTUNITIES

- Activated domestic investments in preparation for the introduction of the National ID number system and hosting of the Tokyo 2020 Olympic and Paralympic Games
- Expanded investment in urban infrastructure centered on emerging countries/Measures against degradation of infrastructure

### THREAT FACTORS

Loss of opportunities from a shortage of resources

## NEC'S RESPONSE

- ▶ Take a proactive approach to domestic customers by leveraging our strengths in sensors, networks, IT and other fields
- ▶ Enter international markets with competitive solutions including Predictive Monitoring and Diagnostics System, water management solutions, complete airport solutions, cyber security and biometrics
- ▶ Effectively leverage resources, including the standardization of development processes

## Business Environment

ICT investment in Japan is on the road to recovery and there is a tailwind of support for social infrastructure projects ahead of the January 2016 implementation of the Social Security and Tax Number System in which individual numbers will start being used, and the Tokyo 2020 Olympic and Paralympic Games. In the international market, meanwhile, demand for constructing new

infrastructures is arising at cities in newly emerging countries, while in developed countries there are needs for infrastructure diagnostics and preventative preservation to counter degradation of existing infrastructures. It is estimated that markets for transport, water and energy will expand in particular.

## NEC's Issues and Responses

Under this business environment, NEC works to expand sales by responding to demand unique to Japan in the Social Security and Tax Number System, regional revitalization, national resilience projects, and the New Basic Plan on Space Policy. In addition, with initiatives taken in focus businesses in Japan and overseas such as Big Data, SDN, cloud-based services and safety, we will establish new businesses that will provide a foothold for growth going forward.

NEC carried out field trials with customers and delivered systems. Our initiatives include the Predictive Monitoring and Diagnostics System (PMDS), a safe operation system for large-scale facilities that detects equipment irregularities at the predictive stage; a Water Leak Detection Service that inspects and efficiently manages waterway leaks; and complete airport solutions that support air traffic control through to service facilities within airports for safe

and smooth operations. Moreover, we are steadily expanding results of the Cyber Security Factory, which protects customers' information assets from cyberattacks. Currently, we are providing security monitoring services to about 100 companies. Additionally, NEC holds the world's most accurate facial and fingerprint identification technologies, and we are expanding the applications of the technologies with immigration control and urban surveillance to applications such as verifying people entering concert halls and preventing illegal access to PCs.

On the other hand, NEC acknowledges possible risks of losing business opportunities due to resource shortage in system integration. In response, NEC is working to standardize development processes to enhance efficiency.

## Medium- to Long-Term Value Creation

The public business is largely related to social infrastructure, and the projects are characteristically long in life cycle. As a result, it is important to conduct business development with future outlook in an early state to deliver medium- to long-term growth. To this end, we initiated the development of a Water Leak Detection Service for a local government in the state of Texas, U.S.A. which then led to initiatives such as conducting joint research on social infrastructure projects with Texas State University in fields other than detection of water leaks. We will expand growth on a global scale by steadily

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Going forward, NEC will proactively propose solutions incorporating cutting-edge technology in response to market opportunities, including the Tokyo 2020 Olympic and Paralympic Games. Furthermore, we will accelerate the transformation as a service provider in the ICT field for global development, while focus on building business models that are competitive in the international market.

NEC Corporation
Annual Report 2015

Annual Report 2015

# **Enterprise Business**



NEC provides IT solutions in manufacturing and retail/services in the private sector, launching new services to help create new value for customers.

In particular, we are accelerating development in the total supply chain management (SCM) business for manufacturing, retail and logistics worldwide as it will be a growth field going forward.

Chikara Ishii

Senior Vice President

# Fiscal 2015 Performance

In the enterprise business, sales decreased 0.7% year on year to ¥270.5 billion. While sales to the retail and services showed solid growth, sales to the manufacturing sector decreased.

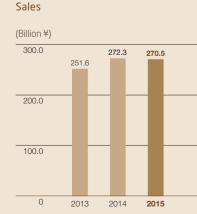
Operating income improved by ¥1.8 billion year on year to ¥8.3 billion, owing to cost reduction and the improved profitability of system integration services, despite reduced sales.

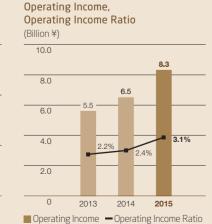
# Fiscal 2015 Main Accomplishments

### To Transport

## To Sell

- \*1 PLM: Product Lifecycle Management
- \*2 NEC is an official marketing partner of Universal Studios Japan®.
- ® Universal Studios. CR15-2523





## **NEC Global Enterprise Solutions System**



# For Future Growth

## OPPORTUNITIES

- ▶ Recovery in IT investment in Japan as domestic corporate business performance improves
- lapanese business models for convenience stores and retail services to be further deployed in the international markets

# THREAT FACTORS

Cost competition to intensify in Japan

## NEC'S RESPONSE

- ▶ Leverage NEC's unique technologies to develop value chain innovations
- ▶ Expand "NEC Global Enterprise Solutions" that reflect our strengths and track record in Japan and international market
- ▶ Reduce costs through further cost management

### **Business Environment**

In Japan, IT investments are expected to improve with recovery in the performance of domestic companies though some industries show weaker momentum than others. It is notable that IT investments that contribute to a customer's business growth or to create new business for customers have gained vigor. Furthermore, markets are projected to expand for enterprise SDN, which has already entered a period of widespread adoption, and security, in

addition to Big Data utilization and cloud-based services. That said, the IT market for private-sector demand in Japan is highly competitive, and slips easily into price competition. As a result, securing profits remains a challenge in these fields.

Globally, there are opportunities to broaden business with Japanese companies making inroads to emerging countries, or an expansion in local markets.

## NEC's Issues and Responses

On the basis of this business environment, NEC is responding with ongoing efforts to reduce costs through cost management to improve profitability of the Enterprise Business. In addition, we continue to establish the competitive "Solutions for Society" by accelerating the value chain innovations of "to create, transport and to sell" to deliver the "Solutions for Society" closest to people's lives and lifestyles. Furthermore, in addition to expanding SDN solutions to accelerate business development in the SDN market, NEC is leveraging its unique technologies to focus on

growth areas: security solutions such as measures against targeted attacks, information leaks and corporate response to the Social Security and Tax Number System; failure sign monitoring systems and demand forecasts using Big Data; and cloud services catered to customers' needs.

In expanding global business, NEC sets "NEC Global Enterprise Solutions," a set of strong solutions with prominent track records in Japan, as its core solutions. With it, we will move ahead to grow in Asian market.

## Medium- to Long-Term Value Creation

Improving profitability is the key factor for the medium- to longterm growth of the Enterprise Business. NEC is approaching this by shifting the business model of the Enterprise Business. This includes that in addition to increasing the ratio of upstream processes such as consulting in the systems integration business, we will move ahead with packaging and toward cloud-based services centered on growth areas. This will entail converting the traditional customization model to a business model premised on horizontal development.

Globally, NEC will further expand "NEC Global Enterprise Solutions" and strengthen the business by leveraging the expertise of Regional Business Support Centers (RBSC) in global development. We aim to broaden target regions and industries, and create new businesses in the international market.

NEC Corporation Annual Report 2015

# Telecom Carrier Business



In the telecom carrier business, we supply equipment mainly to telecom carriers for network implementation, along with network control platform systems and operating services. NEC's wealth of experience in large-scale network implementation and strong technical capabilities contribute to the development of highly reliable communications networks.

Shunichiro Tejima Executive Vice President

# Fiscal 2015 Performance

In the telecom carrier business, sales were ¥740.2 billion, an increase of 2.0% year on year, thanks to increased international business through submarine cable systems and mobile backhaul even as Japanese sales were flat.

Operating income improved by ¥1.6 billion year on year, to ¥62.0 billion owing to increased sales and streamlined costs, despite accelerated investment in growth fields such as software-defined networking (SDN) and Telecom Operations & Management Solutions (TOMS),

# Fiscal 2015 Main Accomplishments

Strengthened the global structure in the SDN/NFV field for telecom carriers with NetCracker Technology Corp.

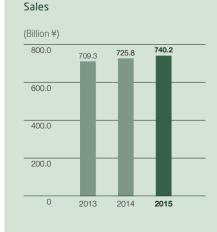
Operating Income, Operating Income Ratio

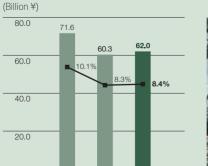
## ▶ Submarine Cable Systems

# ▶ lapan

Delivered LTE-A base stations

<sup>\*</sup> NFV: Network Functions Virtualization





2013 2014 ■ Operating Income ■ Operating Income Ratio



n iPASOLINK established in Thailand's Nakhon

## For Future Growth

## OPPORTUNITIES

- ▶ Expansion of global communications infrastructure market in the emerging nations
- ▶ Strong need to reduce capital investments and operating costs as communications infrastructure becomes more complex

## THREAT FACTORS

▶ Maturation of the Japanese market and increased competition from global vendors

▶ Global marketing of solutions such as TOMS and SDN that reduce capital investments and operating costs for customers

NEC'S RESPONSE

▶ Maintain domestic advantage through prompt response to advanced technologies

### **Business Environment**

to be severe in Japan by a matured market in which we expect to see a decrease in investments in network infrastructure. Furthermore, we expect that competition will intensify as markets become increasingly borderless.

Globally, however, the market is expected grow particularly in emerging countries, backed by a steady increase in needs for

The environment for business targeting telecom carriers is expected network infrastructure. In addition, services such as TOMS, which contributes to reducing customers' operating costs, are expected to grow.

> Moreover, while the market launch of SDN/NFV is delaying, telecom operators are working steadily in commercial application of the service, which is expected to trigger significant changes in the telecom carrier business.

# NEC's Issues and Responses

Amid such an operating environment, NEC will firmly maintain its domestic advantage in the intensifying global competition by promptly providing network devices with advanced technologies to our customers. In the international market, we will growth in existing businesses such as submarine cable systems and mobile backhaul in response to the need for infrastructure expansion. Furthermore, we have positioned TOMS and SDN/NFV as focus

fields, and we will contribute to our customers in and outside of Japan in cutting their capital expenditures and operating costs. For SDN/NFV, in particular, we acknowledge that establishing a prominent position in the newly commercialized market is important in expanding our business when the market starts to grow. To this end, we are investing in development and sales resources to accelerate business development.

# Medium- to Long-Term Value Creation

Medium-to long-term growth in the telecom carrier business relies on an extension of steady growth in TOMS and the rapid commercialization of SDN/NFV. We expect to see demand in the TOMS market to grow in response to advancing network operation controls going forward. NEC will expand business with its subsidiary NetCracker Technology Corp.

For telecom carrier SDN/NFV, we believe that obtaining rapid commercialization results will expand business opportunities among global telecom carriers. To this end we will actively move forward with proposal, and field tests for Telefónica Brasil, S.A. and other global carriers.

Furthermore, in preparation for the full-scale commercialization of SDN/NFV for telecom carriers going forward, we have collaborated with NetCracker Technology in strengthening the global sales expansion network for SDN/NFV solutions. Looking ahead, NetCracker Technology has been delivering to more than 250 companies in 58 countries, utilizing solution selling methods cultivated by marketing TOMS to accelerate proposal activities directed at telecom carriers across the globe.

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# **System Platform Business**



In the system platform business, we provide products for business, ranging from terminals to network and computer equipment, software products and service platforms, as well as solutions and services based on them. Our solution platforms, which organically combine these products, solutions and services, reduce labor and improve efficiency for customers, while at the same time creating new value based on ICT.

Shinichi Shoji

Executive Vice President

# Fiscal 2015 Performance

In the system platform business, sales were ¥728.9 billion, a decrease of 6.6% year on year, due to the special demand for corporate PCs that occurred in the previous fiscal year and the reduction of enterprise networks.

Operating income was ¥31.4 billion, an increase of ¥0.7 billion year on year due mainly to structural reforms in enterprise networks and integration of NEC Fielding, Ltd. in spite of the rapid devaluation of the yen.

# Fiscal 2015 Main Accomplishments

## ▶ Reinforcing Profitability

Began development of the next-generation vector supercomputer aiming for performance more than 10 times greater than existing models Commenced operations at NEC Cloud laaS/Kanagawa Data Center

Achieved the leading share in 2014 enterprise telephony equipment market in Japan and the third largest share worldwide\*1

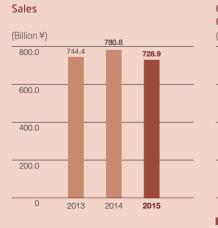
\*1 Source: Gartner, "Market Share: Enterprise Telephony Equipment, Worldwide 2014," 17 March 2015 (Seat License Shipment base) Graph created by NEC, based on research by Gartner

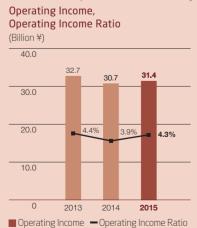
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\*2 Source: CY1996-2014 Japan x86 Server Market (Unit, Factory Revenue (Yen))

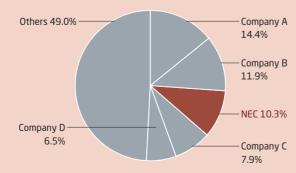
Source: IDC, Worldwide Quarterly Server Tracker 2015Q1

IDC declares a statistical tie in the server market when there is less than one percent difference in the factory revenues of two or more vendors.









## For Future Growth

### OPPORTUNITIES

- ▶ Popularization and expansion of cloud services and Big Data due to the uptake of the IoT
- Expansion of demand for security

## THREAT FACTORS

- ▶ Price competition to intensify in the general-purpose market
- Costs to increases due to weak ven

▶ Accelerate creation of new services in growth areas such as Big Data and cloud services

**NEC'S RESPONSE** 

- ▶ Create solution platforms in preparation for the IoT
- ▶ Maintain cost competitiveness through further cost reductions and development cost efficiency

## **Business Environment**

The environment encompassing the system platform business has become increasingly harsh in recent years with customers seeking lower costs particularly in the general-purpose hardware. Added to that, costs rose in the latter half of fiscal 2015 due to the rapid yen depreciation, which is expected to continue through fiscal 2016.

On the other hand, the market is expected to grow in areas that can strengthen competitiveness and cost reductions for customers. These include cloud platforms, SDN, Big Data and security, and advanced information processing platforms supporting the enormous amounts of digital data generated by the popularization of the IoT (Internet of Things) going forward.

# **NEC's Issues and Responses**

To provide strong ICT assets as a foundational business and support business units in promoting the "Solutions for Society" amid such an operating environment, the System Platform Business Unit will streamline costs and expenses by standardizing parts used in various types of hardware. Moreover, we are reforming the development and production framework to raise cost competitiveness and maintain our position in the existing market.

In addition, we are creating new solutions in fields such as SDN. safety and security, Big Data and cloud platforms for further growth. NEC sees sales expansion in these areas as an immediate goal and is accelerating business development by investing in the growth areas.

## Medium- to Long-Term Value Creation

The general-purpose market is expected to become fierce in competition going forward. For the system platform business to deliver significant value over the medium- to long-term in this environment, NEC is reforming its business models from providing various types of hardware, software and components parts, to providing the combination of these items as solutions.

NEC has proprietary technology and expertise in Big Data engines with vector supercomputers, virtualized platforms evolving SDN and edge computing. NEC will leverage these strengths going forward as we strive to take the lead in the upcoming IoT age. Furthermore, we will integrating these three strengths and accelerate creation of solution platforms that provides higher added-value.

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