

## SOCIAL INFRASTRUCTURE BUSINESS



**Tomonori Nishimura**  
Senior Vice President

NEC provides eco-friendly, reliable and secure systems and solutions that contribute to a comfortable society. Through information and communications technology (ICT), these systems and solutions support the sophisticated operation of social infrastructure, including broadcasting and video distribution systems, control systems, transportation and public network systems, fire and disaster prevention systems, and aerospace and defense systems.

### FISCAL 2012 PERFORMANCE AND MAIN ACCOMPLISHMENTS

Business segment sales increased 3.6% year on year to ¥330.4 billion. This increase mainly reflected steady growth in the social systems field including broadcasting, and fire and disaster prevention systems, despite a decline in sales in the aerospace and defense systems fields due to government expenditure cutbacks in Japan.

Operating income improved ¥1.6 billion to ¥16.2 billion, mainly reflecting increased sales and cost reductions.

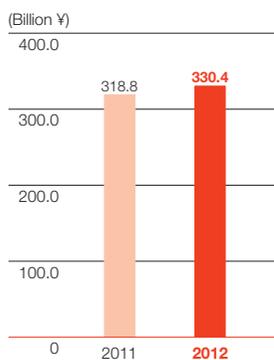
In fiscal 2012, in the social systems field, particularly broadcasting and video distribution systems, NEC delivered a studio system for multimedia broadcasting to mmbi, Inc., which launched "NOTTV™,"\*1 Japan's first broadcasting service for smartphone users. In addition, digital terrestrial TV transmitters designed to provide digital terrestrial TV broadcasting service to the Kanto region were delivered to TV Asahi Corporation, TV TOKYO Corporation, and Fuji Television Network, Inc. These digital terrestrial TV transmitters, which reduce power consumption by more than 40% compared with conventional models, have been

installed on "TOKYO SKYTREE®"\*2. Overseas, NEC supplied digital broadcasting equipment to Argentina. Ever since its first delivery in 1998 to the U.K., where the world's first commercial digital terrestrial broadcasting service was launched, NEC has delivered more than 3,000 digital terrestrial TV transmitters to 42 countries around the world. Leveraging this track record and its technical capabilities as competitive advantages, NEC will continue to provide products that meet customer needs.

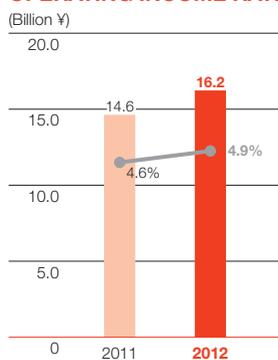
Since fiscal 2011, demand for disaster prevention systems in Japan has increased significantly due to regional enlargement and digitization of wireless communication networks of fire and disaster prevention systems. NEC has maintained a high market share in this field by leveraging software defined radio (SDR) technology developed ahead of the industry. Moreover, NEC also delivered postal automation systems to Switzerland and Malaysia.

In the aerospace and defense systems field, NEC was chosen to design the systems of the asteroid explorer for the "Hayabusa 2 Project," which is scheduled for launch in 2014. This comes in recognition of NEC's solid track record

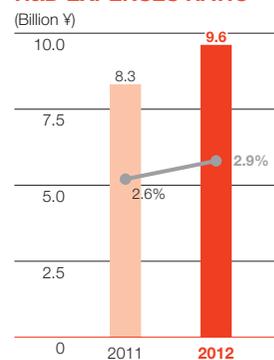
#### SALES



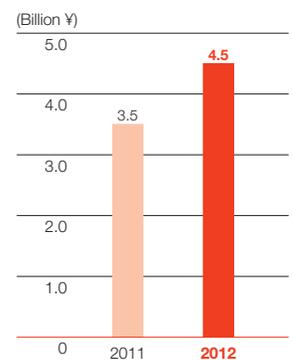
#### OPERATING INCOME, OPERATING INCOME RATIO



#### R&D EXPENSES, R&D EXPENSES RATIO



#### CAPITAL EXPENDITURES



\*1 NOTTV is a trademark of mmbi, Inc.

\*2 "TOKYO SKYTREE" is a registered trademark of TOBU RAILWAY CO., LTD. & TOBU TOWER SKYTREE CO., LTD.

and experience in this field. The asteroid explorer will be the successor to the original “Hayabusa” asteroid explorer, which returned to Earth in June 2010.

## FOR FURTHER GROWTH

The social infrastructure business should continue to expand as earthquake recovery-related projects get fully under way. Expansion should also be driven by continuing demand for digital communications in the fire and disaster prevention, broadcasting and transportation systems fields.

In light of this business environment, NEC's first priority will be to build a stable operating base by ensuring that it seizes business opportunities. Opportunities will include replacement demand driven by regional enlargement and digitization of wireless communications networks of fire and disaster prevention systems, upgrades to the second generation of ETC systems, and renovation of broadcasting studio facilities. Another opportunity will be overseas demand for TV transmitters.

Furthermore, NEC aims to launch new businesses by developing technologies related to telematics systems, intelligent transportation system (ITS) communications (vehicle-to-vehicle and road-to-vehicle communications) and smart grids (control of energy).

NEC is also focused on expanding business globally by utilizing the business assets it owns. NEC has a strong track record in projects such as astronomical observation satellites and the “Hayabusa” asteroid explorer. Leveraging this strength, NEC will develop compact Earth observation satellites with a low cost and short delivery time utilizing the NEXTAR small standard satellite bus module system\*3.



Digital terrestrial TV transmitters installed on “TOKYO SKYTREE”<sup>®</sup> (Broadcasting and video distribution systems)

NEC plans to market this satellite to emerging countries primarily in Asia, where there are growing needs for owning satellites for disaster prevention and other purposes. NEC also intends to create new businesses in the safety domain, including surveillance of critical facilities and disaster prevention systems, with the view to develop the safety business globally. This effort will comprehensively utilize NEC's strengths in various technologies such as sensor, network and information processing technologies.

NEC has other unique products, such as the X-info Table (read “Cross-info Table”), a large tablet device that enables the rapid gathering and analysis of information by multiple people, and terahertz imagers, which has sensitivity in terahertz waves\*4 and can find out something from terahertz images that cannot be observed with visible light or infrared radiation. By proposing unique solutions harnessing these sorts of products, NEC will strive to win new customers.



“Hayabusa 2”  
(Image provided by Akihiro Ikeshita)



High-performance fire-fighting command center  
(Fire and disaster prevention systems)

\*3 Bus system: Structurally, artificial satellites consist of a mission-specific component for performing communications, Earth observation and other tasks, and a bus component that provides functions common to all satellites, such as attitude control and power supply. NEC is working on standardizing the bus component of satellites.

\*4 Terahertz waves: These electromagnetic waves are situated between visible light / infrared radiation and radio waves. Because they can be transmitted through paper, plastic, fabrics, smoke and other substances, terahertz waves are attracting high hopes for applications in various fields, such as non-destructive inspection, healthcare and drug discovery and detection of illegal substances.