

MOTION & CONTROL™

**NSK**

**NSK REPORT 2017**

Year ended March 31, 2017  
Integrated Report



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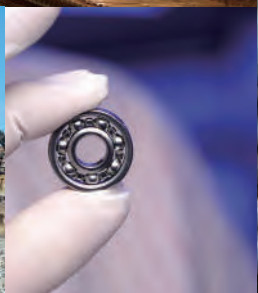
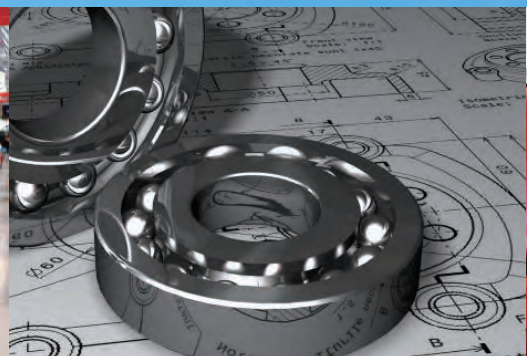
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## Mission Statement

NSK contributes to a safer, smoother society and helps protect the global environment through its innovative technology integrating Motion & Control™.

As a truly international enterprise, we are working across national boundaries to improve relationships between people throughout the world.



## NSK Report 2017 Editorial Policy

The NSK Report 2017, which provides a complete picture of the Company together with the story and results of efforts to create corporate value as well as a comprehensive account of NSK's underlying strengths, is designed to provide all stakeholders with a deeper understanding of the Company. This Report provides a concise summary of all information deemed important in the Group's efforts to create corporate value. For more detailed information about the NSK Group's products, business activities, and financials, we ask that you refer to the Company's website. Detailed information about NSK's approach to and initiatives in corporate social responsibility (CSR) can be found in the CSR section of our website and in our CSR Report. In putting together this Report, we referred to the International Integrated Reporting Framework of the International Integrated Reporting Council (IIRC).

## Disclaimer

Statements made in this integrated report with respect to plans, strategies and future performance that are not historical facts are forward-looking statements. NSK cautions that a number of factors could cause actual results to differ materially from those discussed in forward-looking statements.

This document is an English translation of NSK Report 2017 dated September 1, 2017, that was originally prepared in the Japanese language, and it is provided for convenience purposes only. Therefore, this document does not include any event that has occurred, or has been found to have occurred, on or after September 1, 2017. NSK makes no representation or warranty that this document is a complete or accurate translation of the original Japanese text, and it is not intended to be relied upon. In the event that there is a discrepancy between the Japanese and English versions, the Japanese version shall prevail. This document is not intended and should not be construed as an inducement to purchase or sell stock in NSK.

## Management Principles

- 1 To provide our customers with innovative and responsive solutions through our world leading technologies.
- 2 To provide challenges and opportunities to our employees, utilizing their skills and encouraging their creativity and individuality.
- 3 To identify the needs of the present and future, and to meet these needs by being flexible, agile, and dynamic.
- 4 To contribute to the communities in which we operate.
- 5 To manage our business from an international perspective and to develop a strong presence throughout the world.

## Action Guidelines

### Beyond Limits, Beyond Today

- |                        |   |
|------------------------|---|
| Beyond Frontiers       | Adopting a global perspective in all aspects of NSK's operations.   |
| Beyond Individuals     | Accomplishing and growing beyond personal ideas.  |
| Beyond Imagination     | Transcending conventional ideas and adopting a flexible and inquisitive approach to exceed present limitations. |
| Beyond Perceptions     | Welcoming change and encouraging creative synergies.  |
| Challenging the Future | Looking beyond the short term and accepting the challenge of new opportunities.                                 |



## Mission Statement

## Management Principles / Action Guidelines

## NSK Vision 2026

# SETTING THE FUTURE IN MOTION

We bring motion to life,  
to enrich lifestyles,  
and to build a brighter future.

Dedicated to uncovering society's needs,  
we set ideas in motion,  
to deliver solutions beyond imagination.

We're NSK.

And, we're setting the future in motion.

# The Pioneering Spirit that Has Endured Throughout the 100 Years of NSK

In 1916, NSK was established as Japan's first manufacturer of bearings in Osaki-cho, Ebara-gun, Tokyo (the site of its current headquarters: today Osaki, Shinagawa-ku, Tokyo). In the 100 years since, the Company has developed an array of innovative technologies, contributed to the reduction of energy loss, and underpinned the development of industry worldwide through its expansion in overseas operations.

While the wording used has evolved to match the times, the spirit that has supported NSK's from its founding to the present day is its consistent stance of "contributing to society through technology."

# 1916

## I want to produce bearings domestically to raise the standard of Japanese manufacturing and bring the country in line with advanced nations.

### The Vision of Founder Takehiko Yamaguchi

Having graduated from the Tokyo Vocational School (now the Tokyo Institute of Technology), Takehiko Yamaguchi joined the Ministry of Agriculture and Commerce where, as an assistant examiner for the Japan Patent Office, he was responsible for machinery inspections and wanted to see the advanced machinery industries in advanced countries, such as the United States and those in Europe. At around that time, through the recommendation of an acquaintance, Korekiyo Takahashi, who would later become Prime Minister, Yamaguchi joined the Yasuda Bank owned by Zenjiro Yasuda, who was trying to start up a business manufacturing nails, and set off on a tour of Europe and the United States to conduct a technical research survey on Western nails and the purchase of state-of-the-art equipment. During his inspections of factories in each country, from the United States to the United Kingdom, Belgium, Germany and France, Yamaguchi became keenly aware of the gap in the level of technology between the Japanese machinery industry and that of Western nations.

After returning to Japan, Yamaguchi worked as chief engineer at Yasuda's nail manufacturing works before moving to an executive position at a Yasuda Bank-affiliated company, where he cultivated his entrepreneurial spirit and strove to develop Japan's precision machinery industry. He established Yamatake Shokai Co., Ltd., which primarily imported and sold machine tools and measuring instruments, and Nippon Sanso Limited Partnership Company, aiming to capitalize on imported machinery to enter the oxygen welding business.

Along with screws and gears, the rolling bearings that support the rotating shafts of machines are the vital parts referred to as the three major machine elements, and modern bearing manufacturing companies had been established in Europe and the United States in the latter half of the 1880s. One after the other, companies such as New Departure Manufacturing Company (1889), Hyatt Roller Bearing Company (1892) and The Timken



Replica bearings created based on the oldest blueprints in existence at the Company.

Company (1899) in the United States, The Hoffmann Manufacturing Company in the United Kingdom (1898) and SKF in Sweden (1907) commenced production. Of these, the first bearings introduced to Japan were those made by SKF.

With a vision of advancing into the manufacture of precision machine tools, Yamaguchi established Nippon Seiko Limited Partnership Company in 1914 with the aim of selling "goods that have screws, various types of gears, general machinery tools and other machine manufacturing." At that time, only a small number of bearings were imported for maintenance purposes, and the difficult research and trial production process was started in conjunction with the Navy, which viewed bearings as an important machine element. Driven by the strong desire to "develop domestically produced bearings by all necessary means," without adequate machinery and sufficient materials, repeated trial and error finally led to the completion of Japan's first bearing in 1915.

On the back of this success, in 1916 Yamaguchi founded NSK Ltd. with the aim of producing bearings in Japan.

### Following the Footsteps of NSK Founder Takehiko Yamaguchi through to NSK's Foundation (Brief Resumé)

- 1869 Born in Satsuma (now Kagoshima Prefecture)
- 1886 Moves to Tokyo and makes the acquaintance of Korekiyo Takahashi, who provides him with a variety of support
- 1891 Graduates from the Tokyo Vocational School (now the Tokyo Institute of Technology), joins the Ministry of Agriculture and Commerce with responsibility for machinery inspections at the Japan Patent Office
- 1895 Joins Yasuda Bank  
Departs on an inspection tour of Europe and the United States to conduct a research survey of nail technologies and to purchase state-of-the-art machinery
- 1897 Returns to Japan, works as chief engineer for Zenjiro Yasuda's nail manufacturing works (now Yasuda Kogyo Co., Ltd.)
- 1906 Establishes Yamatake Shokai Co., Ltd. (now Azbil Corporation) to handle the import and sales of types of machine tools and measuring instruments
- 1910 Establishes the oxygen manufacturing business Nippon Sanso Limited Partnership Company (now Taiyo Nippon Sanso Corporation)
- 1914 Establishes Nippon Seiko Limited Partnership Company
- 1915 Perfects Japan's first domestically produced bearings
- 1916 Founds NSK Ltd.



# 1962

## The Foresight in Declaring "Companies Exist to Serve Society"

### Company Creed—the NSK Spirit

Taking office as NSK's fourth president in 1948, Hiroki Imazato promoted the rationalization and modernization of manufacturing facilities, the expansion of bearing applications and the development of new products other than bearings. At the same time, he worked to strengthen and expand the Company's domestic sales network and export operations and brought about the expansion of its business scope. Then, in 1962, Imazato established the Company Creed, a summary of his key messages to NSK employees.

Imazato stated in writing that: "a company whose only goal is the pursuit of profit, and who fails to fulfil their social responsibility, will not survive." This company creed, based on the previous "4S Principles" that had been followed by employees at the time, served as an employee code of conduct and a guideline for businesspeople. To further instill this spirit, Imazato created and distributed a pamphlet entitled "NSK Spirit: Living the Company Creed" to all employees.

### Company Creed—the NSK Spirit

Following NSK's proud history, we shall:

1. Always remain sincere, humble, and act in a manner worthy of industrialists.
2. Thus, we shall respect the role the company plays in society, work tirelessly to innovate and improve, and devote ourselves to refining technology.

The 4S Principles are to serve as a guideline to help employees put the NSK Spirit into practice.



# 1991

## Under the MOTION & CONTROL™ Banner

### NSK Corporate Philosophy

On November 8, 1991, which marked the 75th anniversary of our founding, we established and communicated the “NSK Corporate Philosophy” both internally and externally. Over a two-year period, a committee of young employees tasked with creating a more attractive NSK took reviewed the company’s mission, *raison d’être* and business domains. Consisting of a mission statement, management principles, action guidelines and a corporate message, the NSK Corporate Philosophy represents the key message that NSK communicates to society as well as a shared mindset and action guidelines for all employees.



The mission statement defines the “spirit,” “direction” and “ideal image” of NSK in the 21st century and outlines the management efforts, actions and manner through which the company will contribute to society. We also decided to summarize our mission statement, business domain and ideal image as a catchphrase in our corporate message: Responsive and Creative Motion & Control™. The thoughts encapsulated in the Corporate Philosophy are indicated in the words of Toshio Arata, who was NSK’s president at that time.



What kind of company is NSK aiming to become? What is needed and how do you communicate so that NSK becomes an excellent company that is loved and respected?

Compared to other Japanese companies, NSK has expanded overseas from an early stage and worked to achieve globalization by promoting the localization of production. We can say with confidence and pride that these efforts in regional communities are highly appreciated. NSK’s products are by no means high profile in the eyes of the general public, yet they are indispensable to modern industry. We contribute to society by means of our technologies and the quality of our products. This will continue to be the primary reason that NSK is needed in any region on the planet. Developing and actively proposing new technologies based on the precision technologies we have cultivated in bearings is becoming an increasingly important task. It is also necessary for each of us to extend our respective strengths, challenge the possibilities, and create an in-house environment that is filled with initiative and creativity.

**NSK President Toshio Arata, November 1991**

# 2016

## Embarking on a New Chapter of Evolution toward the Next 100 Years

### NSK Vision 2026: Setting the Future in Motion

Created in the build-up to November 8, 2016, the Company’s 100th anniversary, NSK Vision 2026 is a statement of what NSK will achieve in the 10 years through to 2026. NSK Vision 2026 also indicates the state we should ideally attain over the mid- to long-term to become a company that continues to contribute to society and grow sustainably.

In order to become a world-leading corporation that continues to provide high value to customers and society at a time when the social and market environments continue to undergo significant change, we must constantly generate originality and value that only NSK can deliver.

*Setting the Future in Motion* means shifting from our previous passive, reactive way of thinking and approach to a more proactive

mind-set.—for example, in our mindset, behavior and decision-making criteria. Although NSK’s products are not finished goods, we are connected with society via the manufacturers of machinery and equipment and the variety of finished products they produce.

Creating new products and services will require thinking not only about the markets that we face and direct customer requests but also about the uses to which end users put finished products and what kinds of potential needs they have. The vision puts this mindset into words.



## Foundation Underpinning the NSK Spirit

### Four Core Technologies

Since successfully developing the first bearings in Japan in 1915, fueled by a desire to catch up to European and U.S. technology, the spirit of pushing the boundaries of NSK’s technologies has been passed down to successive generations. With a vision of creating a world-class center for bearing research, we established a Technology Center in Fujisawa in 1961. Provided with an anechoic chamber, a sound-insulated laboratory, dust-free rooms (clean rooms), a precision measuring room with constant temperature and humidity, a chemical analysis room and a lubricant laboratory, we established an R&D system that enables consistent research and testing, from basic research on bearing performance to new product development. In 2002, we defined tribology, materials, numerical simulation and mechatronics as our four core technologies. We clarified the technical areas that underpin the development of NSK’s high-quality products and regard them as the foundation for technologies and services that will realize sustainable growth.

### Global Business Foundation (Overseas Expansion Capabilities)

Currently, NSK has 151 overseas bases, including 43 plants, 88 sales offices and nine technology centers. As a Japanese manufacturer, we have promoted global expansion from an early stage. The bearings, precision machinery and parts, as well as automobile parts, manufactured by NSK are not finished goods for which the production equipment can be easily transferred. Each stage, from the establishment of overseas plants in the early 1970s to the securing of production capabilities in line with the overseas deployment of Japanese companies in the latter half of the 1980s and the plant

expansion in emerging markets that has been undertaken since the 1990s, was based on the philosophy of acting as a company that benefits the communities into which we enter. In addition to becoming a member of the local community and prioritizing contribution to the development of industries and employment in all countries and regions in which we operate, we are working to expand business to local customers while promoting the local procurement of raw materials and parts, as well as the localization of management.

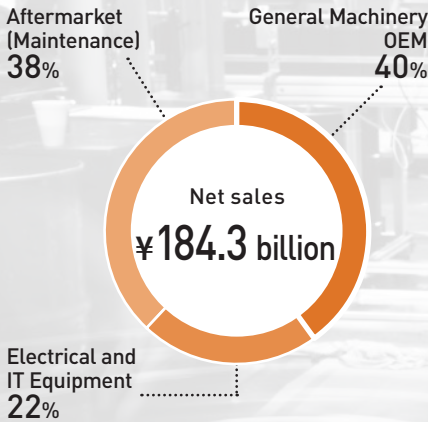
### CSR/ESG Management

As evident in Company Creed—the NSK Spirit as well as the NSK Corporate Philosophy—both established before terms such as CSR or ESG were ingrained, our philosophy has long called for involvement with and contribution to society. On the environmental front, we established the Environment Control Department in 1975, which was subsequently expanded into the Global Environment Department in 2007. We introduced Neco, our own environmental efficiency index, in fiscal 2008 to quantitatively control the environmental contribution of bearings and other NSK products that primarily contribute to lower environmental impact. Meanwhile, in order to contribute to society, we established the NSK Foundation for the Advancement of Mechatronics and started awarding research grants in 1988. With regard to the next generation, which we regard as important stakeholders, we have sponsored the Science Museum since its opening in 1964 and continue to hold children’s science classes. As for governance, we have consistently been among the Japan’s frontrunners, having first invited independent directors to our Board and establishing non-mandatory committees in 1999 before shifting to a Company with Three Committees structure in 2004.

# NSK's Business

## Industrial Machinery Business

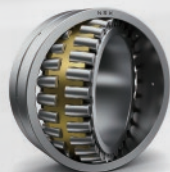
### Industrial Machinery Bearings



As a comprehensive bearing manufacturer, NSK offers a varied lineup of miniature through to extra-large products catering to needs across a broad range of industries. The Company is working to expand its business across three sectors: the general machinery sector including steel, machine tools, wind turbines and railways; the electrical and IT equipment sector such as home appliances and personal computers; and the aftermarket, providing maintenance and repair services.

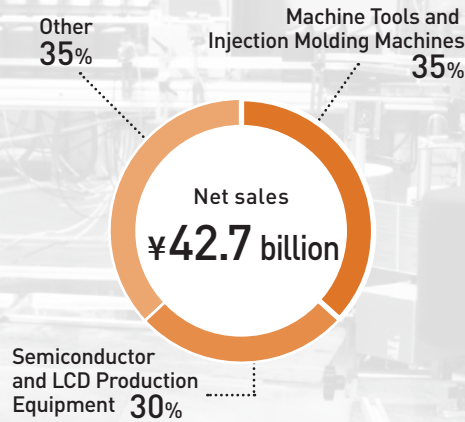


Double row cylindrical roller bearings  
High rigidity series



NSKHPS™  
Large spherical roller bearings

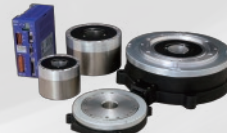
### Precision Machinery and Parts



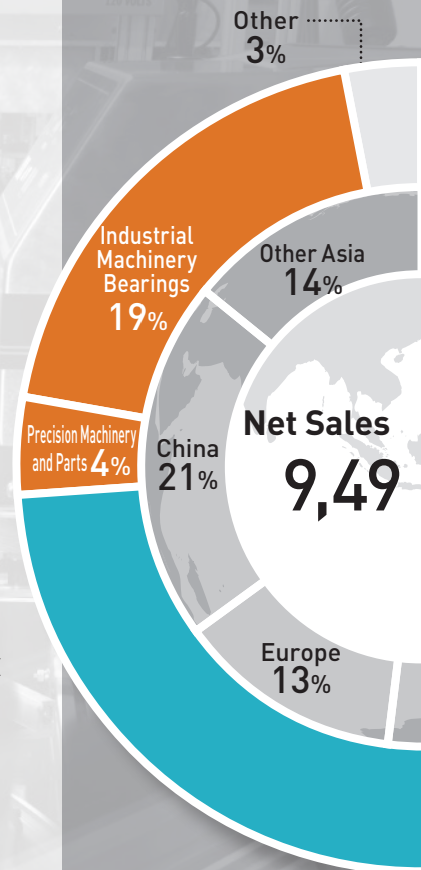
NSK helps to push forward new developments in a wide range of advanced fields. Through the supply of machinery parts including the ball screws and NSK Linear Guides™ that play an important role in linear motion products, and such mechatronic products as XY Tables and MEGATORQUE MOTOR™ that employ ultra-high precision positioning as well as controlling technologies, the Company provides invaluable support in the production of machine tools, injection molding machines, industrial robots, semiconductor and LCD production equipment, conveying machines and medical devices.



Ball screw with X1 seals



MEGATORQUE MOTOR™  
PS/PN Series



Bearing Net Sales (including

**Domestic share No.1**

\*Certain industrial machinery business automotive business in the fiscal year

## NSK Products: Playing a Key Role in an Array of Industries

NSK caters precisely to a variety of needs by ensuring that it is fully aware of the characteristics of customers' industries as well as usage environments and the different requirements of each country and region.

**Machine Tools**  
Ball screw with X1 seals  
High precision angular contact ball bearings

**Steel**  
Long-life, optimized cylindrical roller bearings for continuous casting machines

**Mining and Construction**  
NSKHPS™ Spherical roller bearings

**Wind Turbines**  
Full-complement cylindrical roller bearings NNCF (double row)

**Industrial Motors**  
New ceramic coated insulating bearings for industrial motors

**Railways**  
Double-row tapered roller bearings for axles

**Home Appliances**  
Ball bearings for ultra-high-speed rotary motors

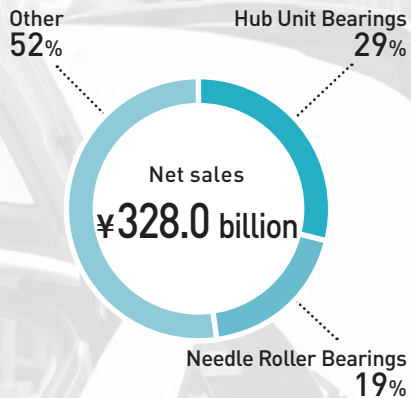
**Semiconductor Production Equipment**  
NSK Linear Guides™ NH Series, NS Series

**Pumps & Compressors**  
NSKHPS™ High load capacity angular contact ball bearings

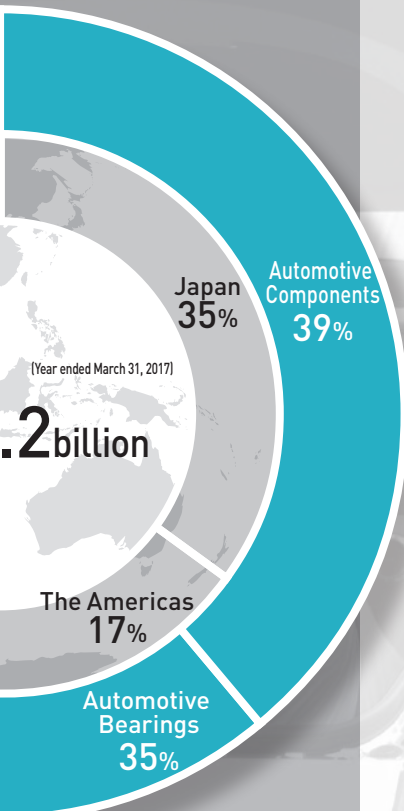
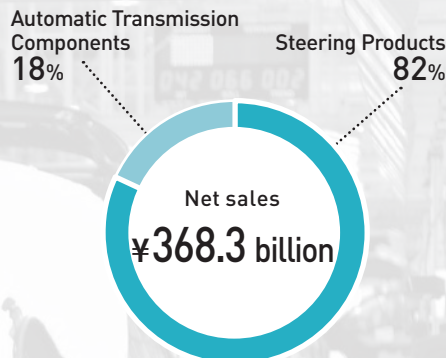
**Robots**  
Highly functional thin-section angular contact ball bearings

# Automotive Business

## Automotive Bearings



## Automotive Components



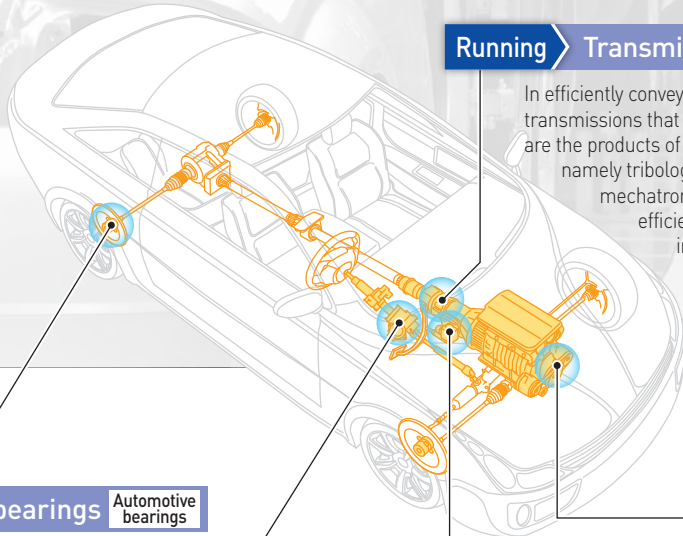
Of the 100–150 units used in every type of automotive bearing said to go into each vehicle, as well as the components that go into automatic transmissions, electric power steering (EPS) and components for electric braking systems, and other products, NSK supplies critical function components that support a car's running, turning and stopping.

Automotive technological innovation today is moving forward at a dramatic speed, including progress toward diversified power sources and autonomous driving. With its elemental technologies accumulated to the present and new technological initiatives, NSK is contributing to enhanced performance in such areas as automotive safety, comfort and the environment.

for industrial and automotive use)

Global share **No.3**

operations were transferred to the ended March 31, 2017.



### Running > Transmissions Automotive bearings Automotive components

In efficiently conveying engine power to the tires, critical to the transmissions that need to operate smoothly and with flexibility are the products of NSK. We engage in four core technologies, namely tribology, materials, numerical simulation and mechatronics, and offer products that enhance the efficiency of transmissions, making them increasingly compact and lightweight.



Needle roller bearings for planetary gears (cage and roller assembly), Pinion shaft

Clutch assembly optimized high efficiency

### Running > Hub unit bearings Automotive bearings

Hub unit bearings are fundamental components which support the chassis while facilitating the rotation of the wheels. They are exposed to rainwater, mud, snow and other elements, and under such extreme environments, realize excellent durability and smooth rotation.



Double-row angular contact ball bearings with inner and outer mounting flange [HUB III for driven wheels]

### Stopping > Ball screws for electric brakes Automotive components

Along with the trend of making it mandatory to equip vehicles with automatic emergency braking, there is an increasing shift toward electrification at the point of brake booster function. Within this "e-brake booster" type there is the promising ball screw type. NSK, putting to use its global No. 1 share of ball screw technology, will continue to contribute to raising the level of safety in the brake field.



Ball screws for electric brakes

### Turning > Electric power steering (EPS) Automotive components

With the recent trend in advanced driving assistance and autonomous driving, electric power steering systems are becoming increasingly important. In addition to the primary column-type EPS, the Company is making progress on the development of a rack-type EPS that puts to use NSK's technological excellence. This is contributing to a broad product lineup and driving that is safe and comfortable.



Functional safety-compliant electric power steering

### Running > Power source/Electric components Automotive bearings

Given that raising environmental performance is pursued as a social issue, there is an ongoing shift toward automotive components electrification of and a growing demand for bearings to perform in new positions. NSK is seeking growth by leveraging its strengths in the electrical components field where an ever-more sophisticated level of technology is required.



Bearings for alternators

Bearings for in-vehicle motors

# Creating New Value That Adds to Society

## The NSK Group's Stakeholders



In its mission statement, NSK declares its aims of realizing the well-being and safety of society, and contributing to the protection of the global environment through its Motion & Control™ technology. NSK considers safety, quality and compliance as its top priorities and creates new value that contributes to society through its operations, spanning development to design, production, sales and aftermarket services.



NSK Mission Statement

NSK Vision 2026

Diverse Capital and Inputs

**Manufacturing Capital**  
Raw materials: Steel, greases and oils, externally procured components  
Global production sites  
Manufacturing facilities  
Process set-ups, process controls

**Intellectual Capital**  
100 years of accumulated know-how, four core technologies, knowledge/expertise in specialist fields, R&D centers, R&D framework linked to external organizations

**Human Capital**  
Highly qualified engineers, skilled workforce, globally minded talent, sales personnel who maintain close relationships with customers, corporate governance structure (Three Committees system, global compliance framework)

**Financial Capital**  
Capital, interest-bearing debt, cash reserves

**Social/Relationship Capital**  
Relationships of trust with external parties (users, suppliers, local communities), globally recognized and trusted NSK brand

**Natural Capital**  
Minerals (iron ore, coal, etc.), water, energy

Production sites (Plants)  
Japan: 21  
Overseas: 43

R&D centers  
At 15 locations in 10 countries

Ratio of new employees with science backgrounds (annual average over the past five years)  
72.3%

Number of employees worldwide  
31,501

Employee development expenditure per person (non-consolidated)  
Approx. ¥44,000

Total equity  
¥485.0 billion

Interest-bearing debt  
¥267.4 billion

Cash and cash equivalents  
¥139.6 billion

Number of customer inquiries to NSK salespeople  
7,256 cases/year

Energy input (per year)  
16,312 TJ

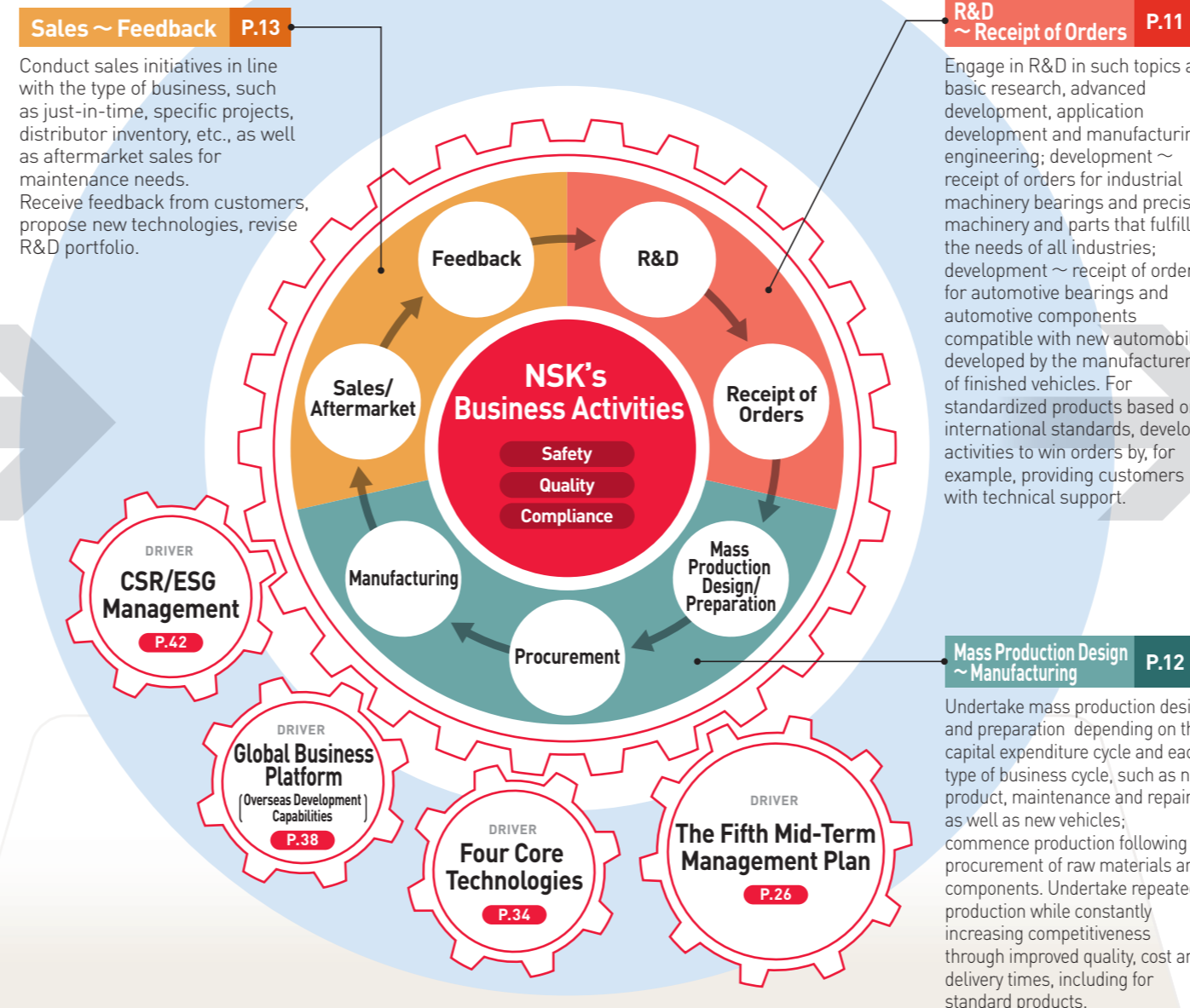
[As at March 31, 2017]

**Social Issues**

Well-Being and Safety of Society  
Protection of the Global Environment

NSK's Value Creation Process (Business Model)

Business Foundation and Four Drivers for Expansion and Enhancement



Output and Outcomes

**Products/Services**

- Industrial Machinery Bearings
- Precision Machinery and Parts
- Automotive Bearings
- Automotive Components
- Maintenance & Repair, Aftermarket Services

**Financial Outcomes from Provision of Added Value**

- Cash generation
- Improvement in ROE
- Improvement in share price/market capitalization
- Internal reserves for investment in growth
- Maintenance of stable ratings

**Impact on Society/Environment**

- Reduction of investment resource/energy usage through improved production processes
- Promotion of human resource diversity
- Improvement of compliance awareness
- Compliance with varying regulations in each country (e.g., avoiding use of conflict minerals, UK Modern Slavery Act)

**(Output as burden on the environment)**

- Greenhouse gases (GHG), industrial waste, water discharge

Share of bearings market  
Ranked 3rd in the world

Number of EPS mounted on vehicles (cumulative total)  
Approx. 75 million

Number of product press releases  
21 releases/year (24 in the previous fiscal year)

Cash flow from operating activities  
¥67.9 billion

Dividends/Payout ratio  
¥20.2 billion/44.1%

Lost-worktime injury rate\* (global)  
0.68 (0.70 in the previous fiscal year)  
\*For more information on lost-worktime injury rate, please see p. 45.

Diversity (Global)  
Proportion of female employees 17.6% (17.3% in the previous fiscal year)

Number of employees who have attained a TOEIC score of 730 or higher  
507 (472 in the previous fiscal year)

Development of environmentally friendly products  
219 products (cumulative total)

GHG emissions per production unit  
10.2% decrease (Japan) (-8.4% in the previous fiscal year)  
33.2% decrease (excluding Japan) (-33.2% in the previous fiscal year)  
\*Rates of percentage increase and decrease are presented compared with the base date of the year ended March 31, 2012 (0%).

**Value Created**

- Environmental contribution (making products lighter, more compact, and with longer service lives)
- Contribution to an advanced technological society
- Realization of a more prosperous society
- Growth of a wide range of industries
- Advancement of mobility societies
- Improvement of shareholder value

Suppliers, Customers, Employees, Shareholders and Investors, Future Generations, Local Communities

External Factors Affecting Corporate Value Creation

**Foreign Exchange Rate Fluctuations**  
Exchange rate fluctuations affect revenue as the ratio of net sales outside Japan to total net sales is 65%, and the overseas production ratio is 55%.

**Resource Price Fluctuations**  
Changes in the prices for resources, such as the steel and rare earths minerals that are raw materials for NSK products, affect revenue

**Economies/Economic Trends**  
Economic trends in each country and market affect related demand. For example, the number of new vehicles sold by finished vehicle manufacturers affects Automotive Business revenue

**Capital Expenditures**  
Capital expenditure cycles affect the sales of bearings and precision products that are affected by demand in a wide range of industrial sectors

**Competitive Environment**  
Although barriers to entry into the equipment industry are high, changes in the competitive environment for Japanese and global manufacturers of bearings, precision products and automotive components may affect revenues

**Changes in Technological Innovation and Industry Structure**  
The impact that automotive technological innovation and IoT has on the structure of industry will have direct and indirect effects on NSK's business

Short term

Long term

# NSK's Business Activities and Corporate Value Creation

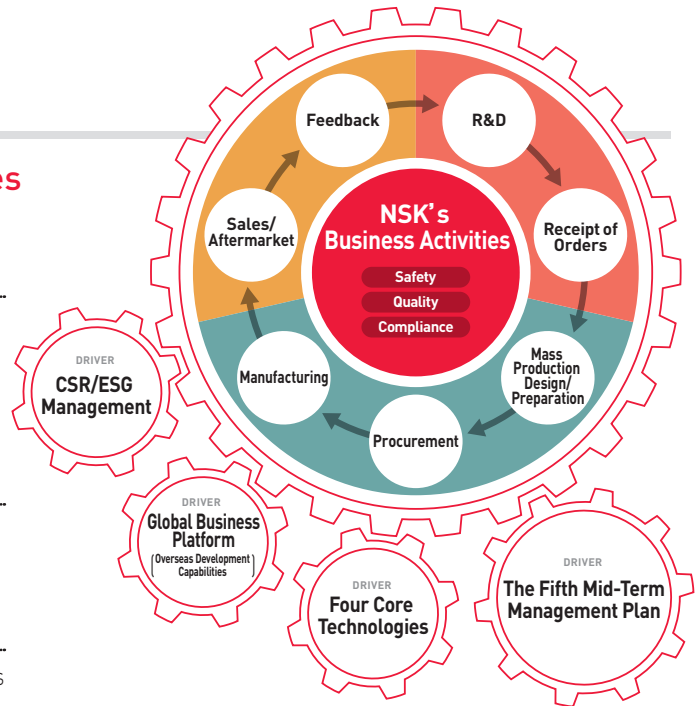
## Framework for NSK's Business Activities

NSK engages in BtoB operations, where its direct customers are automakers and machinery manufacturers, not end users.

NSK has two business segments, the Industrial Machinery Business and the Automotive Business, reflecting the industries in which its customers operate. The Industrial Machinery Business Division Headquarters and the Automotive Business Division Headquarters oversee these businesses on a global level. (Please see "Organizations Supporting Global Management" on page 39.)

Each business division headquarters maintains its own production, sales and technology units that take responsibility for the entire business value chain, from marketing activities for order receipt to product design, manufacturing, sales, delivery, payment collection and the aftermarket.

As shown in the chart on the right, NSK's value chain creates value for its customers through business activities encompassing research and development, manufacturing, sales and feedback from customers.



## Shared Features of the Industrial Machinery Business and the Automotive Business

- ① NSK's products are components that enhance the performance of the customer machinery in which they are incorporated. The product specifications and functional requirements of our customers influence NSK's products and business activities.
- ② QCDDSM  
Quality, Cost, Delivery, Development, Service and Management play an important role in securing our competitive advantage.
- ③ Demand conditions in the industries of its customers influence NSK's net sales and profits.
- ④ The ability to develop business on a worldwide scale influences NSK's competitiveness and growth potential.
- ⑤ The ability to propose technological solutions is key to acquiring new projects.
- ⑥ In principle, products are manufactured once orders are received rather than in anticipation of orders.

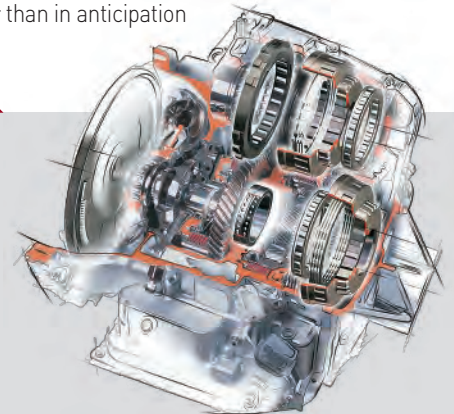
## Value Creation in Automatic Transmissions (ATs)

There are various types of automobile transmissions, but AT is a transmission that controls automobile acceleration and deceleration by the switching of automatic gears. Among them, the most frequently adopted type of AT is called step AT. In addition to bearing products, such as needle bearings and tapered roller bearings, NSK supplies a variety of products, such as clutch assemblies and friction plates, as components for use in ATs.

As environmental regulations are becoming increasingly more stringent, NSK's R&D capabilities, sales responses, design technologies, production capabilities and service are assisting in its responses to customer needs, which include its desire to make AT units smaller and lighter, to control friction and make AT units more fuel efficient, and to realize improvements in fuel economy and comfort through multistep ATs.

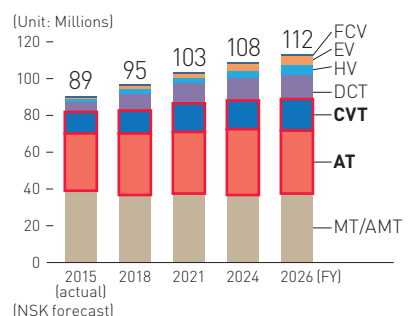
### Background to NSK's AT Business Expansion

- 1 Expansion of automatic transmissions in emerging markets (step AT and CVT)  
**FY2026 Demand Forecast (compared with FY2015) +10 million units**
- 2 Progress in shift to multistep AT (multistep AT = seven or more speeds)  
**Multistep AT ratio: FY2015 22% → FY2018 46%**
- 3 Business expansion for largest customers  
**New business acquisitions by NSK's customers**



AT for use on a front-engine, front wheel-drive (FF) automobile

### Transmission Market Forecast (by type)



## R&D~Receipt of Orders

### R&D

Our four core technologies are tribology, materials, numerical simulation and mechatronics (see page 34). In the field of R&D, NSK engages in broad research and development that applies to both business segments, in addition to fundamental research, advanced development, application development and production technologies. NSK's R&D activities lead to the creation of new products, technologies and businesses.

#### Key Inputs



- Technical staff (human capital)
- Accumulated technologies, R&D centers (intellectual capital)
- R&D structure with external parties (social/relationship capital)
- Financial foundation for funding R&D (financial capital), etc.

#### Our Strengths

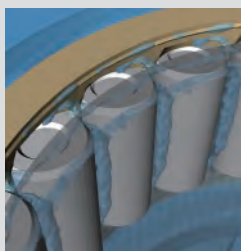
- Our excellence is in solving complex technological problems, based on our four core technologies and thanks to the breadth of our technical staff and accumulated technologies gained from deep knowledge and experience.
- Based on our tight-knit relationships with customers, we can quickly obtain product- and technology-related needs and work on development.
- Collaborating and jointly developing products with its customers, suppliers and external research institutions, NSK leverages those efforts in product development (e.g., steel materials, grease, motors, electronic control units [ECUs]).
- NSK has a global network of technology centers.
- NSK has systematic education programs and educational institutions, including the NSK Institute of Technology (NIT), for the training and strengthening of its technical staff. (Please see page 35 for more details.)

### Contributing to Improvements in Fuel Efficiency through Tribology, Materials and Numerical Simulation

In an environment where further improvements in automobile fuel efficiency are being demanded, the utilization of NSK's tribology, materials and numerical simulation is driving the development of AT-related products. Improving fuel efficiency requires the downsizing of bearing size and low torque, but making a bearing smaller or thinner will generally reduce its durability and shorten its life. We are devising a solution, involving material and heat treatment technologies, to make it difficult for metal fatigue-induced "flaking" damage to occur with long-term bearing use under high loads.

For example, the use of materials that have undergone carbonitriding processes is advantageous in terms of life, but its heat treatment takes time and the extent of heat treatment deformation increases. Having studied the composition of the steel materials, NSK realized a longer life using standard materials.

Also, by simulating the mechanism of agitation resistance from the lubricating oil in the AT unit by means of numerical simulation, the bearing cage was made of plastic instead of metal, and a shape was devised to create an oil reservoir.



Oil flow analysis of a tapered roller bearing

### Receipt of Orders

The independent sales divisions of the Industrial Machinery Business and Automotive Business coordinate with other internal departments to win new orders. The timing of orders received, lead times and other aspects of order-taking activities depend on the customer's business, products and components used. For global products, the sales divisions coordinate with the relevant sites in other countries.



- Experience and track record in QCDDSM (manufacturing, intellectual and human capital)
- Strong relationships of trust with customers (social/relationship capital)
- Sales capabilities (human capital)
- NSK brand recognition (social/relationship capital), etc.

- NSK has internal systems that support tight-knit communications between customers and its engineering and sales staff.
- NSK's global development and supply capabilities also help to win a variety of orders (e.g., orders for newly developed, improved, existing and standard products).
- In the Automotive Business, Global Account Managers (GAMs) and Key Account Managers (KAMs) work together on project requirements.
- NSK focuses on high-quality, environmentally friendly products that are trusted by customers.

### Gaining Trust by Anticipatory Proposals, Problem-Solving and Troubleshooting

In accepting orders for new projects, the key lies in how to quickly and appropriately ascertain a customer's needs and the ability to offer precise proposals. Relationships that allow guest engineers to be embedded with automakers is an NSK strength that enables the obtaining of information on customer needs from the early stages of vehicle development and the making of anticipatory proposals. In the development of a new AT unit, for example, there have been cases in which it was possible to propose the optimum bearing size from the initial stage, which led to the receipt of orders.

In addition to its responses up to the receipt of an order, there have been cases in which NSK has gained and maintained customer trust by troubleshooting—for example, problem solving relating to mass-produced product market complaints and warranties—that has resulted in a customer changing its supplier from another company to NSK. NSK is advancing a sophisticated project involving a sales and marketing technical response manual called "Co-Creation Project *with*," an effort to share and visualize customer information, such as who the primary customer contact person is and what kind of technology is key.



# NSK's Business Activities and Corporate Value Creation

## Mass Production Design and Preparation~Manufacturing

### Mass Production Design and Preparation

Mass production design entails the design of large-lot products delivered to customers. Mass production includes both newly designed products and standardized products that do not require new designs. Mass production preparation involves the setting up of processes and production equipment at mass production plants once specifications have been finalized. In many cases, final customer approval is required for product specifications, equipment and processes.

#### Key Inputs



- Mass production equipment preparation, capital investment (manufacturing capital)
- Design engineers (human capital)
- Accumulation of every type of technology (intellectual capital)
- Technology centers, R&D sites (intellectual capital)
- NIT (intellectual, human capital), etc.

#### Our Strengths

- Design quality is a key factor in manufacturing quality. Accordingly, accurately understanding the specifications required by customers and reflecting them in product design leads to improvements in product development, design proposals and product management.
- NSK develops its own, specialized production equipment, which leads to lower costs for mass-produced products.
- Having a framework in place to manage the entire process, from order receipt to the mass production launch, NSK works to improve profitability by timely and cost-conscious preparations, from product design to mass production.

### Numerical Simulation Utilized in the Mass Production Design of AT Friction Materials

A part called a friction plate (friction material), used when connecting or cutting power inside an AT, is one of the key parts of an AT unit. Developed by NSK to further improve fuel efficiency, the "Nv (nu) Multi-Segment" friction plate has optimized the flow of oil inside the AT and, by facilitating the crimping and releasing of the plate, reduced the idle running torque (drag torque) and realized a dramatic improvement in energy loss. Although a small part about 15 cm in diameter, this friction plate has been linked to a 1% improvement in AT automobile fuel efficiency compared to conventional parts. Optimization of product shapes through computer analysis and improvements in evaluation technology through the accumulation of analytical data contributed to the successful mass production design of "Nv (nu) Multi-Segment."

In addition, friction materials with a thickness of 1 mm used for friction plates have to function in temperatures from below freezing to more than 300° C. In the mass production preparation process, mass production was made possible by the members of the departments involved in the manufacturing technologies and the methods for quality assurance being established as a working group team.



### Procurement

The equipment, materials, parts and production materials required to manufacture mass-produced products are procured from manufacturers and suppliers. NSK's basic procurement policy involves procurement at each production site and procurement by the head office, which determines procurement policies on a company-wide level. Collaboration with suppliers to ensure stable procurement is essential.



- Know-how of each production site (manufacturing, intellectual capital)
- Joint development suppliers (intellectual, social/relationship capital)
- Coordination/collaboration with each supplier (social/relationship capital), etc.

- Favorable and strong relationships with suppliers that enable the stable procurement of raw materials and components, enhanced cost competitiveness and high quality.
- NSK jointly develops materials, parts and grease with suppliers to improve the quality of its products.
- Overseas, we are working to reduce costs by improving the local procurement ratio while advancing into markets jointly with existing suppliers or assisting their efforts to make inroads independently.
- In equipment procurement, NSK develops its own equipment and has a system for procuring within the Group.
- From the standpoint of CSR procurement, NSK monitors supplier performance based on stringent criteria in its supplier CSR guidelines for human rights, the environment, compliance, information security and BCP, and suggests improvements as needed. NSK puts into practice green procurement, avoids the use of conflict minerals and ensures compliance with the UK Modern Slavery Act.

### Capable of Undertaking Local Procurement after Achieving Long Life through International Standard Materials

Currently, automotive production is undertaken globally, and components are required to be supplied locally. Bearing in mind local production and local procurement, NSK aimed to extend the lives of bearings used for AT products with international-standard steel available globally. In the past, measures had been taken to improve durability by special materials and heat treatment, but optimizing the design of the roller of the roller bearing (crowning processing) now makes it possible to use standard materials. By enabling the use of standard materials, local materials can be used as the basis even overseas, resulting in greater advantages, from the procurement standpoint by the improved efficiency of material inventory and the cost standpoint.

As there is no need to perform a special heat treatment, the degree of freedom when procuring heat treatment equipment for local production also has been increased.



## Manufacturing

The manufacture of products takes place at the NSK Group's manufacturing plants. A wide range of business collaboration, such as manufacturing, quality assurance, manufacturing engineering/equipment management, production control, plant accounting and general affairs work is necessary for stringent management concerning quality, cost and delivery (QCD). Both the Industrial Machinery Business and the Automotive Business maintain their own manufacturing plants.



- Production plants and facilities (manufacturing capital)
- Various production technologies, accumulated know-how (intellectual capital)
- Production technical skills (human capital)
- Supplier and local community support for production (social/relationship capital)
- Steel used as a raw material, components, oil, electric power and water (natural capital, manufacturing capital), etc.

- Operating 21 plants in Japan and 43 plants overseas, NSK possesses a production system able to meet global demand in a timely manner.
- As mother plants, some of the plants both in Japan and overseas have established support systems, such as for launching overseas plants and measures for various tasks.
- Small-group activities (QC circles) are conducted at each plant on an ongoing basis to improve workplace processes. More overseas plants are being operated under the supervision of local staff.
- The NSK Manufacturing Education and Training Center provides hands-on training to engineers from plants around the world with the aim of passing down technical skills and improving technical capabilities.

### New Plants in South Korea, Mexico and Japan (Haruna, Gunma)

In line with the expansion of NSK's AT business, the Cheonan plant, the second NSK production site in South Korea, was launched in April 2017 to maintain expansion of production capabilities for needle roller bearings. Giving consideration to making the plant a place that is conducive for employees to work, the scattering of grinding oil has been eliminated, thereby realizing the deodorizing of the plant. In addition, we plan to set up a factory for AT parts (clutch assemblies) in Mexico and construct the third building at the Haruna Plant in Gunma Prefecture, Japan. As a components manufacturer, following customers' production plans remains the highest priority.

A change made to a heat treatment method, which draws on NSK proprietary technologies, to respond to sudden requests to increase the number of AT bearings, has been accepted following an NSK internal evaluation test alone. This case provides proof positive of the trust placed in us by our customers through our business dealings up to now and an acknowledgment of having acted at an early stage.



Cheonan Plant

## Sales, Aftermarket and Feedback

Sales activities span the delivery of manufactured products to customers and distributors, inspection and acceptance of the delivered products, and final recording of the sale. Aftermarket services entail the maintenance and repair of equipment and machinery for customers and end users. Feedback from customers is reflected in production plan reviews, inventory management, product improvements and the development of new products.



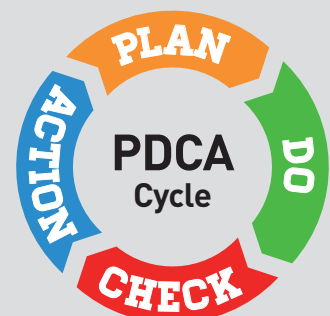
- Human resources to undertake production, sales and inventory (PSI) management (human capital)
- Customers, distributors in aftermarket services (social/relationship capital)
- Product-related survey and analytical data (intellectual capital), etc.

- NSK practices the holding of appropriate levels of inventory and undertakes strict inventory controls with advanced PSI management.
- The bedrock of the aftermarket business is NSK's strong relationship with distributors and its extensive network.
- NSK has advanced analysis capabilities and accumulated technologies from access to broad data fields, such as for defects and damage at customers and end users.
- Responding to repair and maintenance demand not only for its own products but also for other companies' products, NSK focuses on sporadic demand outside of routine maintenance and on prompt support that leverages its network.
- Feedback is used to improve products and propose solutions with new technologies.

### Toward Next Preparations/ Responses Using Customer Production Information and Design Information Feedback

The nature of the sales and deliveries in the Automotive Business demands timely responses by the so-called just-in-time system. To respond flexibly to fluctuations in customer delivery quantities, we are obtaining customers' production information promptly and accurately and bearing in mind ongoing proactive preparation.

In addition, to gain next project business, an important step is to analyze the reasons why our products could not be ordered in the current unit and to feed back this information to, for example, the development and design departments. In a case where it was found that NSK's proposed size and capacity of a certain bearing was one rank larger, we were able to maintain our competitiveness by working on a response, for example, by renewing the design standards as a result of reviewing and confirming that there was no problem to change.



# Financial and Non-Financial Highlights

## Eleven-Year Summary

NSK Ltd. and Consolidated Subsidiaries

JP-GAAP up to and including the fiscal year ended March 31, 2015, IFRS from the fiscal year ended March 31, 2016, onward.

Years ended March 31			2007	2008	2009	2010
<b>Financial Data</b>	Net sales		717,225	772,036	647,593	587,572
	[By segment]*1	Industrial Machinery Business	294,058	307,243	267,021	201,963
		Automotive Business	397,863	435,705	352,453	366,463
		Others / Adjustments	25,303	29,087	28,118	19,145
		[By region]				
		Japan	364,395	388,929	323,375	289,540
		The Americas	105,111	107,321	78,754	70,609
		Europe	121,698	133,853	111,866	98,504
		Asia (excluding Japan)	126,021	141,933	133,596	128,918
		China	—	—	—	—
		Other Asia	—	—	—	—
		Operating income	62,383	69,343	22,106	11,305
		Ordinary income	57,595	64,854	16,964	7,598
		Net income attributable to owners of the parent	34,853	42,613	4,561	4,765
		Capital expenditures	37,689	53,905	44,138	21,818
	Depreciation and amortisation	35,316	38,380	39,729	37,149	
	R&D expenditures	10,100	10,240	10,691	8,794	
	Cash flows from operating activities (A)	64,153	69,236	11,785	51,108	
	Cash flows from investing activities (B)	(64,600)	(23,187)	(46,422)	(29,355)	
	Free cash flows (A) + (B)	(447)	46,049	(34,637)	21,753	
	Dividends paid	8,650	10,277	7,574	4,327	
	Acquisition of treasury shares	—	—	—	—	
	Equity attributable to owners of the parent (shareholders' equity)	262,425	267,914	233,395	247,941	
	Total assets	815,788	828,580	744,229	789,624	
	Interest-bearing debt	255,557	264,413	323,165	304,937	
<b>Non-Financial Data</b>	Number of employees worldwide (persons)		23,413	25,069	24,050	24,633
	Number of overseas employees (persons)		13,285	14,374	12,895	13,204
	Number of employees: non-consolidated (persons)		4,519	4,888	5,274	5,932
	Proportion of female employees (Japan) (%)		5.6	5.5	5.5	6.6
	Total waste (1,000 t)*2		91	100	85	87
	Greenhouse gas emissions (1,000 t-CO <sub>2</sub> equivalent)*2		437	451	384	378
	Number of environmentally friendly products (cumulative)		75	96	110	124
<b>Per Share Data (Yen)</b>	Net income		64.53	78.84	8.44	8.82
	Equity attributable to owners of the parent (shareholders' equity)		485.62	495.61	431.74	458.65
	Cash dividends*3		16.0	19.0	14.0	8.0
<b>Financial Indices</b>	Operating income margin (%)		8.7	9.0	3.4	1.9
	Return on average shareholders' equity (ROE) (%)		14.0	16.1	1.8	2.0
	Return on average assets (ROA) (%)		4.5	5.2	0.6	0.6
	Ratio of net worth to total capital (%)		32.2	32.3	31.4	31.4
	Net D/E ratio (times)		0.69	0.56	0.85	0.73
	Dividend payout ratio (%)		24.8	24.1	165.9	90.7
	Total return ratio (%)*4		24.8	24.1	165.9	90.7
	Period-end share price (yen)		1,124	755	377	738
	Price earnings ratio (PER) (times)		17.4	9.6	44.7	83.7
	Price book-value ratio (PBR) (times)		2.3	1.5	0.9	1.6
Dividend yield (%)		1.4	2.5	3.7	1.1	
<b>Exchange Rate Data</b>	US\$1		116.93	114.55	100.74	92.83
	€1		150.35	162.22	144.47	130.89

\*1 In accordance with segment changes in the business domains (part of operations transferred from Industrial Machinery to Automotive), the fiscal years

\*2 Total waste and greenhouse gas emissions data up to the fiscal year ended March 31, 2010, encompasses Japan only. Data from the fiscal year ended

\*3 The breakdown of the 38.0 yen per share dividend paid in the fiscal year ended March 31, 2017, is a normal dividend of ¥28.0 per share and a ¥10.0 per

\*4 Total return ratio = (Dividends paid + Acquisition of treasury shares) ÷ Net income

Millions of yen (Financial data)

	2011	2012	2013	2014	2015	2016	2017
	710,431	733,192	732,842	871,742	974,885	975,319	<b>949,170</b>
	259,095	255,835	216,142	242,969	276,361	259,784	<b>226,924</b>
	424,157	444,585	490,545	590,545	656,998	689,122	<b>696,271</b>
	27,178	32,772	26,154	38,226	41,525	26,411	<b>25,974</b>
	354,542	363,754	333,348	329,136	328,837	318,434	<b>330,512</b>
	85,466	86,267	103,352	134,483	164,821	183,652	<b>165,177</b>
	102,176	107,958	102,667	124,590	133,752	131,830	<b>121,920</b>
	168,246	175,213	193,473	283,532	347,475	341,403	<b>331,559</b>
	82,587	89,068	91,442	167,239	210,237	204,361	<b>201,185</b>
	85,658	86,143	102,030	116,293	137,238	137,042	<b>130,373</b>
	43,524	44,417	32,361	68,049	97,327	89,534	<b>65,341</b>
	38,572	42,004	30,310	66,785	91,002	—	<b>—</b>
	26,110	28,514	15,739	31,167	61,962	65,719	<b>45,560</b>
	41,294	54,619	48,025	45,448	49,197	54,996	<b>58,602</b>
	34,943	35,807	34,598	35,079	38,568	43,048	<b>43,354</b>
	10,515	10,373	10,432	9,919	10,660	11,155	<b>13,858</b>
	64,973	57,158	53,797	70,342	67,709	108,622	<b>67,936</b>
	(33,348)	(56,090)	(45,262)	(42,402)	(46,335)	(45,212)	<b>(54,243)</b>
	31,625	1,068	8,534	27,940	21,374	63,410	<b>13,692</b>
	5,950	6,491	5,943	8,650	15,161	18,425	<b>20,174</b>
	—	—	—	—	—	—	<b>14,999</b>
	257,012	280,312	319,286	359,201	456,046	454,661	<b>461,350</b>
	788,626	845,073	882,547	1,000,932	1,129,164	1,032,374	<b>1,043,955</b>
	274,585	296,750	305,102	315,532	326,400	278,152	<b>267,399</b>
	26,334	27,444	28,487	30,454	31,088	31,587	<b>31,501</b>
	15,039	16,181	17,267	19,231	20,052	20,296	<b>20,210</b>
	6,306	6,203	6,398	6,310	6,294	6,278	<b>7,585</b>
	6.5	6.7	6.5	6.6	6.9	7.0	<b>10.7</b>
	176	180	182	192	201	206	<b>211</b>
	865	877	871	939	968	991	<b>991</b>
	140	157	173	190	202	211	<b>219</b>
	48.30	52.75	29.14	57.70	114.56	121.38	<b>86.08</b>
	475.45	518.56	591.36	664.74	842.69	839.56	<b>873.11</b>
	11.0	12.0	11.0	16.0	28.0	34.0	<b>38.0</b>
	6.1	6.1	4.4	7.8	10.0	9.2	<b>6.9</b>
	10.3	10.6	5.2	9.2	15.3	14.3	<b>9.9</b>
	3.3	3.5	1.8	3.3	5.8	6.1	<b>4.4</b>
	32.6	33.2	36.2	35.9	40.4	44.0	<b>44.2</b>
	0.60	0.58	0.51	0.41	0.31	0.23	<b>0.28</b>
	22.8	22.7	37.7	27.7	24.4	28.0	<b>44.1</b>
	22.8	22.7	37.7	27.7	24.4	28.0	<b>77.2</b>
	717	637	715	1,062	1,758	1,030	<b>1,592</b>
	14.8	12.1	24.5	18.4	15.3	8.5	<b>18.5</b>
	1.5	1.2	1.2	1.6	2.1	1.2	<b>1.8</b>
	1.5	1.9	1.5	1.5	1.6	3.3	<b>2.4</b>
	85.63	79.02	83.10	100.24	109.93	120.14	<b>108.42</b>
	112.92	109.40	107.14	134.37	138.77	132.58	<b>118.84</b>

ended March 31, 2016 and 2017, are presented under the new categories.

March 31, 2011, are presented on a global basis.

share dividend to commemorate the 100th anniversary of the Company's founding.

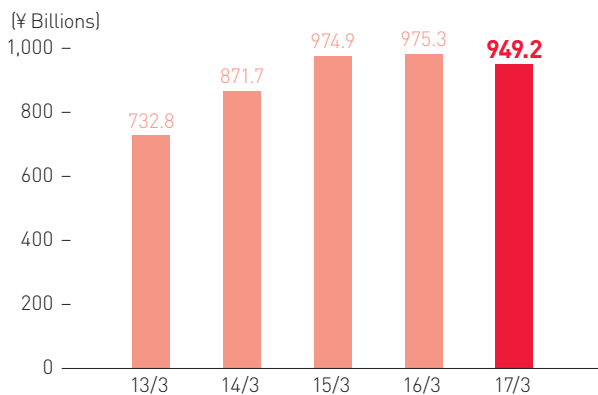
# Financial and Non-Financial Highlights

## Trends in Major Indices

\*JP-GAAP up to and including the fiscal year ended March 31, 2015, IFRS from the fiscal year ended March 31, 2016, onward.

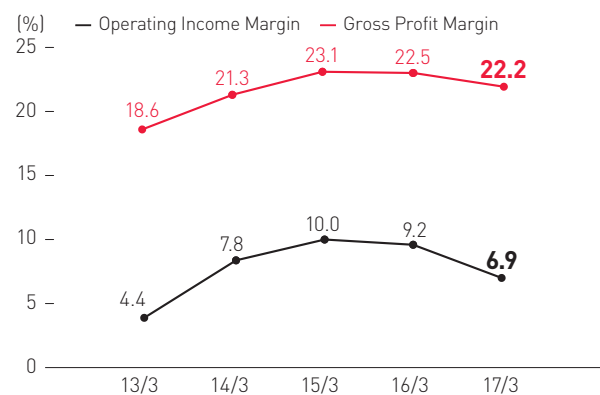
The comments under the charts apply to the actual results for the fiscal year ended March 2017.

### Net Sales



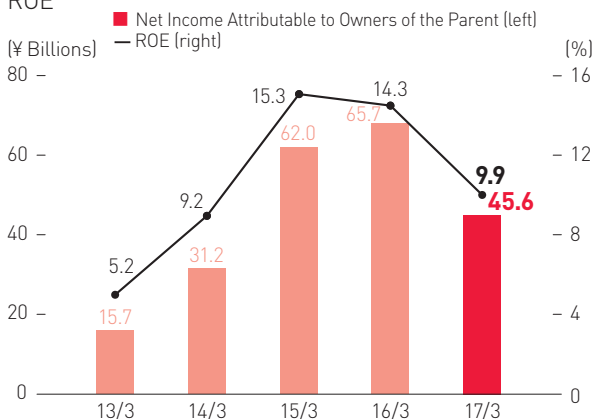
While ongoing strength in the Automotive Business contributed to improved sales on a volume basis, the ¥75.1 billion adverse impact from yen appreciation resulted in sales revenue declining 3% compared with the previous year.

### Operating Income Margin / Gross Profit Margin



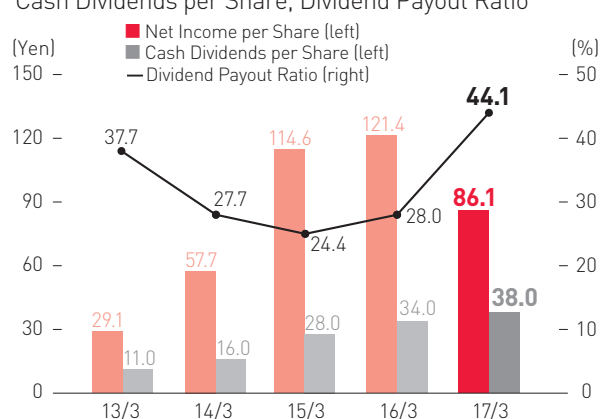
Operating income was down due to the impact from yen appreciation and the booking of other operating expenses. The operating income margin deteriorated 2.3 percentage points compared with the previous year.

### Net Income Attributable to Owners of the Parent ROE



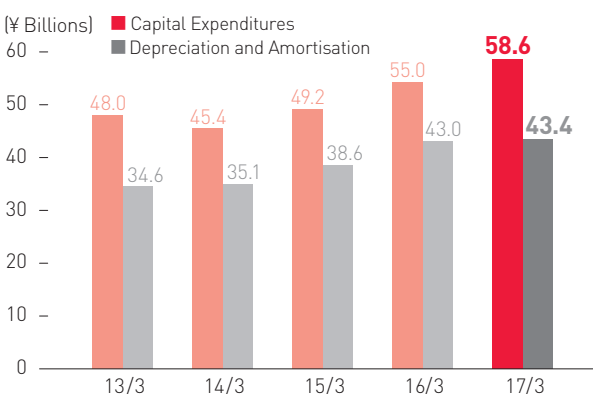
Although deteriorating profit margins contributed to a decline in ROE compared with the previous year, ROE was still at the 10% level targeted in the Company's Fifth Mid-Term Management Plan.

### Net Income per Share Cash Dividends per Share, Dividend Payout Ratio



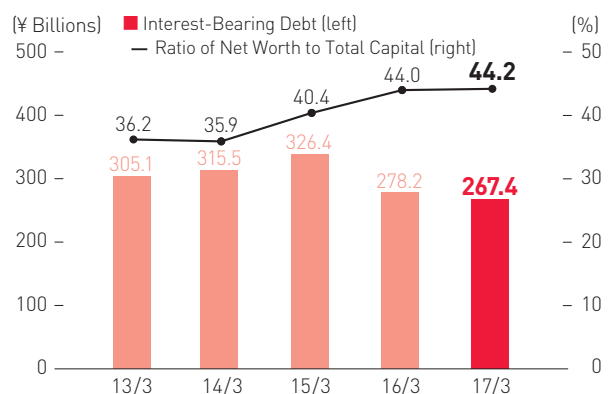
NSK paid an ordinary dividend of ¥28 and a ¥10 dividend to commemorate the 100th anniversary of the Company's founding. Efforts to enhance shareholder returns contributed to a payout ratio of 44.1%. The Company also acquired ¥15 billion worth of treasury shares for the year ended March 2017.

### Capital Expenditures / Depreciation and Amortisation



Capex increased ¥3.6 billion compared with the previous year, primarily in ordinary investments (renewal, productivity improvement, etc.) in the Automotive Business.

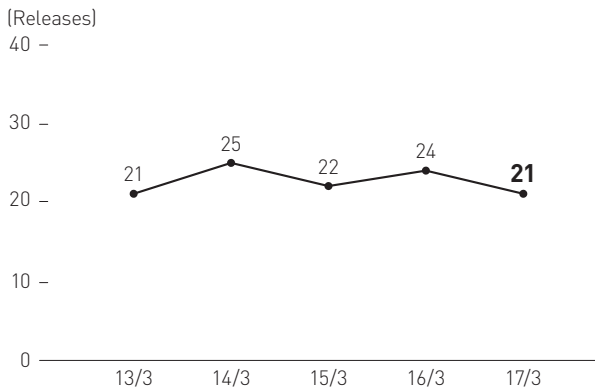
### Interest-Bearing Debt / Ratio of Net Worth to Total Capital



NSK continued to reduce interest-bearing debt. The Company's ratio of net worth to total capital improved to 44.2%, indicating compatibility in shareholder returns and financial soundness.

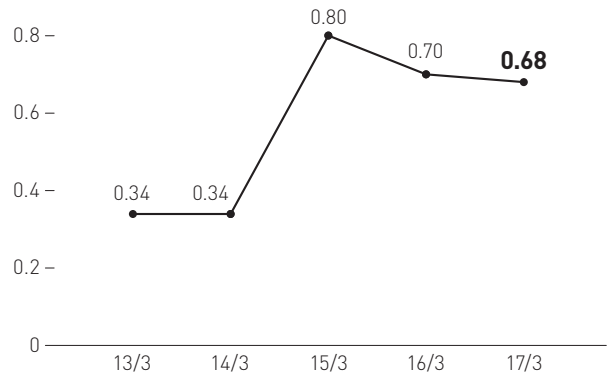


### Number of Product Press Releases (annual)



NSK made more than 20 news announcements for products with global appeal.

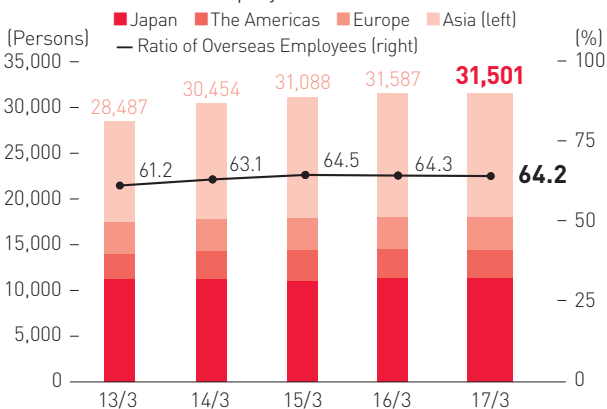
### Lost-Worktime Injury Rate



While enhanced efforts have contributed to an overall decline, there was one major incident. NSK is continuing to bolster its efforts to prevent any recurrence.

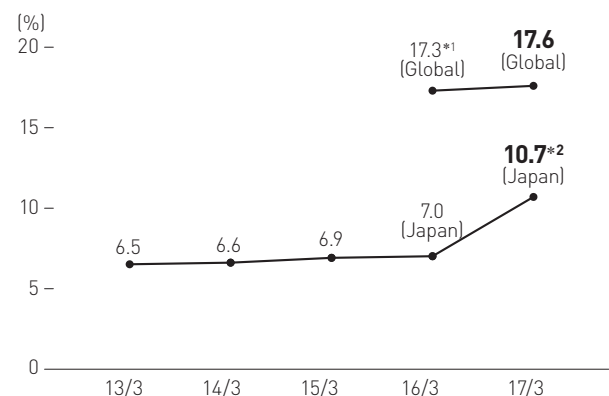
\*Data from the year ending March 31, 2015, are presented on a global basis.  
\*For additional information on the lost-worktime injury rate, please see page 45.

### Number of Employees Worldwide Ratio of Overseas Employees



Although there were no major changes compared with the year ending March 31, 2016, employment over the medium term is expanding in line with business growth, particularly in Asia.

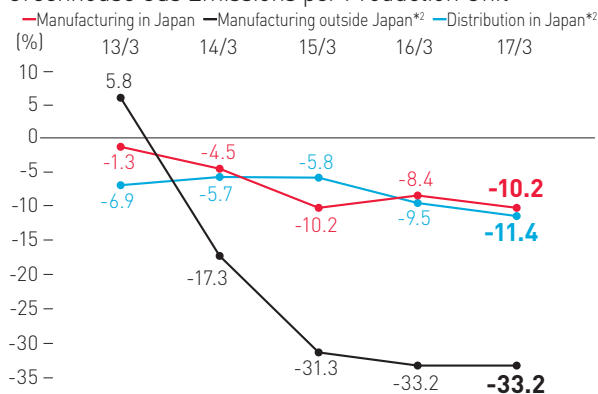
### Ratio of Female Employees



The ratio of female employees has increased gradually to 10.7% in Japan and 17.6% on a global basis, thanks to ongoing efforts to support career advancement and expand the range of job opportunities for women.

\*1 We have reviewed the scope of data and have revised the data retroactively.  
\*2 Data include the subsidiary acquired in 2016.

### Greenhouse Gas Emissions per Production Unit\*1

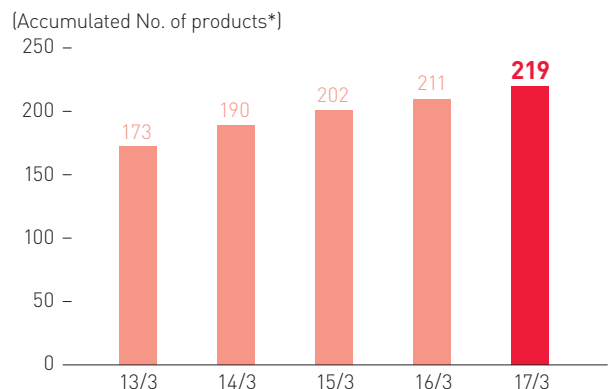


NSK is making steady progress in reductions by introducing energy-saving equipment and improving distribution efficiency and production efficiency.

\*1 Rates of percentage increase and decrease are presented compared with the base date of the year ended March 31, 2012 (0%).

\*2 We have revised the method of calculating greenhouse gas emissions and the data retroactively.

### Number of Environmentally Friendly Products Developed



With the development of eight new products, the number of products contributing to the environment now stands at 219.

\*Cumulative data from the year ended March 31, 2003.

## To Our Stakeholders



**We aim to be a company that creates new value and delivers sustainable growth over the next 100 years.**

President and Chief Executive Officer

*Toshikazu Uchiyama*

## A Look Back at Events in Japan and Overseas in Fiscal 2016

**NSK celebrated its 100th anniversary in fiscal 2016, the year its Fifth Mid-Term Management Plan began. We have obtained measurable results but still see room for improvement.**

On November 8, 2016, NSK celebrated its 100th anniversary. We would not be here today without the support of our numerous stakeholders, including our customers, suppliers, local communities, and partners outside Japan. We would like to express our deep gratitude for this support from all our stakeholders.

Looking back at 2016, the two largest news events were the United Kingdom's vote to exit the European Union and the victory of Donald Trump in the U.S. presidential election. Both outcomes were a surprise to many people, underscoring the differences in perception among respective sectors of society and conflicting viewpoints surrounding certain issues. It also exposed the one-sidedness of thinking among

intellectual circles and in the mass media, the source that most people rely on for their news.

Fiscal 2016 was the first year of NSK's Fifth Mid-Term Management Plan. The outlook from the outset was grim, with the yen appreciating from the outset of the year and weak demand in the Industrial Machinery Business. Although sales and profits were in line with or just above our forecasts in the first and second quarters, demand for industrial machinery began to pick up from the third quarter, and the year ended on a bright note. In the automobile market, conditions in North America remained brisk while sales in China grew considerably against the previous year due to the effect of tax breaks for small vehicle purchases. With market conditions acting as a tailwind, **NSK reported**

**stronger-than-forecast earnings for fiscal 2016. Under the Fifth Mid-Term Management Plan, NSK is working diligently to improve profitability and strengthen competitiveness in each business division and region, under the motto of operational excellence. These efforts have already begun to show measurable results.** However, **profitability in the Industrial Machinery Business is still not at a satisfactory level,** and we will continue to strengthen this area going forward. Although safety, quality and compliance are fundamental requirements for all manufacturing companies, NSK currently has **room for improvement in its safety and quality performance, and is prioritizing efforts on this front.**

## Issues for Fiscal 2017 Onward

**The Industrial Machinery Business is reorganizing production and pushing forward with innovation in manufacturing. In the Automotive Business, NSK aims to expand its powertrain business, expand its lineup of electric power steering products, and develop new business in components for electric brake boosters.**

**One of our priorities is to restore profitability in the Industrial Machinery Business, which fell amidst a decline in demand. One step we are taking to achieve this is a reorganization of our production network.** Specifically, NSK is gradually transferring part of its production from the Fujisawa plant, which was built 80 years ago, to new facilities at its Kiriwara site, located slightly to the north. In addition to upgrading old equipment, the transfer of production is also an opportunity to **streamline processes, improve machining processes and press ahead with other innovations in the manufacturing field.**

NSK is also transferring production of large and ultra-large bearings used in wind power

generation to its Shenyang plant in China, where demand is projected to strengthen over the long term. NSK is targeting demand in China by shortening lead times through local production, while enhancing cost competitiveness by maximizing the use of local parts and materials. Moreover, we aim to expand sales of high-margin products such as precision bearings, standard-size ball bearings and ball screws, in addition to tapping into the mid- to long-term growth potential of markets in railways and robots.

Although the Industrial Machinery Business generated strong earnings during past peak periods as sales expanded in Europe, foreign exchange rates and the competitive landscape have

changed significantly since then. NSK aims to create a structure capable of generating profits even in challenging business environments. To this end, we are strengthening our cost competitiveness by reorganizing production and upgrading manufacturing methods. We are working diligently to improve profitability and expand the presence of the Industrial Machinery Business in Europe and other regions outside Japan.

**In the Automotive Business, the powertrain business has grown briskly** amid a shift in demand from manual transmissions (MT) to automatic transmissions (AT) and a trend toward multistep AT. In China, although MT was mainstream in the past, the market has been shifting

## To Our Stakeholders

toward continuous variable transmissions (CVT), dual clutch transmissions (DCT) and multistep AT. **We aim to tap into related demand for bearings and AT components.**

**In the steering business, we must work to expand our product lineup.** The focus of technological change has shifted towards large and medium-size vehicles, from column assist electric power steering (EPS)—our field of expertise—to lower assist EPS. Methods that assist steering force downstream near the wheel are growing in relevance due to their

compatibility with self-driving cars and responsiveness. Having successfully developed a rack assist type (lower assist) system and installed it in demonstration vehicles, our foremost objective is now to secure orders for mass-produced vehicle models. We are targeting the start of mass production in 2020 or later to coincide with the timing of our customers' vehicle development.

Meanwhile for column type EPS, our customers are demanding even better performance. NSK intends to lead the industry by refining its technologies to deliver even greater

safety, responsiveness and lighter weight.

Meanwhile, in a new development NSK has been preparing for the mass production of components integrating ball screws and bearings for electric brake boosters. In the second half of the current fiscal year, we will launch production in Japan and plan to start production in overseas locations near demand centers. **In electric brake systems, we aim to win orders against a backdrop of growing demand as automatic emergency braking systems become mandatory in vehicles.**

### Our Vision for Sustained Growth Over the Next 100 Years

**By harnessing the energies of each and every employee, we will work to deliver new performance, functions and value for society and achieve sustainable growth over the next 100 years.**

External expectations placed on NSK tend to focus on how technologies will change in the future, and the new products and businesses that NSK will create in response to these changing technologies. On the occasion of our 100th anniversary, we established NSK Vision 2026: *Setting the Future in Motion* as our mid- to long-term vision. With our customers, society, and our shareholders now focusing on how NSK will achieve this goal of *Setting the Future in Motion*, we have a responsibility to deliver measurable results.

**By setting the future in motion, we aim to generate new levels of performance, functionality and value for not only the customers we supply directly, but also the people who use the vehicles and home electronics in which our products are incorporated, as well as the end users of the industrial equipment, machines and systems that employ NSK products.**

With an even greater focus on societal trends, we will utilize our four core technologies to create new products and services that match our customers' needs. Moreover, I believe we can also take a completely new approach to our existing products, services and



businesses. Over the past 100 years of our history, we have done our utmost to satisfy customer requirements and demands, but it is also vital that we anticipate and understand what end users desire in the finished products. We intend to expand the scope of our potential by breaking with outdated traditions and conservative thinking. To this end, we must constantly ask ourselves why we do things the current way, and search for better and more effective methods of accomplishing our goals.

Last year, NSK stepped up its public relations to commemorate its 100th anniversary. NSK is not widely

known among the general public as end users generally do not have many opportunities to see our products with their own eyes. We believe that our centennial public relations effort has helped bring the NSK name further into the public consciousness. Our employees feel pride and unity when the NSK brand is recognized, and as such, we expect that our public relations efforts will have a positive impact not only in Japan, but also on our operations around the world. **We will continue focusing the abilities of each and every Group employee on achieving sustainable growth over the next 100 years.**

**NSK aims to promote diversity and inclusion while contributing to the environment through its business.**

**NSK follows Japan's Corporate Governance Code and is working on an ongoing basis to improve the effectiveness of its Board of Directors.**

First, regarding E (environment), international society came together to sign the COP21 Paris Agreement in 2015, rallying behind the goal of reducing CO<sub>2</sub> emissions to a net total of zero by the end of the century. Countries and regions around the world have introduced regulations to reduce CO<sub>2</sub> emissions and increase renewable energy, and competition to develop new technologies has gained momentum, especially in electric vehicles and wind power generation.

**At NSK, our corporate philosophy calls for the preservation of the global environment through Motion & Control™ technology, as our products can directly help improve the environment.** Our bearings, automotive parts and precision machinery products help minimize energy loss and facilitate the efficient control of mechanical movements. Leveraging our four core technologies, we believe our first mission is to develop further environmentally friendly products that can be employed around the world. At NSK, we strive to contribute to the environment in terms of both its products and manufacturing methods, aiming to reduce environmental load in our production processes by improving production efficiency, installing energy-saving equipment, and switching to cleaner energy sources. In order for NSK to attain sustained growth, we must become more proactive and attuned to the global societal goal of achieving a sharp reduction in CO<sub>2</sub> emissions. This requires an improvement in our ability to create innovative production technologies and develop groundbreaking new products. To achieve this goal, we are investing more heavily than in the past. As part of our commitment to our corporate philosophy, we have formulated long-term environmental visions with 10- and 20-year time spans.

**With regard to our relationship with S (society), we see the need to**

**strengthen our diversity and inclusion initiatives. Diversity of gender, age and nationality, is essential.** Organizations composed of people with similar backgrounds and mindsets tend to form monochromatic cultures. However, in a rapidly changing world where uncertainty is the norm, there are limits to what can be accomplished with homogeneous value systems and ways of thinking. In order to remain a company that is highly regarded and welcomed by society and customers, we must respond and adapt to the many changes occurring around the world. Diversity is an asset that will help us achieve this. I believe that having people with a range of different opinions debate and discuss problems will lead to better decisions and outcomes on important matters. NSK conducted a survey of its 64 plants around the world, and one of the most interesting findings was that the plant with the best quality performance was in China, and that it also had the highest ratio of female employees and managers among the Group. This may be, for example, that female employees can offer a different perspective of the shop floor in terms of arrangement, organization and cleanliness, compared to sites with predominantly male staff. Moreover, the ways discussion takes place within an organization also tend to differ. Whereas male-dominated organizations tend to operate based on hierarchical relationships between supervisors and employees and seniority-based systems, discussion at organizations with a greater number of female employees tends to be more open and inclusive. Empowering women in the workplace is a key issue for our management. NSK aims to assist female employees with their career development while providing a supportive work environment. Workplaces that are welcoming for female employees are, by extension, more supportive for male employees as

well. This extends to childcare and elderly care policies, for example, as well as other situations that demand employees' time for a variety of reasons. As one initiative to support working parents, in Japan NSK has introduced an in-house childcare service on days when employees work on national holidays and public childcare services are closed. Both mothers and fathers have begun to take advantage of this service. NSK has also started a trial work-at-home program for employees raising children. In addition to childcare, we are also promoting more flexible working styles for all employees, regardless of gender or age.

In order to promote diversity and inclusion, it is important to understand why diversity leads to innovation and why organizations that lack diversity are at risk. To further this understanding, we aim to encourage dialogue among employees and are striving to create an organization and corporate culture that welcomes diverse members and value systems.

With respect to G (governance), since the introduction of Japan's Corporate Governance Code, attention has focused on the importance of succession planning for top management and developing the next generation of managers. In the past, most companies were exclusively controlled by the CEO, but in the future, companies will have to be more transparent and explain the decision-making process for nominating and selecting successors to the CEO position. NSK has adopted a Company with Three Committees structure. I had previously headed the Nominating Committee as NSK's president and CEO, but since the June 2017 Ordinary General Meeting of Shareholders an independent director has taken over this role. We are currently drawing up plans for introducing a leadership development system, including defining

## To Our Stakeholders

qualifications based on discussions of the ideal candidate for CEO in terms of career background and mindset.

In fiscal 2015 and fiscal 2016, the same external consultant has evaluated the effectiveness of the Board of Directors and provided an assessment of progress made over the past two years. This assessment was communicated to all directors based on a predetermined reporting process. NSK's Board of Directors was commended for its improvement in ensuring livelier debates as a result of reviewing the matters put

for debate and discussion by the Board of Directors, increasing the length of time allocated for debate, and working harder to make sure all of the directors are well informed prior to meetings. **By having the opportunity to visit business sites inside and outside Japan, NSK's independent directors gained a better understanding of the Company's business conditions and key tasks, which has led to deeper discussions and a greater sense of unity at Board of Directors meetings.** However, the consultant also raised issues requiring

improvement, including greater awareness of the role that the Board of Directors should play in ensuring sustainable growth and improving corporate value over the mid- to long-term, increasing diversity on the Board of Directors, and reconsidering the ratio of external to internal directors. **NSK will continue working to improve the effectiveness of its Board of Directors, taking into consideration a range of opinions and the results of self-assessments made by each director.**

### Toward a Sustainable World

**It will become increasingly important to incorporate SDG objectives into our management based on a sound understanding of their true aims.**

Sustainable Development Goals (SDGs): 2030 Agenda for Sustainable Development was adopted by the United Nations at a summit in September 2015. It consists of 17 Sustainable Development Goals and 169 targets for

realizing a sustainable world. Government agencies, corporations and civic organizations have been called upon to adopt the SDGs and work together to solve social issues including eradicating poverty, eliminating

discrimination, and addressing climate change.

**We believe the United Nations created these goals with the intention of improving the welfare and happiness of people around the world as the organization has thus far striven to achieve through its initiatives in regions around the world.** From the latter half of

the 20th century to the present day, unsustainable development has been the reality around the world. In addition to causing environmental problems, this has led to disparities between regions as well as other problems such as the use of child labor in developing countries. Accordingly, we realize that it is more important than ever to focus on sustainable development.

While the 17 SDGs are all reasonable goals, figuring out which of them we should aim to address in our corporate activities has posed quite a challenge. Some goals are directly related to corporate activity, while others have a more indirect relationship. However, given that corporations are a considerable presence in society, companies of a certain size should be expected to address SDGs.

Regarding the SDG for "quality education," NSK views the next generation as an important stakeholder, and conducts a range of initiatives to promote science and support education.



For example, we established the NSK Scholarship Foundation in conjunction with our 100th anniversary. The Foundation has already begun awarding scholarships to undergraduates and graduate students in Japan wishing to study abroad, as well as assisting science and engineering students from Asian countries, particularly the ASEAN region, to study in Japan. In addition, we have published a book called “The Secrets of Bearings” in a comic book format aimed at elementary students, and gifted these books to all elementary schools and public libraries in Japan. We have also distributed English and

Chinese translations of this book through our overseas affiliates. Furthermore, NSK has offered science classes for children at the Science Museum in Kitanomaru, Tokyo for the past 10 years.

The SDG calling for “affordable and clean energy” is also relevant to our operations. NSK develops components and technologies used in products and services that in turn reduce energy consumption. Within the context of the SDG for “industry, innovation and infrastructure” although NSK’s products are very basic parts, they play a vital role as elemental components in machinery.

The SDG for “responsible consumption and production” is an important consideration in our supply chain operations, and also addresses the issue of recycling.

I believe we need increasing awareness of the 17 SDGs within the context of our business development, including the orientation of our operations, the location of our production bases, and the type of plants we create. The issue of how to reflect the SDGs in our operations will become an increasingly important task for NSK’s management going forward.

## Our Long-Term Outlook

### Viewing change as an opportunity for further development, NSK aims to leverage the technologies and business foundation it has accumulated throughout its history to create new value that contributes to society.

NSK has established Vision 2026 as its vision for the next decade. Within the context of changes in the business environment over a period that extends beyond this plan and our growth strategies in response to these changes, we believe that the major technological trends in the Automotive Business will be the popularization of electric vehicles, increasing vehicle electrification, and autonomous driving. Numerous predictions have been made about when the spread of electric vehicles will begin to gain traction and how far this trend will spread. Countries around the world have formulated policies to support electric vehicles, with France and the United Kingdom announcing goals to prohibit the sale of gasoline- and diesel-powered vehicles by 2040. Although related infrastructure, the cost of batteries, driving range and other issues remain to be solved, the shift toward electric vehicles is progressing smoothly. A while it is yet unknown whether completely self-driving cars can become a reality by 2026, we expect partially autonomous vehicles and assisted driving to become prevalent. Moreover, considering the current state of traffic accidents, especially with

accidents increasing among elderly drivers in Japan, we believe that automatic braking and automated steering systems will quickly become standard features. Other major keywords will be “connected cars” and “ride sharing,” which stand to dramatically change society and the automotive industry. If the connected car concept works as expected, traffic congestion should ease. Paired with ride sharing, people can forgo owning a car if they choose. We must think about how these trends will impact automotive technologies and design. Will automobiles simply be viewed as a means of mobility in the future? Or will people continue to drive cars for pleasure as a hobby? We believe that the purpose of automobiles will split into two distinct categories: mobility and driving pleasure.

In fields other than automobiles, we are seeing rapid advances in technologies related to IoT, artificial intelligence, robotics, alternative materials, metallic lamination technology, and 3D printing. We believe these technologies have the potential to drastically change the industrial machinery industry. If advances are

made in condition monitoring with IoT and AI, there may come a day when industrial machinery, components, and bearings break down less frequently, reducing demand for spare parts. While NSK has conducted research and engineering into unbreakable bearings and long-lasting bearings, at present all bearings reach the limit of their service lives after use for a certain length of time. If the service lives of bearings become longer, this could change the demand structure in the Industrial Machinery Business. This would pose a business risk to NSK. Amid trends in technological innovation, however, we believe requirements for more technologically advanced products present significant business opportunities. Moreover, business growth also depends on our ability to proactively offer new value on our own, without waiting for customers or external parties to define requirements. Having accumulated a range of cutting-edge technologies and built a solid business foundation, NSK aims to transform into a company that creates new value for society, with an eye to fields beyond our traditional business domain.

# Looking Back on Past Mid-Term Management Plans

Here we take a retrospective look at the past 10 years of mid-term management plans, from the second to the fourth. (Note: Mid-Term Management Plan is abbreviated as MTP)

	The Second MTP Year to March 31, 2007–Year to March 31, 2009	The Third MTP Year to March 31, 2010–Year to March 31, 2013	The Fourth MTP Year to March 31, 2014–Year to March 31, 2016
<b>Vision Positioning</b>	<p><b>To become No. 1 in total quality</b></p> <p><b>Establish foundation for NEXT10 (where NSK should be at 100th anniversary of establishment in 2016)</b></p> <ul style="list-style-type: none"> <li>• Transition to growth strategy</li> <li>• Improvement of profitability</li> </ul>	<p><b>Responding to paradigm shifts</b></p> <p><b>Reorganizing business foundation toward net sales of ¥1 trillion</b></p> <ul style="list-style-type: none"> <li>• Period to establish and consolidate corporate fundamentals appropriate for a company with net sales of ¥1 trillion</li> <li>• Continue measures to become No. 1 in total quality</li> </ul>	<p><b>Establishing corporate fundamentals appropriate for a company with net sales of ¥1 trillion</b></p> <ul style="list-style-type: none"> <li>• Establish corporate fundamentals appropriate for a company with net sales of ¥1 trillion in 2016, the 100th anniversary of NSK's foundation</li> <li>• Implement measures to achieve mid-term targets</li> <li>• Continue to implement basic strategies (focus on profitability, growth in emerging countries, global management)</li> </ul>
<b>Outline of the MTP</b>	<p><b>Common Group Strategies</b></p> <ol style="list-style-type: none"> <li>① Strengthen manufacturing capability</li> <li>② Strengthen product development capability</li> <li>③ Strengthen overseas profitability</li> <li>④ Strengthen global management capability</li> </ol> <p><b>Positioning of Each Business</b></p> <p>Industrial machinery bearings: Profit growth driver</p> <p>Automotive products: Stable profit foundation</p> <p>Precision machinery and parts: Steady contribution to total profits</p> <p><b>Foundation to Underpin Measures</b></p> <p>Global <i>hitozukuri</i> (human resource development) supporting growth</p> <p>Production innovation through thorough <i>monozukuri</i> awareness</p> <p>Rebuilding of global IT systems</p>	<p><b>Our Three Core Management Strategies</b></p> <ol style="list-style-type: none"> <li>① Enhancement of business-based management (sales &amp; marketing, production and technological divisions brought under business headquarters management)</li> <li>② Growth strategies</li> <li>③ Profitability improvement</li> </ol> <p><b>Specific Measures</b></p> <p><b>A. Enhancement of business-based management</b> Autonomous management by integrated business management and the clarification of divisional responsibilities</p> <p><b>B. Growth strategies</b></p> <ol style="list-style-type: none"> <li>① Increase presence in emerging markets</li> <li>② Expand environmental, infrastructure and resource businesses</li> <li>③ Respond to technological innovation</li> </ol> <p><b>C. Profitability improvement</b></p> <ol style="list-style-type: none"> <li>① Proactive sales strategy (strengthen proposal-based sales capabilities)</li> <li>② Reorganize global production sites</li> <li>③ Accelerate new product development</li> </ol>	<p><b>Business Strategies</b></p> <p><b>Growth with focus on profitability</b></p> <ol style="list-style-type: none"> <li>① Growth in emerging countries</li> <li>② Enhancement of customer and sector strategies</li> <li>③ Production and technological innovation capabilities</li> <li>④ Strategic alliances</li> </ol> <p><b>Corporate Foundation</b></p> <p><b>Develop management capability to handle ¥1 trillion in sales volume</b></p> <ol style="list-style-type: none"> <li>① Enhancement of corporate governance and compliance</li> <li>② Reform of business structure</li> <li>③ Advancement of global management</li> </ol> <p><b>Basics of MTP (Priority Issues)</b></p> <p>Safety, quality and compliance</p>
<b>Looking Back</b>	<p>Until the second year of the Second MTP (the year ended March 2008), the Company steadily expanded its business due to factors that included favorable global economic conditions and the added impetus provided by high demand for infrastructure and resource-related business in emerging markets, as well as the weak yen. As a result, the Company achieved record-high sales, as well as operating and ordinary income, for four consecutive fiscal years.</p> <p>However, Lehman Brothers filed for bankruptcy in the autumn of the third and final fiscal year, fiscal 2008, and the environments of all businesses and markets suffered significant deterioration due to the global economic crisis. As emergency revenue measures, the Company thus made adjustments to its production levels and reduced fixed costs, but business performance in the final year of the Second MTP (the year ended March 2009) fell short of targets.</p>	<p>Amid the severe business conditions that followed the collapse of Lehman Brothers, the Company responded to the paradigm shift typified by the keywords "emerging markets" and "technological innovation," worked on reorganizing its business structure toward net sales of ¥1 trillion and achieved some measure of success.</p> <p>Nevertheless, the upheaval in the business environment, including a sharp appreciation of the yen and fluctuations in global demand, continued to intensify, and the numerical targets of the final year of the Third MTP (the year ended March 2013) were not achieved.</p> <p>Furthermore, having been found guilty of violating the Antimonopoly Law in a 2013 case involving a bearing product cartel, the Company received a cease-and-desist order and was ordered to pay financial penalties. As a priority and urgent task, the Company undertook measures to strengthen its compliance system toward the early restoration of trust and to prevent any reoccurrence.</p>	<p>Against a backdrop of improvements in the profitability of the Automotive Business and assisted by an underlying weakness in yen exchange rates, the Company achieved all its numerical targets, including those for net sales and profit, a year ahead of schedule in the second year of the Fourth MTP. The Company also improved on the targets in the MTP's final fiscal year. Significant growth was recorded in the Chinese business and in the EPS business in particular.</p> <p>With regard to profitability, the Company achieved an operating income margin of 10.0% in the fiscal year ended March 2015 and maintained a high level of 9.7% in the final fiscal year. In contrast, net sales and profitability in the Industrial Machinery Business were on a declining trend, buffeted by the slowdown in global economic growth, including the deceleration in China.</p>
<b>Achievements</b>	<ul style="list-style-type: none"> <li>• Strengthened the industrial machinery bearings business (improved roller bearing supply capacity, expanded aftermarket sales networks)</li> <li>• Expanded the global business and improved revenues in the automotive products business</li> <li>• Improved overseas profitability, primarily in Europe and Asia</li> <li>• Expanded business structures in China and India</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthened its business foundation in China (established a production system for a full product lineup, built an autonomous management system within China)</li> <li>• Exceeded the MTP target for global expansion of the EPS business</li> <li>• Enhanced profitability following the reorganization of the Precision Machinery and Parts Business</li> <li>• Advanced local production and local procurement</li> </ul>	<ul style="list-style-type: none"> <li>• Achieved all the MTP numerical targets</li> <li>• Improved profitability on a consolidated basis</li> <li>• Expanded business in China, increased EPS sales</li> <li>• Made progress with the global management structure</li> <li>• Strengthened and enhanced compliance</li> </ul>
<b>Issues and Shortcomings</b>	<ul style="list-style-type: none"> <li>• Rapid responses to changes in the demand environment (reflect on effects of the Lehman Brothers collapse, particularly in Japan)</li> <li>• Quality improvements in the Precision Machinery and Parts Business are incomplete</li> <li>• Even though measures to boost earnings have been carried out, including partial plant shutdowns in the U.S. business, further improvement in profitability is needed</li> </ul>	<ul style="list-style-type: none"> <li>• Declines in profitability levels due to the extremely high value of the yen and inadequate responses to changes in the business environment, including extreme fluctuations in demand</li> <li>• Decrease in the Industrial Machinery Business sales ratio</li> <li>• Strengthening of the compliance system to restore trust and prevent any reoccurrence following the cartel incident</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to build foundation as a company with ¥1 trillion in net sales</li> <li>• Establish profitability not greatly affected by business cycles or fluctuations in the amounts of raw materials or exchange rates</li> <li>• Promote new products and development in new areas</li> </ul>

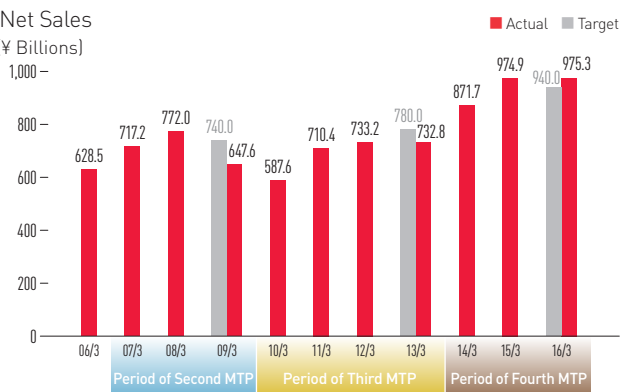


## Business Trends

(Note: To show 11 years of trends, the actual figures are based on the JP-GAAP.)

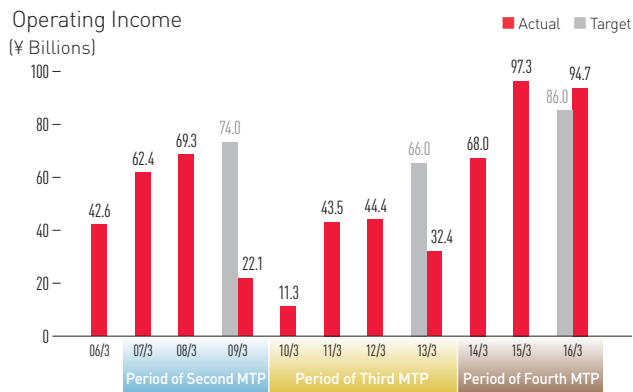
### Net Sales

(¥ Billions)



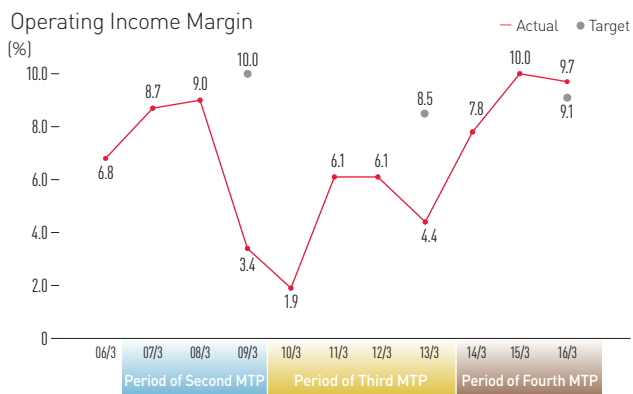
### Operating Income

(¥ Billions)



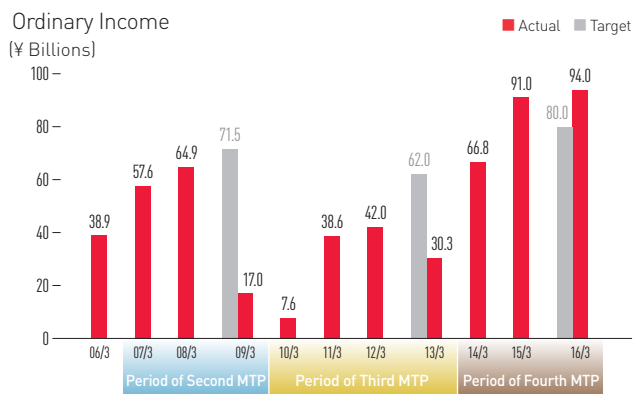
### Operating Income Margin

(%)



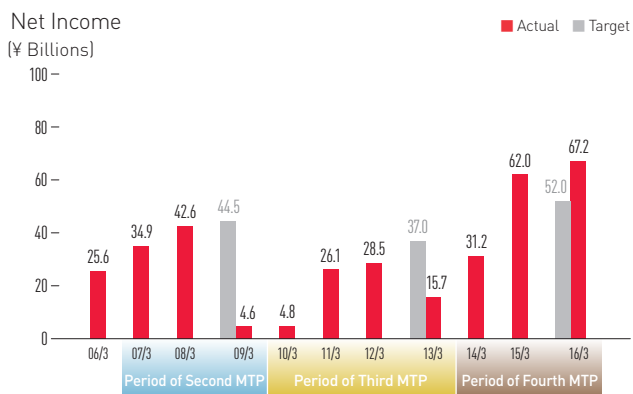
### Ordinary Income

(¥ Billions)



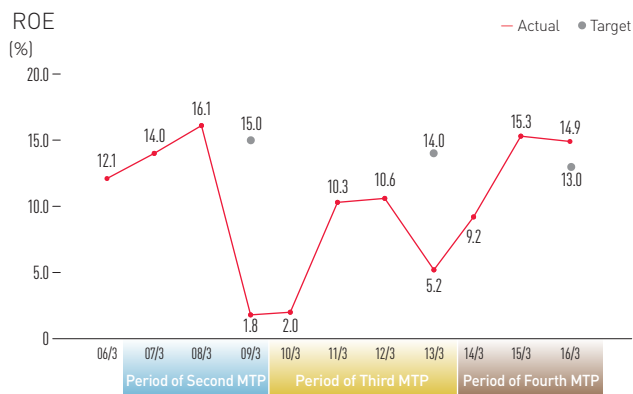
### Net Income

(¥ Billions)



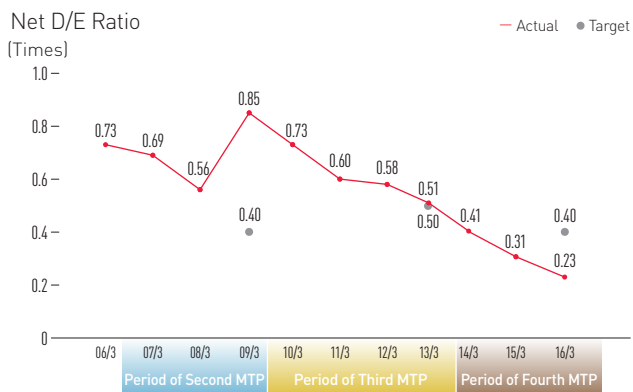
### ROE

(%)



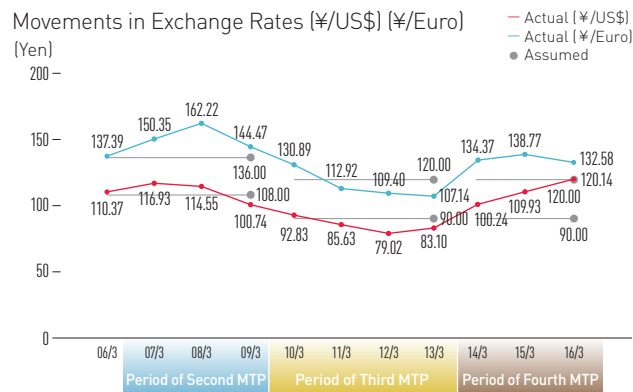
### Net D/E Ratio

(Times)



### Movements in Exchange Rates (¥/US\$) (¥/Euro)

(Yen)



# The Fifth Mid-Term Management Plan

## Outline of the Fifth Mid-Term Management Plan

Under the slogan “embark on new chapter in evolution towards next 100 years” with two key policies of “operational excellence” together with “innovate and challenge,” NSK is addressing the three main management tasks of achieving sustainable growth, reconstructing its profit base and expanding into new growth fields.

### Twin Pillars

#### 1. Operational Excellence

By going one step further in leveraging *monozukuri*, a key ingredient in our DNA, we are endeavoring to realize more robust front-line capabilities. In addition, we are pursuing efficiency across all our manufacturing, sales, technical and administrative functions while working to raise the competitiveness of core businesses.

#### 2. Innovate and Challenge

This pillar focuses on the creation of new value for the future through new technologies, products and businesses. By pursuing operational excellence, the Company will secure the level of profitability necessary to reinvest in innovation for the next stage of development, thereby achieving further growth.

### Aims and Implementation

#### 1. Sustainable Growth

Through our focus on sustainable growth, NSK will contribute to the creation of a safe, convenient, comfortable and environmentally friendly society.

#### 2. Reconstruct Profit Base

Having improved profitability under the Fourth Mid-Term Management Plan, NSK will make every effort to reconstruct its business structure and profit base to ensure that the Company's foundation is more resilient to changes in its external environment. At the same time, we will continue our traditional emphasis on *monozukuri* and quality while taking care of our employees and valuing our customers and business partners.

#### 3. Expand into New Growth Fields

In addition to growth through functional and elemental components that leverage NSK's core technologies, the Company is broadening its focus to include the applications, machinery, equipment and systems that use NSK products. We will be more proactive in advancing technological development and marketing designed to enhance these functions.

## NSK Vision 2026 Setting the Future in Motion

### Embark on New Chapter in Evolution Towards Next 100 Years



## The Fifth Mid-Term Management Plan Numerical Targets

Although the recovery in demand over the course of the Fifth Mid-Term Management Plan is expected to be limited, NSK will continue to take up the challenge of achieving its previous targets: net sales of ¥1 trillion, an operating income of ¥100 billion and an operating income margin of 10%.

As far as other management indicators are concerned, NSK will work to achieve an ROE of 10% or more and a net D/E ratio of 0.3 times in a bid to improve its capital efficiency and financial stability.

In an effort to secure growth, NSK plans to invest a total of ¥180 billion over three years. This is expected to exceed depreciation and amortization by around ¥50 billion, which is projected to come in at ¥130 billion.

Moreover, the Company will also engage in R&D expenditures totaling ¥80 billion. Moving forward, every effort will be made to put in place the important intellectual property and human assets necessary to realize future growth from a mid- to long-term perspective.

	(*Based on IFRS) FY2015 (Actual)	(*Based on IFRS) FY2018 (Plan)
Net sales	¥975.3 billion	¥1 trillion
Operating income	¥89.5 billion	¥100 billion
Net income <small>(attributable to owners of the parent)</small>	¥65.7 billion	¥70 billion
Operating income margin	9.2%	10.0%
ROE	14.3%	10.0% or more
Net D/E ratio	0.23 times	0.3 times
Exchange rate	US\$1 = ¥120 €1 = ¥133 1RMB = ¥18.9	US\$1 = ¥105 €1 = ¥120 1RMB = ¥16.7

	(*Based on IFRS) Fourth MTP (Actual)	Fifth MTP (Plan)
<b>The Fifth Mid-Term Management Plan Capital Expenditure/R&amp;D Expenses</b>		
Capital expenditure (including intangible assets)	¥149.0 billion	¥180.0 billion
<b>Operational Excellence</b> Enhance profitability, reorganize plant network, improve operational efficiency		¥140.0 billion
<b>Innovate and Challenge</b> New manufacturing methods, smart factories, new products and fields		¥20.0 billion
<b>Reinforce Business Base</b> Safety, security, environment, BCP		¥20.0 billion
R&D expenses	¥68.5 billion	¥80.0 billion
Depreciation and amortization	¥115.3 billion	¥130.0 billion

## Strategies by Business

### Industrial Machinery

Against a backdrop of factors that include a slowdown in growth in emerging markets and a downturn in resource prices, the demand environment for the Industrial Machinery Business is in an adjustment phase and its future remains uncertain. In contrast, mid- to long-term technological needs are evolving, and we will engage in the following key initiatives so that we can meet and grow those needs.

#### Measures Geared toward Key Initiatives

##### ▶ Response to Changes in the Business Environment

To rework its competitive edge and improve profitability, the Company will review quality and costs, work to shorten lead times and strengthen product appeal.

##### ▶ Measures for Focus Sectors

Having cited the infrastructure field, including wind turbines and railcars; capital goods, including machine tools; and the rapidly growing fields of robotics and medicine as its focus sectors, the Company will provide solutions. The Company will also strengthen the management of its sales channels in the aftermarket field.

##### ▶ Creation of New Added Value and Demand

In addition to engaging in the technological development and the establishment of a business model for a condition monitoring system (CMS), NSK will focus on developing new products by harnessing the synergies created by combining bearing and linear motion technology.

#### Key Initiatives

##### Respond to Changes in the Business Environment and Expand Target Fields

##### Operational Excellence

- Reinforce response capabilities and profitability
- Enhance product development capabilities

##### Innovate and Challenge

- Concentrate resources on focus sectors
- Create new added value and demand

### Automotive

Based on the two main topics of "diversification in automotive power sources" and the "evolution in vehicle dynamics control," significant changes in the environment in which the Automotive Business operates are proceeding at a rapid pace. In accordance with these changes in the environment, the Company reorganizes the business into the Automotive Powertrain Division HQ and the Automotive Steering and Actuator Division HQ and link them to next-generation growth.

#### Measures Geared toward Key Initiatives

##### ▶ Powertrain Business

The Company will bring about the further evolution of its elemental technologies for bearings and automatic transmission (AT) products. With regard to the latter, the Company is anticipating sales expansion boosted by multistep AT and an increase in business from customers that handle unit products. Against the backdrop of the spread of electrical components for automobiles, the Company is also aiming for growth by developing new products in the field, such as electrical chargers and in-vehicle motors.

##### ▶ Steering and Actuator Business

The Company has positioned the period of the Fifth Mid-Term Management Plan as the time for sowing the seeds for the next generation of growth. Aiming to expand the customer base of its mainstay column-type EPS, the Company will link this to growth over the duration of the next mid-term management plan by further developing its rack-type EPS. The Company will also utilize the mechatronics technologies accumulated in its EPS business to advance the development of new core products, such as actuators for electric brakes.

#### Key Initiatives

##### Reinforce Profit Base and Establish Platform for Future Growth

##### Operational Excellence

- Expand drivetrain business, achieve growth with accompanying profitability
- Expand customer portfolio for EPS

##### Innovate and Challenge

- Respond to technology evolution (high efficiency, electrification, autonomous driving)
- Develop lower-assist EPS

## Status of Initiatives under the Fifth Mid-Term Management Plan

The Company concluded the fiscal year ended March 31, 2017 (fiscal 2016), the first of the Mid-Term Management Plan, with a recovery in demand that was projected to be limited actually stronger than expected particularly in the Industrial Machinery Business sectors, such as machine tools and semiconductors. Although the situation varies depending on the sector, in the fiscal year ending March 31, 2018, it is expected that the gradual recovery trend will continue. Although the automotive market continues to expand at a moderate pace globally, an adjustment in North American demand and a slowdown in China are expected to take place. Under such circumstances, in the Industrial Machinery Business, a key initiative is to maximize the expansion of sales in the sectors experiencing remarkable demand recovery and to strengthen supply management for that purpose. In the Automotive Business, the Company will cover the negative impact of the EPS model change through the powertrain business, which is expected to increase. The Company is also planning to expand orders for ball screws for electric brake systems. As a manufacturer that makes products, the Company gives its levels of safety, quality and compliance the highest priority.

### Industrial Machinery Business Progress Report

##### ▶ Response to Changes in the Business Environment

Although there are fields where the competitive environment is intensifying due to the rise of Chinese manufacturers, NSK clarifies its target markets and focuses on areas requiring advanced technologies. With regard to the strengthening of cost competitiveness and productivity, the Company will conduct design reviews and work to accelerate global procurement.

##### ▶ Measures for Focus Sectors

In the railway field, the Company has begun its full-scale entry into the European MRO business and is continuing to expand its sales activities in China. To secure stable supplies of machine tools, the Company will strengthen its productivity and procurement capabilities on a global basis.

##### ▶ Creation of New Added Value and Demand

Having newly established a CMS Development Department, the Company is developing the systems that will become its platform and promoting efficient and effective technology and product development.

### Automotive Business Progress Report

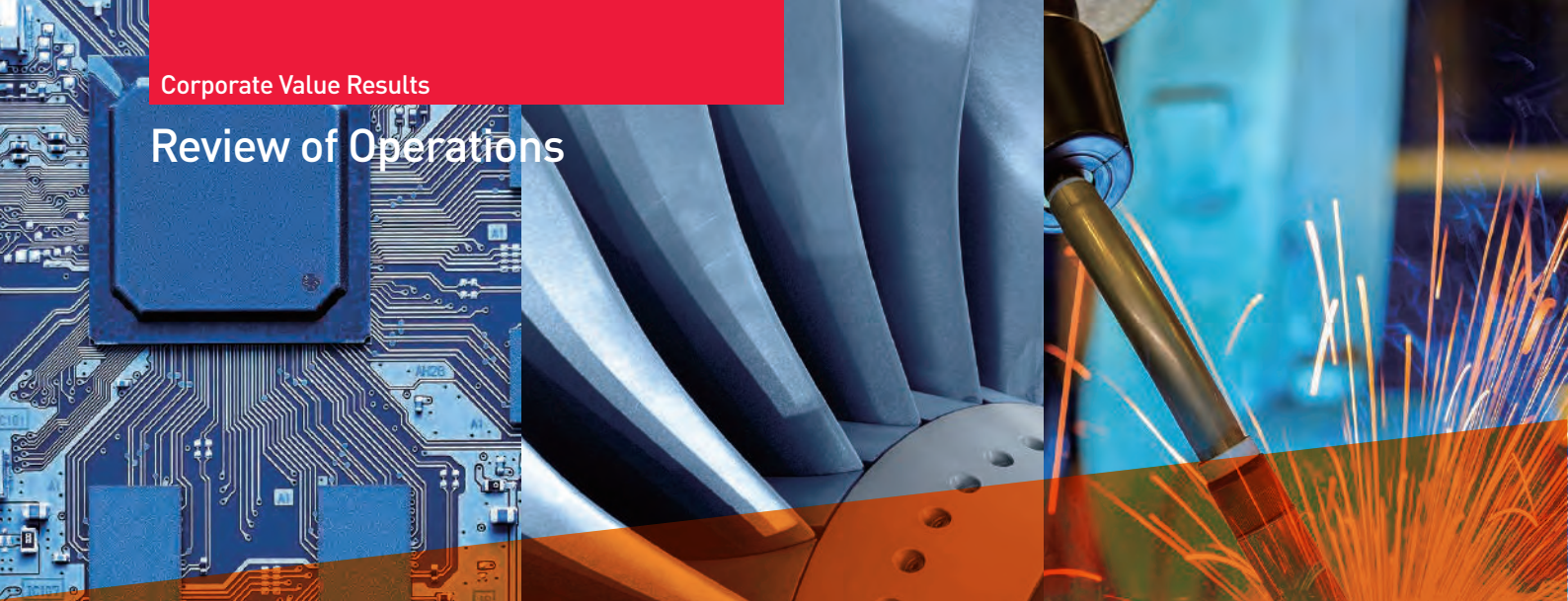
##### ▶ Powertrain Business

In the new application business that is accompanying the shift toward electrification, the level of performance required of bearings is high, and the Company is working to expand orders by drawing on NSK's technical capabilities. The Company has also commenced sales of hub unit bearings that leverage the low friction technologies for the new, mass production electric vehicle models. To strengthen the production structure of its AT business, where demand is expanding, the Company will start operations at a needle roller bearing plant in South Korea and at an AT components factory in Mexico in the current fiscal year, ending March 2018.

##### ▶ Steering and Actuator Business

The Company will endeavor to expand its customer base by means of its next-generation column-type EPS. The development of the rack-type EPS is under way and on schedule, and the Company will accelerate activities for the gaining of orders. In addition, the trend for standardization in the mandatory installation of automatic emergency braking is expanding globally, and following on from large-scale projects for ball screws for electric brake systems that will enter mass production in March 2018, the Company is working to further expand orders.

# Review of Operations



## Industrial Machinery Business

### Business Overview

The industrial machinery bearings business comprises three sub-segments: general machinery, which manufactures bearings for applications in a wide range of industries such as machine tools, steel plant facilities, railcars, construction machinery, chemical plants, industrial pumps and wind turbines; electrical and IT equipment, which includes home appliances, office equipment, hard disk drives (HDDs) and general-purpose motors; and the aftermarket business, which provides maintenance and repair services.

Industrial machinery bearings come in a range of sizes, from bearings with an outer diameter of approximately 2 mm that are incorporated into ultra-small motors to bearings with an outer

diameter of more than 2 m that are utilized in wind turbines. The typical household contains around 150 bearings, which are used in general appliances such as vacuum cleaners and washing machines.

On the other hand, the precision machinery and parts business manufactures linear motion products and mechatronics products that are utilized in machine tools, injection molding machines, transfer machines, and machines for producing semiconductors and LCD panels. Many NSK products are being put to work in machine tools in which precise positioning is paramount.

Refer to page 4 of this report for information on our net sales and main products.

<b>Customers</b>	<ul style="list-style-type: none"> <li>• Machinery manufacturers in Japan and overseas (excluding automotive), distributors</li> <li>• Large number of customers, wide range of products</li> </ul>
<b>Features of Customers and NSK Businesses</b>	<ul style="list-style-type: none"> <li>• Products for use in general machinery are produced in small lots and many varieties, whereas products for electrical and IT equipment are mass produced (large volumes of standardized products).</li> <li>• Products for use in general machinery and the aftermarket include large products with relatively long lead times.</li> <li>• The aftermarket mainly consists of demand from end users of general machinery for maintenance and repair of facilities and equipment. It also includes sales of standardized products through distributors. In partnership with distributors, it is important to avoid lost opportunities by maintaining appropriate inventory levels to ensure immediate delivery.</li> </ul>
<b>NSK's Competitive Advantages</b>	<ul style="list-style-type: none"> <li>• Extensive product lineup as a comprehensive manufacturer</li> <li>• Technological capabilities based on our four core technologies</li> <li>• Accumulated expertise in customer needs and technology for a wide range of industries and applications</li> <li>• Manufacturing, supply and technical support capabilities delivered via a global network</li> </ul>

### Business Environment

The Industrial Machinery Business is influenced by a range of factors, including changes in business conditions, movements in customer demand, the status of competition and technological innovation. Due to changes in the economic cycle, global demand has been remained in a slump. However, many industries have seen clear recoveries starting in the second half of the fiscal year ended March 31, 2017, led by semiconductors and machine tools.

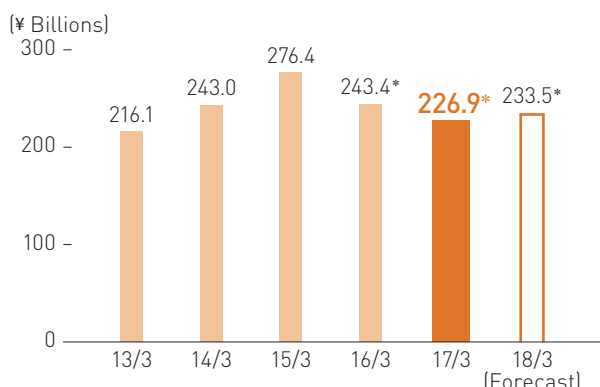
On the other hand, the competitive environment with rival bearing makers in and outside Japan remains in a severe condition. Along with clarifying target markets and taking steps to differentiate itself from rivals mainly in fields that require advanced technologies

in which NSK specializes, NSK will enhance cost competitiveness and productivity in an effort to adapt to changes in the competitive environment.

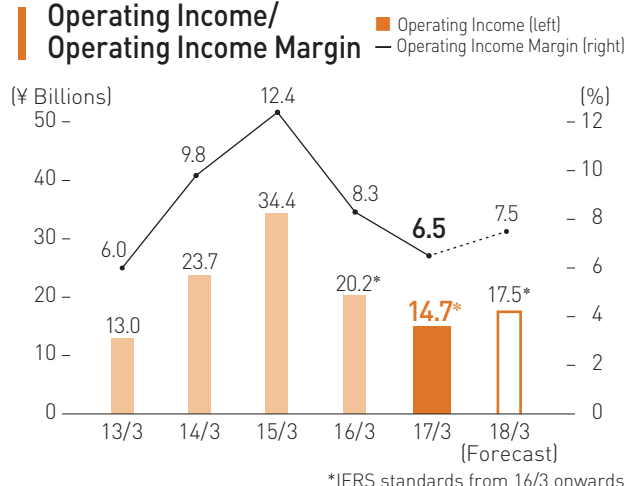
In this market environment, the NSK Group has targeted and will address two areas under its Fifth Mid-Term Management Plan: 1) raising its share of infrastructure-related sectors projected to grow in the medium to long term, such as wind power generation and railways, and 2) expanding its presence in new fields where high growth can be expected, such as robotics and medicine.

Refer to page 27 of this report for information on the Mid-Term Management Plan.

## Net Sales



## Operating Income/ Operating Income Margin



## A Look Back at the Year Ended March 31, 2017, and the Forecast for the Year Ending March 31, 2018 Expect sales and profits to rise in the year ending March 31, 2018, as demand recovers after bottoming in the first half of the year ended March 31, 2017.

Global demand in the Industrial Machinery Business had been weak but is now on a recovery track (albeit uneven by sector) after bottoming in the second quarter, with noticeable rebounds being seen mainly for machine tools, semiconductors and LCDs. Net sales was on par with the year ended March 31, 2016, on a volume basis, reflecting a rebound in the second half that offset sluggish sales in the first half, but ultimately declined due to the strong yen.

Looking at results by region, in Japan sales in the machine tools sector were weak. In the Americas, sales recovered in the semiconductor and aftermarket sectors. In Europe, demand was sluggish centered on the wind power and aftermarket sectors. In China, sales were solid mainly in the electrical and railcar sectors. In other Asian countries, sales rose for semiconductors and LCDs in South Korea.

As a result, net sales in the Industrial Machinery Business totaled ¥226.9 billion (a year-on-year decrease of 6.8%), operating income was ¥14.7 billion (a year-on-year decrease of 27.3%) and the operating income margin was 6.5%. (Results for the year ended March 31, 2016, have been adjusted retroactively to reflect the transfer of a certain business domain from the Industrial Machinery Business to the Automotive Business from the year ended March 31, 2017.)

In the fiscal year ending March 31, 2018, it is expected that sales will increase gradually as demand recovers, while sales for precision machinery and parts are expected to continue to grow solidly throughout the year despite an expected peak in the semiconductor market. As a result, we forecast net sales of ¥233.5 billion (a year-on-year increase of 2.9%), operating income of ¥17.5 billion (a year-on-year increase of 19.4%) and an operating income margin of 7.5%.

## Risks and Opportunities, Future Policies

### ① Economic Fluctuation Risks

The Industrial Machinery Business maintains a presence in a wide array of sectors, but business performance tends to be affected by cyclical fluctuations in the overall economic environment. In addition, the precision machinery and parts sector is affected by shifts in demand given its high sales weightings for semiconductor production equipment and machine tools. While these are unavoidable risks for NSK, the Company places emphasis on formulating accurate estimates of demand, building a production structure and systems that can properly address changes in demand, and bolstering its cost competitiveness. Moreover, NSK is taking steps to alleviate the impact of demand declines in fields it is highly dependent on by increasing sales weightings in the general machinery and aftermarket fields, demand for both of which is broad. Particularly in the aftermarket field, we are pursuing initiatives to boost the quality of sales channels while steadily capturing demand in the MRO (Maintenance, Replacement, Operation) business.

### ② Globalization and Tough Competitive Environment

Rapid changes in the market environment, such as an increasingly tough competitive environment and the global expansion of our customers, can be said to present risks. In particular, there is the possibility that the intensifying rivalry in emerging markets with local manufacturers and those from developed countries will affect the NSK Group's business performance. However, expanding businesses in emerging markets is a key challenge concerning the Group's growth. The Group will aim to maintain and expand its global market share and ensure high profitability by devising ways to bolster its competitiveness in areas other than on price, such as by the expansion of business in fields requiring high-quality bearings and technical service enhancements.

# Review of Operations



## Automotive Business

### Business Overview

To respond to major changes rapidly occurring in automotive technology, NSK reorganized the structure of its Automotive Business to coincide with the start of the Fifth Mid-Term Management Plan in 2016. NSK's Automotive Business has undergone a change from its previous organization based on its products to a structure consisting of a two-division HQ system: the Automotive Powertrain Division Headquarters, which focuses on bearings and businesses for increasing efficiency and the trend toward electrification, and the Automotive Steering & Actuator Division Headquarters, which handles business areas concerning vehicle dynamics control. Accompanying this reorganization, a certain business domain overseen by the Industrial

Machinery Business has been transferred to the Powertrain Division Headquarters to enhance NSK's ability to meet the needs related to the electrification of vehicles, which is progressing at a rapid pace.

Structural changes in automobiles from a technical standpoint, such as power source diversification and the evolution of vehicle dynamics controls geared toward autonomous driving, are accelerating. Building on technologies the Company has accumulated up to now, NSK will contribute to automotive technical innovations through its components and system products.

Refer to page 5 of this report for information on our net sales and main products.

<b>Customers</b>	<ul style="list-style-type: none"> <li>● Automakers in Japan and overseas</li> <li>● Auto component manufacturers in Japan and overseas</li> </ul>
<b>Features of Customers and NSK Businesses</b>	<ul style="list-style-type: none"> <li>● In principle, opportunities to win new orders arise when automakers introduce new vehicle models or undertake a full model change. According to the schedule of each customer's new vehicle project, NSK cooperates on development after being nominated as a development supplier. Development suppliers are generally also responsible for supplying mass-produced products, and prepare mass production in accordance with the launch schedule for the new vehicle.</li> <li>● The delivery volume required for a single project has been on the rise as customers employ common platforms and planned production volumes grow.</li> <li>● NSK's net sales are affected by the sales volumes of the car models on the market. In principle, deliveries are based on the just-in-time system, so inventories are light. However, customers often require that manufacturing take place near the regions of demand, meaning that the local production ratio is relatively high.</li> </ul>
<b>NSK's Competitive Advantages</b>	<ul style="list-style-type: none"> <li>● Diverse business relationships/customer base among automakers and first-tier auto parts makers</li> <li>● Global supply capabilities</li> <li>● Developmental capabilities/technological response capabilities for advances in automobile functions</li> <li>● Global management systems to focus on meeting the needs of non-Japanese customers</li> </ul>

### Business Environment

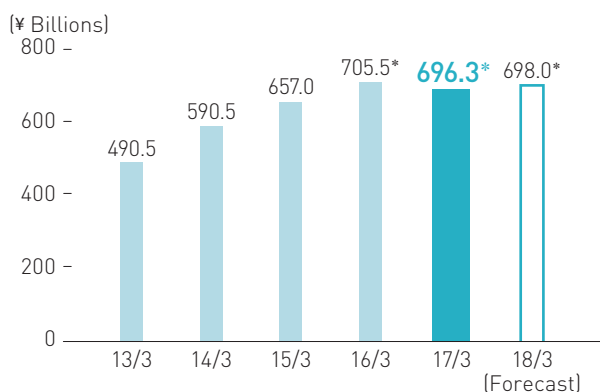
Directly affected by automotive sales around the world and the production volumes of automakers, the Automotive Business is influenced by global economic trends. Global automobile production volumes in the year ended March 31, 2017, were solid, increasing 6% year on year to 94.1 million vehicles, which was driven by China and India. Over the medium to long term, global automotive production volume is forecast to gradually continue expanding toward 100 million vehicles a year.

Against the backdrop of expansion in automotive production volume, the sales volumes in the automotive business are also expected to increase. Accordingly, it is imperative that the Company

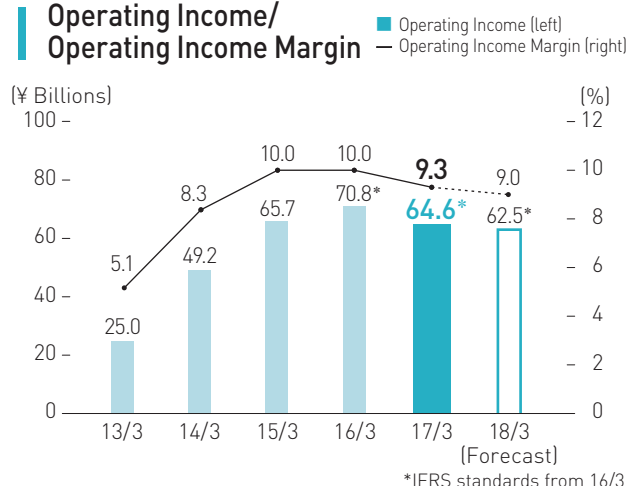
successfully respond to technological innovation in the automotive sector. Based on the business environment assumed in its Fifth Mid-Term Management Plan, the Company is advancing business expansion and strengthening profitability by means of a new organizational structure. In more specific terms, the Company will expand its lineup of powertrain field-related products, respond to new application businesses with the shift toward electrification, develop rack-type electric power steering (EPS) and introduce actuator products to the market led by ball screws for e-brake boosters.

Refer to page 27 of this report for information on the Mid-Term Management Plan.

## Net Sales



## Operating Income/ Operating Income Margin



## A Look Back at the Year Ended March 31, 2017, and the Forecast for the Year Ending March 31, 2018

In the year ended March 31, 2017, sales increased on a volume basis, but net sales dipped slightly due to the strong yen, while profit margins remained high.

During the year ended March 31, 2017, the Automotive Business continued to expand gradually globally, with sales increasing 7% on a volume basis. Looking at results by region, in Japan transmission-related sales were solid. In North America, despite the market being solid, the Company's sales decreased mainly due to the impact of model changes in vehicles equipped with the Company's EPS. In Europe, sales gradually rose as this market recovered. In China, automobile production increased significantly owing to the impact of compact car tax incentives there. In other Asian countries, there were indications of an overall uptrend in sales.

Despite these regional trends, due to the strong yen net sales in the Automotive Business totaled ¥696.3 billion (a

year-on-year decrease of 1.3%), operating income was ¥64.6 billion (a year-on-year decrease of 8.8%) and the operating income margin was 9.3%.

In the year ending March 31, 2018, the Company forecasts global automobile production volume to increase 1%, while there are indications that the North American market has peaked. Although the Automotive Business has seen EPS decline as a result of customer vehicle model changes, NSK targets net sales of ¥698.0 billion (a year-on-year increase of 0.2%), operating income of ¥62.5 billion (a year-on-year decrease of 3.2%) based on its foreign exchange assumptions (¥105/\$, ¥115/€) and an operating income margin of 9.0%.

## Risks and Opportunities, Future Policies

### ① Automobile Power Source Diversification

In the automotive market, it is forecast that there will be a continuation in the diversification of power sources from the previous standard gasoline- and diesel-powered vehicles to hybrids, plug-in hybrids, electric vehicles and fuel cell vehicles. This will lead to increasing requirements for efficiency improvements in component performance and further performance improvements in environmental aspects. Moreover, enhanced safety aspects and IT developments associated with the evolution of vehicle dynamics controls such as autonomous driving and ADAS (Advanced Driver Assistance Systems) are progressing. Although there are risks in these kinds of environmental changes accompanying these types of innovations in automotive technology, they can also lead to opportunities to increase our market share.

In response to the comfort, safety and environmental performance demanded in association with the increased sophistication of automotive technologies, NSK is adding to its 100 years of business development and accumulation of expertise and wide-ranging technologies by undertaking further research and development to achieve further growth in the Automotive Business.

### ② EPS demand changes

In NSK's strategic product field of EPS, the Company has captured a high

market share for column-type EPS systems (motors installed in steering columns) and growth looks promising down the road accompanying rising compact car demand in emerging markets. However, there is a risk of a temporary slowing of NSK's EPS business growth in light of an expected rise in demand mainly for lower-assist rack-type EPS centered on large vehicles. Regarding column-type EPS systems, the Company will take steps to stabilize and strengthen its earnings foundation by expanding its customer base, while aiming to cultivate medium-term growth drivers by developing new rack-type EPS systems that leverage NSK's technological capabilities.

### ③ Product Liabilities Arising from Recalls and Other Factors

NSK Group products are utilized in many industrial fields and end products. Particularly for automobiles that require high functionality, in the event of defects that lead to product liability, there is the risk that this could lead to the incurrence of significant costs or a decline in the Company's social responsibility. In recognition of the importance of quality, the NSK Group has established systems designed to ensure high quality and utilizes insurance that allows a certain level of risk cover. Continuing to redouble its efforts with regard to quality and safety in the years to come, the Company's policy is to give these areas sufficient consideration.

Refer to pages 44–45 of this report for information on quality and safety management.

# Financial Strategy / Policy on Shareholder Returns

## Financial Position

The Company's financial position for the year ended March 31, 2017, as well as an evaluation and comments on the position compared with the previous year, are as follows.

Maintaining the target of a sound financial position, the ratio of net worth to total capital was 44.2% and the net D/E ratio was 0.28.

	2016/3	2017/3	Year-on-year comparison	Evaluation and comments
Total assets	¥1,032.4 billion	¥1,044.0 billion	+¥11.6 billion	Expansion in scale of business
Shareholders' equity	¥454.7 billion	¥461.4 billion	+¥6.7 billion	Retained a portion of profit
Cash and cash equivalents	¥175.5 billion	¥139.6 billion	-¥35.9 billion	Reduced interest-bearing debt Acquired ¥15 billion worth of treasury shares
Interest-bearing debt	¥278.2 billion	¥267.4 billion	-¥10.8 billion	Reduced interest-bearing debt
Ratio of net worth to total capital	44.0%	44.2%	+0.2 percentage point	Due to increase in shareholders' equity
Net D/E ratio	0.23 times	0.28 times	+0.05	Within range of 0.3 times target in the MTP <sup>1</sup>
ROE	14.3%	9.9%	-4.4 percentage point	Despite a downturn in the profit decline, we still met the MTP target of 10% or more.

## A Stable Financial Base

The Company plans to conduct growth investment (¥180.0 billion over three years) to achieve medium- to long-term increases in corporate value and regards the stabilization of its financial base as paramount to the payment of ongoing dividends to all shareholders. The Company recognizes that maintaining an A-level credit rating and a net D/E ratio of

around 0.3 times are the minimum base requirements needed to ensure the Company's financial stability.

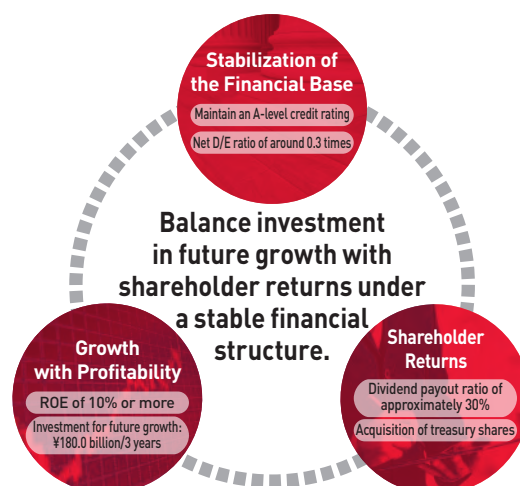
NSK has been able to steadily improve its ability to generate cash flow over the past 11 years, resulting in a sharp improvement in the Company's financial structure. (Please see the 11-year summary on page 14.) NSK has received high evaluations from ratings agencies, including an upgrade to an A rating from Rating and Investment Information, Inc. (R&I) in August 2014 after being rated A-, and maintaining an A+ rating from Japan Credit Rating Agency, Ltd. (JCR), since September 2006.

Rating and Investment Information, Inc. (R&I)	Japan Credit Rating Agency, Ltd. (JCR)
A	A+

## Growth with Profitability

Generating cash and continued growth by constantly and actively investing profits and increasing ROE in excess of the investment return (the cost of capital) expected by shareholders can be considered the "mission" of a publicly listed company. We believe achieving a mid-term ROE that exceeds the Company's cost of capital—estimated from past share trends, business characteristics and the current state of the stock market—is a yardstick for capital efficiency, and our Fifth Mid-Term Management Plan targets ROE of at least 10%.

For the fiscal year ended March 2017, the effects of yen appreciation and the booking of other operating expenses resulted in net income falling 31% compared with the previous year, which in turn resulted in ROE of 9.9%. Although this was down from 14.3% in the fiscal year ended March 2016, it was still close to the Fifth Mid-Term Management Plan target of about 10%. We believe maintaining this target over the medium term could contribute to further improvement in shareholder value.





## Shareholder Returns

Alongside growth investment, the Fifth Mid-Term Management Plan focuses on enhancing returns provided to shareholders, and the current plan is the first to set a numerical dividend payout ratio target—of approx. 30%.

Although net income for the fiscal year ended March 2017 declined compared with the previous year, the Company decided to pay a cash dividend of ¥38 per share after taking into consideration its financial position and such factors as the continuity of dividends. In addition to a normal dividend of ¥28 per share, this cash dividend included a ¥10 per share payment to commemorate the 100th anniversary of the Company's founding. Based on the aforementioned the payout

ratio came to 44%. NSK also acquired ¥15 billion worth of treasury shares for the first time in 12 years in May 2016. This resulted in a total payout ratio, combining dividends and share buybacks, of 77% in the fiscal year ended March 2017.

In addition to returning profits through dividends, the Company recognizes share buybacks as one of the choices available in its financial and capital policy. Considering its financial situation and stock market trends, the Company would like to proceed with an appropriate and flexible financial strategy in the years to come. For the fiscal year ending March 2018, the Company is targeting a cash dividend per share of ¥38 (for a payout ratio of 36%).

## TSR (Total Shareholders' Return)

In addition to ROE exceeding the cost of capital, the Company believes it is important that TSR, the total return on investment including capital gains and

dividends, exceeds the cost of capital. Past TSR trends are as follows. Also, please see the comparison with TOPIX and the TOPIX machinery sector.

## NSK's Share Price Trends (10-Year Period including Dividends)

Share Price Trend (TSR)

Investment period	1-Year		3-Year		5-Year		10-Year	
	Cumulative/annual rate	Cumulative	Annual rate	Cumulative	Annual rate	Cumulative	Annual rate	
NSK	58.3%	59.3%	16.8%	169.9%	22.0%	58.6%	4.7%	
TOPIX	14.7%	33.7%	10.2%	96.2%	14.4%	8.0%	0.8%	
TOPIX Machinery	29.6%	35.0%	10.5%	101.4%	15.0%	35.1%	3.1%	

\*TSR (Total Shareholders' Return): Total return on investment including capital gains and dividends

\*Annual rate based on the geometric mean

\*Created by the Company, based on Bloomberg data

Share Price Fiscal Year Trends (High · Low · Fiscal Year-End · Volatility)

Fiscal Year	High (Yen)	Low (Yen)	Fiscal Year-end (Yen)	Volatility
2007	1,349	745	755	42.4%
2008	1,077	282	377	74.3%
2009	750	366	738	47.6%
2010	836	495	717	37.4%
2011	815	458	637	36.7%
2012	758	414	715	36.5%
2013	1,360	646	1,062	45.7%
2014	1,815	1,023	1,758	32.6%
2015	2,120	910	1,030	39.0%
2016	1,739	691	1,592	44.3%

\*Volatility refers to the standard deviation annualized rate based on the daily closing price.

(Index)  
250 -

200 -

150 -

100 -

50 -

0 -

2007/3 2008/3 2009/3 2010/3 2011/3 2012/3 2013/3 2014/3 2015/3 2016/3 2017/3

— NSK — TOPIX — TOPIX Machinery

\*Share price index trends including dividends (March 31, 2007 = 100)

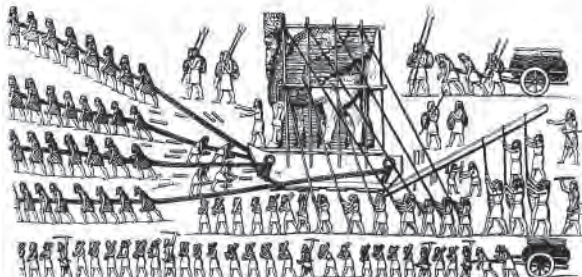
# Fundamental Technologies and R&D

## 1 NSK's Four Core Technologies

NSK has relentlessly pursued innovative technologies and focused on improving quality in order to contribute to the well-being and safety of society and to protect the global environment, in line with its corporate philosophy. NSK leads the world in the product fields of bearings, automotive components and precision machinery and parts. The foundation that underpins those technologies consists of tribology, materials, numerical simulation and mechatronics, which are NSK's four core technologies. The technologies and products that have been created based on our four core technologies are contributing both to the development of industry across the world and to people's abundant lifestyles. NSK will continue to engage in advanced technological development and provide highly functional, high-quality products that meet market needs in the years to come.

### Tribology

Tribology is a technology that controls the friction and wear of sliding surfaces of materials that are in contact while in relative motion. This is the key technology for bearings that support the rotational or linear motion of machinery. The principle of bearings traces its origin to ancient Assyria, where the method used for transporting gigantic stones with relative ease involved placing logs underneath them. It can thus be said that the technology is based on human wisdom and ingenuity that date back to before the Christian era. Referred to as the jewels of tribology technologies, bearings are used in the rotating parts of various machines. Bearings contribute to reducing friction and friction-induced wear and preventing machine galling caused by frictional heat while contributing to energy-saving, long-serving and more reliable machines.

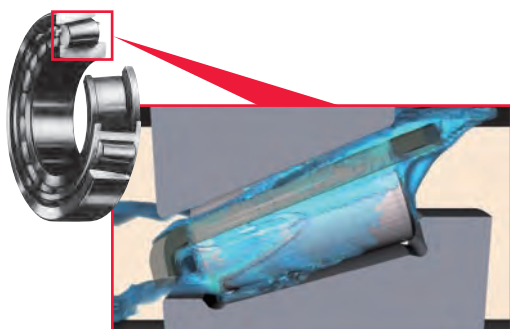


From a mural unearthed at Nineveh, the capital of ancient Assyria

### Numerical Simulation

Numerical simulation is an essential technology used in the optimal design of bearings and product development. For example, there could be a thousand ways for a parts combination to meet a certain condition. Finding the optimum combination would require the making of 1,000 types of trial products and one million experiments, an enormous amount of time and funds. Computer simulations, backed by NSK's 100 years of data from R&D in bearings, help solve difficult problems like these. Taking advantage of NSK's advanced numerical simulation also enables performance evaluations under which the testing of actual machinery is conducted under extremely difficult conditions. The diagram below is a simulation of the oil flow when a tapered roller bearing rotates.

#### ▶ Oil flow analysis of a tapered roller bearing



### Materials

Materials play a key role in enhancing the functionality and durability of bearings subjected to harsh operating environments.

If there are impurities contained in the bearing materials, these will cause the bearing to break. For that reason, a special steel known as bearing steel is used in bearings that is practically free of impurities.

Aiming to develop products with even greater durability and reliability, NSK uses a wide variety of performance assessments and analytical technologies to develop new materials with optimal compositions and new heat treatment processes with optimal conditions. Moreover, the Company engages in technological developments in which new materials, such as ceramics and high polymeric materials, are utilized.



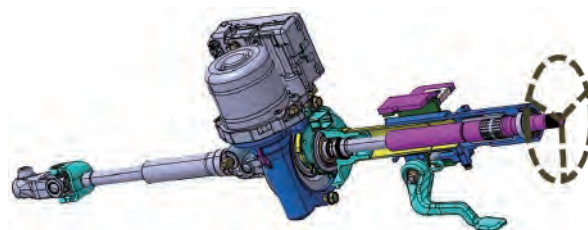
Ceramic ball bearings

### Mechatronics

Mechatronics refers to technologies that combine mechanics and electronics. Placing part of the control of a machine onto electronic circuits and combining them with sensors and actuators achieves complex movements and enables the realization of difficult functions merely by combining machine elements.

Based on technologies in the mechanical field fostered through product development and at production sites, NSK has been honing its proprietary mechatronics technologies in combination with electronics and creating new products that exemplify Motion & Control™. A representative example is electric power steering (EPS).

#### ▶ Modularization-compatible, high-performance EPS

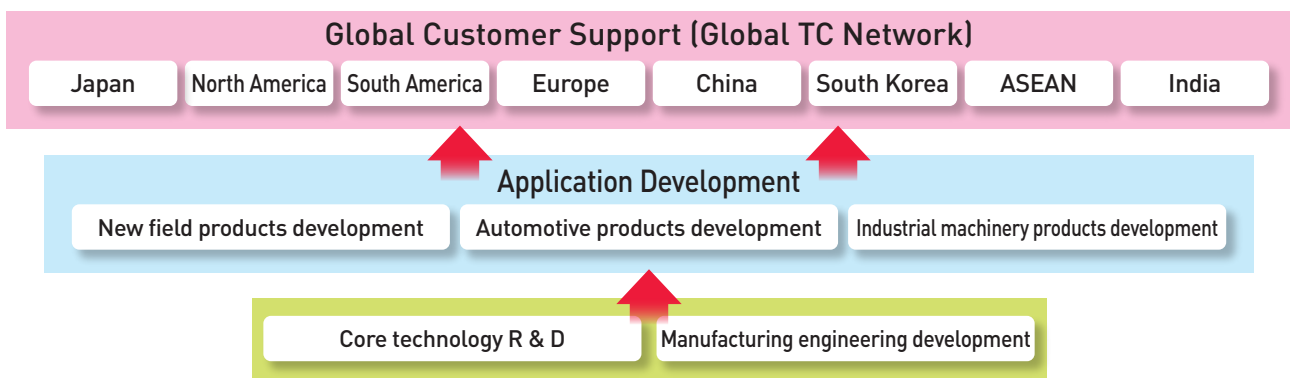


## 2 Global Technology Platform

### Global Development Structure

NSK has a global development structure that has evolved to spur business expansion and sustain growth while flexibly and rapidly responding to the diverse needs of its customers around the world. While advancing the development of the four core technologies, product and application development and production is supported in Japan by the Core Technology R&D Division, which is in charge of developing new products, and the Manufacturing Engineering Development Division, which creates and refines production technologies at our manufacturing bases throughout the world. The Technology Development Divisions for industrial machinery bearings, precision machinery and parts, automotive bearings and automotive components are under the direct control of each business division headquarters, while coordinating closely with the Core Technology R&D Division and the Manufacturing

Engineering Development Division. Also, the divisions identify customer needs through collaboration with sales engineering staff, the primary contact point for customers, and technology centers in each region, and this information about their needs is reflected back in product development. In addition, we are working to create new businesses through the development of products in new fields by letting divisions in charge operate independently on pioneering developments and preparing for mass production. NSK operates 15 technology centers in 10 countries, including Japan, North America, South America, Europe, China, South Korea, ASEAN and India. We have experts in each field in charge of providing solutions to customers. Information from these technology centers is shared globally to improve technical services and to develop and propose new products and technologies.



### NSK Institute of Technology (NIT)

In November 2007, NSK established the NSK Institute of Technology (NIT). NIT is a global educational institution that provides opportunities to obtain knowledge about a broad range of technologies that respond to the needs of customers and the market while also gaining specialized knowledge by diving deeper into each field. Going beyond technical theory, the institute aims to provide a comprehensive education about technologies, from the application and handling of products to quality management, production methods and cost management. The curriculum is divided by academic discipline and has an individual certification system. Classes are provided at domestic technological divisions and overseas technology centers.

In Japan, all academic disciplines require courses in logical thinking and communications, as well as courses for understanding different cultures and respecting diversity. In addition to these standard courses, there is an entire system of courses for English instruction, technology management training for managers, sales engineer training and quality knowledge/practical education. Open seminars are held periodically with outside experts bringing new perspectives. Going beyond technical education, we focus on nurturing advanced technical personnel who will have a direct impact on strengthening the competitiveness of NSK's businesses.

#### ► NIT Education System

**NIT standard course:** Four-year curriculum mainly for newly graduated engineers (two-year curriculum overseas)

		Primary Engineering	Bearing Engineering	Steering Engineering	Precision Engineering	General Education	
Professional	Fourth year	Specialized course	Specialized course	Specialized course	Specialized course	Specialized course	English education [only in Japan]
	Common courses (e.g., different cultures, diversity)						
Professional	Third year	Specialized course	Specialized course	Specialized course	Specialized course	Specialized course	
	Common courses (e.g., logical thinking and communications)						
General	Second year	Specialized course	Specialized course	Specialized course	Specialized course	Specialized course	
	General education						
General	First year	Specialized course	Specialized course	Specialized course	Specialized course	Specialized course	
	General education						

# Fundamental Technologies and R&D

## 3 R&D Initiatives

### Automotive Business | Initiatives to Develop New Products Amid the Shift to Electrification

Centered on the themes of the environment and safety, technological innovation in automobiles has accelerated as companies move aggressively to improve fuel economy while developing control systems for autonomous vehicles and shifting toward electrification. NSK is proactively developing new technologies to support its next stage of growth while adapting to these structural changes occurring in the automobile industry.

#### Ball Screws for Electric Braking Systems

Mass production orders received

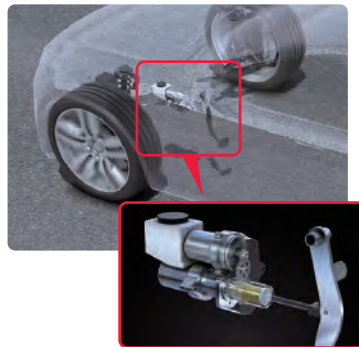
Actuators for brakes

- Increasing efficiency of electric braking systems
- Smaller, lighter systems by integrating shaft bearings and peripheral parts

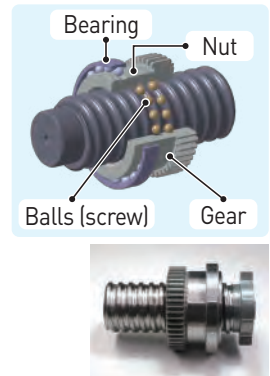
In automotive braking systems, the brake booster function (brake pedal amplifier) is expected to become a key electrical system used not only in hybrid and electric vehicles but also gasoline- and diesel-powered vehicles, owing to moves to make automatic emergency braking systems mandatory in vehicles. While a variety of electric brake boosters exist, the most promising type are ball screw brake boosters due to their outstanding responsiveness and controllability. Utilizing the technologies it has accumulated in precision ball screws, NSK has developed a specification that integrates with bearing. Mass production orders for this product are growing steadily.

[Product Structure]

Electric Braking System



Ball screws



Ball screws convert the rotational motion of a motor into linear motion, generating braking pressure.

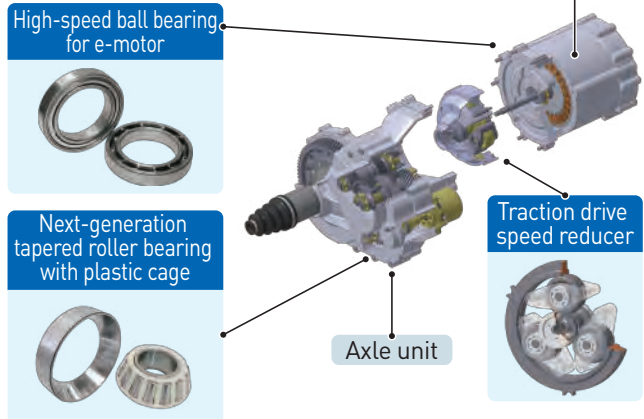
#### EV Drive Units

Electric drive unit for plug-in hybrid and electric vehicles

- Smaller and lighter drive unit uses an ultra-high-speed motor and a traction drive speed reducer, allowing electric vehicles to travel longer distances

As the market for electric vehicles expands, demand for smaller and lighter electric drive units is growing. NSK has developed traction drive speed reducer with its tribology technologies and incorporated other NSK technologies to create an innovative electric drive unit for its customers. Traction drive speed reducer uses oil instead of gears to transfer power. Compared to gear speed reducer, traction drive speed reducer is quieter and vibrate less, allowing the drive motor to spin faster and enabling a smaller electric drive unit.

[EV Drive Unit Structure] ■ NSK products



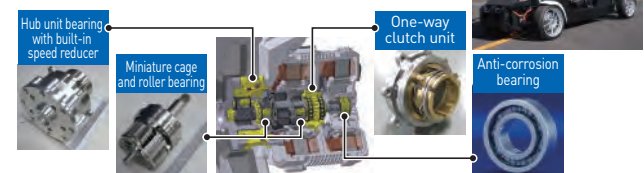
#### Transmission-Equipped Wheel Hub Motor

Motor drive unit for each wheel

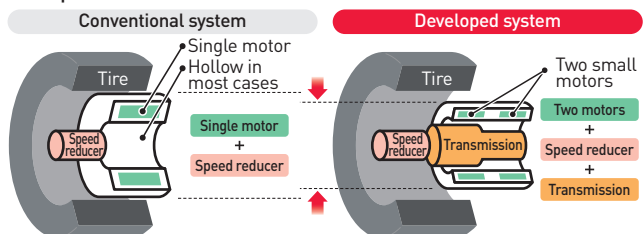
- Successfully developed a compact wheel hub motor without compromising driving performance through the use of a special transmission

Wheel hub motors can be installed on any of the drive wheels. These drive systems can be applied to the various drive systems of automobiles, whether they be hybrid vehicles (HEV), electric vehicles (EV) or fuel cell vehicles (FCV). These next-generation drive systems are gaining attention for their potential to improve environmental performance, safety and driving comfort. NSK has developed technologies for making drive systems more compact by combining two small motors with a transmission, and was the first in the world to carry out verification testing. Based on the knowledge gained from testing the prototype, we aim to commercialize the components in the system.

[Parts targeted for commercialization] ■ NSK products



[Comparison with Conventional Structure]



## Initiatives in New Fields

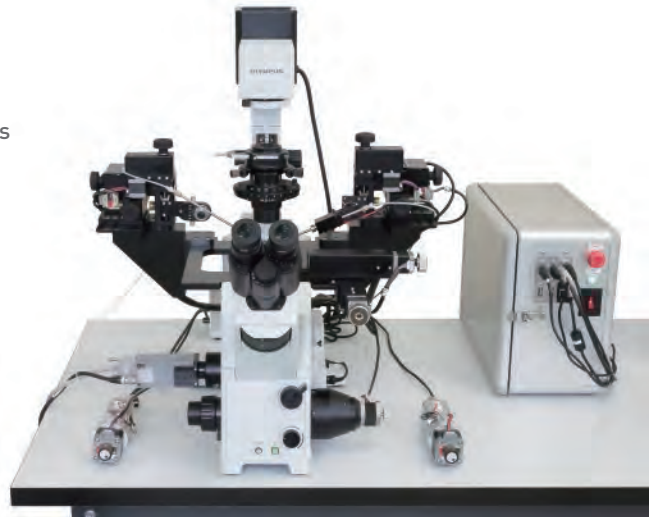
Leveraging its technologies and expertise, NSK is developing new products that will lead to business in a variety of new fields. NSK has also announced capital participation in a company that is developing and deploying personal mobility solutions.

### Manipulation System

Systems for manipulating micro substances under microscopes

- Biotech: micro-fertilization (ICSI)/inject DNA, cells into egg cells, /cell transport
- Industrial machinery: removal of foreign materials from microelectronic parts/high-precision positioning of semiconductor parts

This manipulation system, which is used in the medical, biotech, semiconductor and electronics industries, was developed using NSK's precision positioning drive technologies. The latest model features an all-electric drive system, enabling remote operation, while sharply reducing operator load by requiring less skill to operate.



### LIGHBOT™ Guide Robot

Obstacle avoidance guide robot with navigation function

- Acquired ISO 13482 certification as international safety standard → Available for practical use, and began renting in March 2017
- Introduced at the Kanagawa Rehabilitation Center in Kanagawa Prefecture in March 2017
- Increases convenience for visually impaired and elderly users, lightens the workload of staff who guide visitors

LIGHBOT™ is a robot that can guide people to a destination selected on its touch-panel screen, using maps and current location data to calculate routes and steer around obstacles. The robot can safely guide people to their destination, including visually impaired and elderly users when in unfamiliar places that are easy to get lost in, such as large hospitals.



## TOPICS

### Next-Generation Personal Mobility

In April 2017, NSK announced a capital participation in WHILL, Inc., based in California, USA.

NSK aims to contribute to a safer, smoother society through its Motion & Control™ technology. To this end, NSK and WHILL agreed to collaborate towards the goal of creating new personal mobility solutions for everyone. WHILL develops personal mobility solutions with excellent designs and travel distance based on its mission to deliver fun and innovation to pedestrian travel.

New model  
Released in  
April 2017



A fusion of WHILL's mobility development technologies and NSK's fundamental components and mechatronics technologies

NSK provides highly reliable bearings for the Omni-wheel



**Omni-wheel**  
One large and one small roller arrange interchangeably in 12 locations

**A** Six large rollers **B** Six small rollers

Each roller uses four bearings

Number of bearings in each personal mobility

More than 100

# Global Business Platform

In expanding business globally, NSK maintains the necessary sites, human resources and management structure as an essential foundation, and strives to expand business in each region while promoting global projects through collaboration between regions. While giving exhaustive consideration to being a good corporate citizen in each region, the Company is also endeavoring to further enhance and strengthen its global business foundation.

## Global Sites

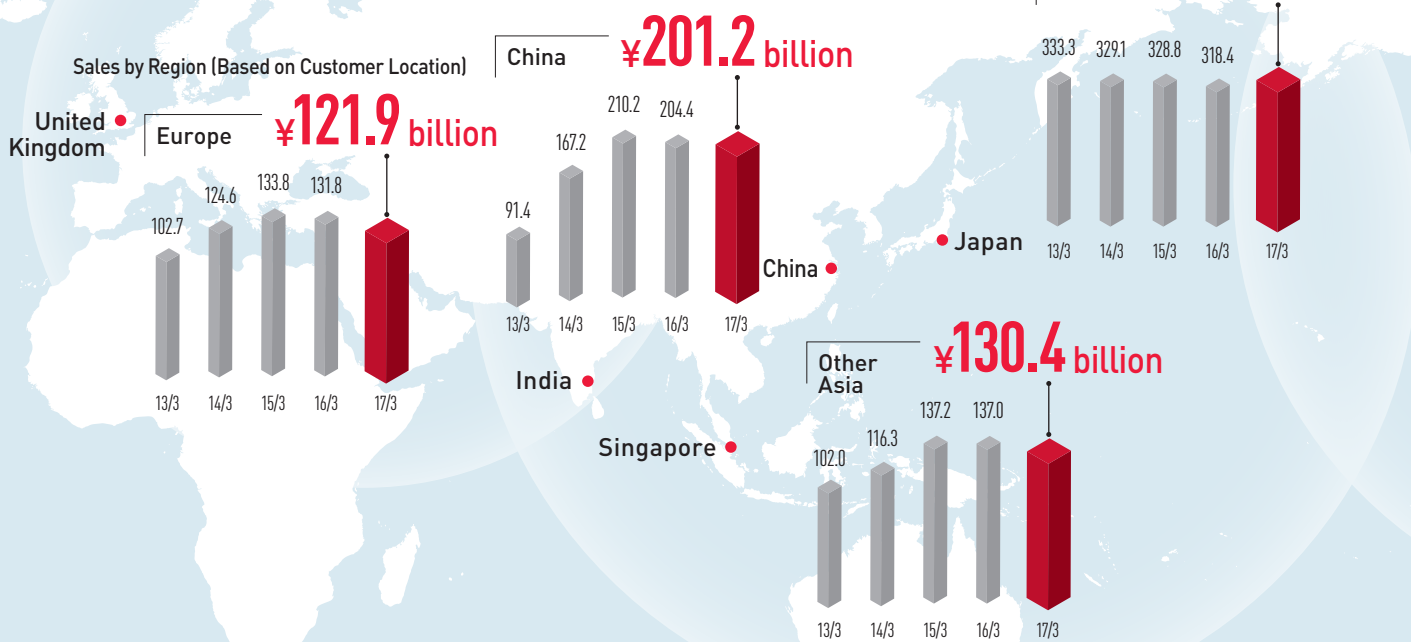
### Background to Globalization

As far as the Japanese manufacturing industry goes, NSK long has been advancing overseas expansion. Having continued its overseas exports that commenced in 1948 and started overseas production in Brazil, the United States and the United Kingdom in the 1970s, the Company has regarded these operations as the basis of its overseas business through their locally manufactured products. In addition to expanding its product lineup in association with the overseas relocations of its Japanese customers, primarily in the electrical sector and automobiles from the 1980s onward, the Company established production sites in China, Indonesia, Thailand, India and elsewhere against a backdrop of emerging market economic development at the start of the 1990s. Thereafter, the Company further increased its global expansion due to a number of factors, including business expansion in emerging markets, the globalization of automobile platforms and increased business with non-Japanese overseas customers. The overseas business currently accounts for nearly 70% of net sales.

### Current Status of Global Sites

As of March 31, 2017, the Company had a total of 210 production, sales and technology sites in operation in 30 countries under six headquarters in six countries.

In addition to their responsibilities for developing business in each area, the respective sites are performing an important role in global project collaboration, which is currently on the increase. Group companies supply high-quality products in a stable manner by undertaking local production in response to customer demand, while the sales and technology centers in each area work to improve NSK's brand power by offering rapid and detailed responses and services to customers' various needs. Expanding into every area in the world, the network represents one of NSK's essential business foundations.



Headquarters (●)	<b>6 locations in 6 countries</b>
Production Sites	<b>64 locations in 13 countries</b>
Sales Sites	<b>119 locations in 29 countries</b>
Representative Offices	<b>6 locations in 5 countries</b>
R&D Centers	<b>15 locations in 10 countries</b>

The Americas	◎	○	●	◇	◆
U.S.A.	1	7	10		1
Canada			3		
Mexico		1	1	1	
Brazil		1	5		1
Peru			1		
Argentina			1		
<b>Total</b>	<b>1</b>	<b>9</b>	<b>21</b>	<b>1</b>	<b>2</b>
Europe/Middle East/Africa	◎	○	●	◇	◆
U.K.	1	4	2		1
Germany		1	2	2	1
France			1		
Italy			1		
Netherlands			1		
Spain			1		
Poland		4	3		1
Russia			1		
Turkey			1		
UAE			1		
South Africa			1		
<b>Total</b>	<b>1</b>	<b>9</b>	<b>15</b>	<b>2</b>	<b>3</b>

Asia/Oceania	◎	○	●	◇	◆
Japan	1	21	31		6
China	1	12	18	1	1
Taiwan			3		
South Korea		2	2		1
Singapore	1		2		
Indonesia		3	2		
Thailand		2	6		1
Malaysia		2	4		
Philippines				1	
Vietnam			1	1	
India	1	4	9		1
Australia			4		
New Zealand			1		
<b>Total</b>	<b>4</b>	<b>46</b>	<b>83</b>	<b>3</b>	<b>10</b>
<b>Global Total</b>	<b>6</b>	<b>64</b>	<b>119</b>	<b>6</b>	<b>15</b>

◎Headquarters  
 ○Production sites  
 ●Sales sites  
 ◇Representative offices  
 ◆R&D centers

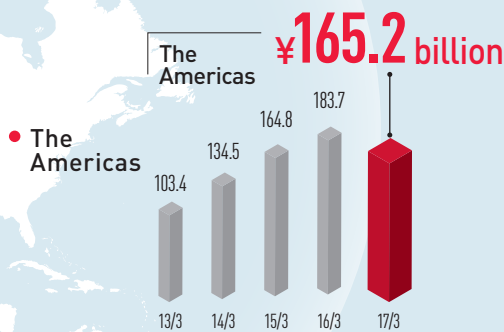
## Global Management

### Advancement of Global Management

One of the themes under the Fourth MTP was the “advancement of global management.” After gaining global consistency as the NSK Group, this initiative aimed to build a system to enable the flexible business management of the local entity in each region.\*

The Company has taken steps to further enhance both its business and functional integration capabilities by promoting the localization of regional management and strengthening collaboration between headquarters and regions through global meetings.

\*NSK establishes each site and divides the sites into Japan, the Americas, Europe, China, ASEAN, India and South Korea by the region in which they are located.

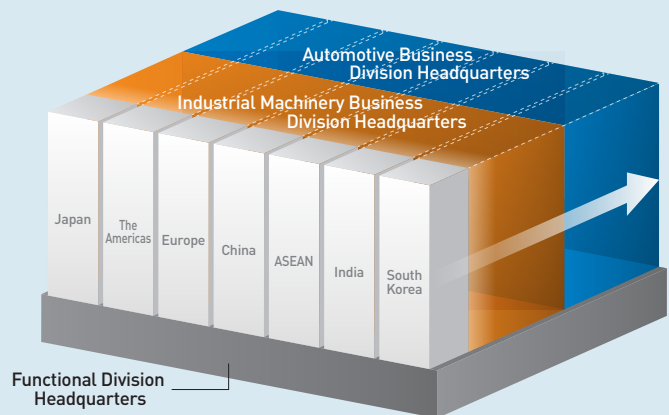


### Organizations Supporting Global Management

Regarding its Industrial Machinery Business and Automotive Business as its two business axes, NSK has adopted a matrix-type organization underpinned by the regional headquarters in charge of business execution in each region and a functional headquarters that supports cross-organizational business from a functional standpoint.

From the business execution standpoint, a regional headquarters is positioned to oversee a region under each business headquarters, and each business site is positioned beneath each regional headquarters. In this way, directions and directives with regard to business planning and the execution of strategy are made to flow from the business headquarters to the regional headquarters and from there to the business sites. On the other hand, each functional headquarters located at headquarters in Japan is responsible for functions that are common throughout the entire Group, such as human resources, legal affairs and accounting, and oversees and supports from policy and standardization aspects.

The Company is aiming for two effects by having adopted this kind of organizational form: 1) to reduce the duplication of operations and costs under a policy that maintains consistency on a global basis with regard to common functions across the entire Company and, 2) from the business execution standpoint, to delegate decision making to lower-level organizations, based on outlines determined by higher-level organizations, and to enable faster responses.



## Globally Minded Talent

### Global Talent Management

Under its Management Principles, the NSK Group works “to provide challenges and opportunities to its employees, utilizing their skills and encouraging their creativity and individuality,” and “to manage its business from an international perspective and to develop a strong presence throughout the world.” In order to achieve business efficiency from an optimal global viewpoint while promoting the localization of operations that are spread across the world, management human resources, who possess global views regardless of their region of origin, and the recruitment and training of local human resources to support them, are considered important. For that reason, NSK is aiming for the development of global talent management by introducing a training program to select and educate human resources who have the potential to become key executives as well as a common global succession plan.

### Global Posts, Global Management Resources

The NSK Group controls key management personnel posts as global posts. This includes the regional key management posts that have responsibilities for business and functions in each region and global business as well as key posts of the Japanese headquarters. In the case of the Asian region and some of the posts, there are instances in which Japanese employees on assignment fill the posts because of business features or differences in the expansion period, but as progress with global management is made, the rate at which local human resources are taking up posts is certainly on the rise. In the years to come, amid ongoing responses to changes in the business environment, it is believed that there will naturally be further advances made in the diversification of management personnel. The Company will embark on the streamlining of its systems to ensure excellent human resources and smoothly progress with personnel changes between regions and posts.

## Global Business Platform (Interview)

# Striving to become a truly global Japanese company, NSK is strengthening its global business foundations through the improvement of administrative functions and increasing diversity.

### Question 1

**You joined NSK 15 years ago. How has its organisation developed over that time?**

NSK has grown significantly over this period, particularly in its overseas regions. It now has about two-thirds of its sales and employees outside Japan. This growth has been supported by the globalisation of the company - its development from a Japanese company with international operations towards the goal of being a truly global Japanese company. By this I mean a company that can operate as one coherent unit across the globe, despite the wide geographical spread of its operations and the diversity of cultures within it, and retain its Japanese identity. This development of

NSK as a global company is reflected in its Global Business Platform (described on [P. 39]), particularly through the operation of a matrix structure and the localisation of regional management.

More than 10 years ago we established a matrix organisation structure comprising Business Division HQs, Regional HQs and Function HQs. This allows us to combine global and local perspectives in the management of the business. It also provides a structure to support the delegation of responsibility and decision-making and to provide common functions, such as

human resources, legal affairs and accounting, and infrastructure. Again more than 10 years ago, we fully localised the management team of our European regional HQ. We subsequently did the same in our Americas region and, more recently, have substantially localised our management team in China. Regional managers are involved in the global management of the company through the matrix structure. Localisation of regional management has, therefore, significantly increased diversity within the overall management pool of NSK.

### Question 2

**Efforts to establish “corporate fundamentals appropriate for a company with sales of 1 trillion Yen” were started in the Fourth MTP and continue through the Fifth MTP. How do these relate to the globalisation of NSK?**

I mentioned that the globalisation of NSK has supported its growth over the last few years towards sales of ¥1 trillion. Regarding organisation structure and the administrative functions, the actions being taken to establish corporate fundamentals include ones to support further development of the company's globalisation and, therefore, future growth. A ¥1 trillion company with a wide geographical spread of operations cannot operate effectively with all decision-making concentrated at a central HQ. The challenge is to balance

delegation of responsibilities and decision-making with proper control. Globalisation of the company provides the framework for establishing the structures, processes and resources that are required to achieve this in an efficient and effective way.

As we have already discussed, NSK has previously implemented some key requirements, such as a matrix organisation structure and the localisation of regional management. However, there is more that we can do in these areas. In particular, the Function

HQs generally have substantially more to do to make the change in mindset and behaviour from Head Office units to global HQs and to drive the standardisation and improvement of common administrative processes across our global operations. The Business Division HQs can further deepen the global links within their organisations and there is also more to be done on the localisation and strengthening of regional management.

Another key requirement for the successful operation of the organisation





Senior Vice President  
**Adrian Browne**

Deputy Head of Corporate Strategy  
Division Headquarters,  
Head of Finance Division Headquarters,  
Responsible for IR

structure is clear and effective communication between all of the components of the matrix. We have always relied on communication to Tokyo from Japanese staff based in the

regions as a key management tool. Whilst this will continue, it is not a sufficient communication process in a matrix organisation. So we also have actions underway to enhance

significantly the information flow in the company through the improvement and standardisation of our administrative infrastructure, including systems and processes.

**Question 3**

**You mentioned the administrative functions. In your area of responsibility, what actions are being taken to establish corporate fundamentals and support further globalisation?**

A key requirement is the improvement throughout the company of the quality, depth, timeliness and accessibility of financial management information and analysis. In the past we have allowed a considerable level of independence in system selection and design in the regions. Consequently, we have many different financial systems with varying levels of functionality. This environment

significantly limits our ability to provide comprehensive and standardised financial management information in a timely and efficient way. So we now have global projects underway to achieve our requirements through the implementation across all operations of new standardised accounting and costing systems and financial management processes. To spread the

management workload, one of these projects is being managed from our European regional HQ rather than Tokyo. In addition, Finance Division HQ is developing its role as a global Function HQ and strengthening its links with the finance functions throughout the company, including the development of opportunities for inter-regional staff transfers.

**Question 4**

**What other challenges is NSK addressing in its efforts to become a truly global Japanese company?**

One challenge is to extend the diversity of nationalities in our management. As already discussed, we have increased the diversity of our overall management pool by localising regional management. The next step is to expand the opportunities for inter-regional transfers of managers, to increase diversity within regions, including Japan, and at various levels within our businesses and functions. However, whilst we strongly believe that such diversity is beneficial

for NSK, it does bring challenges. A key one is cultural differences. We must retain our Japanese core identity as a company but also operate effectively as a team of many national cultures. This requires adaptability from our managers and other staff working with colleagues from different countries. It also requires some understanding by them of cultural differences and their practical impact. Our global HR function is including these matters in its development and

training processes. We also need to use the cross-cultural experience that comes with diversity to support our efforts to encourage a more proactive mindset and a reduction in extreme risk aversion in our staff. Finally, in a large, diverse company we face the challenge of maintaining a common global purpose – we can achieve this through adherence to our Mission Statement and Vision 2026.

# CSR / ESG Management

## The NSK Group's View of CSR

In 2015, the United Nations adopted the 2030 Agenda for Sustainable Development along with the Sustainable Development Goals (SDGs), which are the goals under the Agenda. To achieve the SDGs, governments, companies, and citizens are called upon to join forces to solve problems facing global society, including the eradication of poverty, reduction of inequality, and protection of the global environment, while also pursuing prosperity.

### Relationship with the Global Community

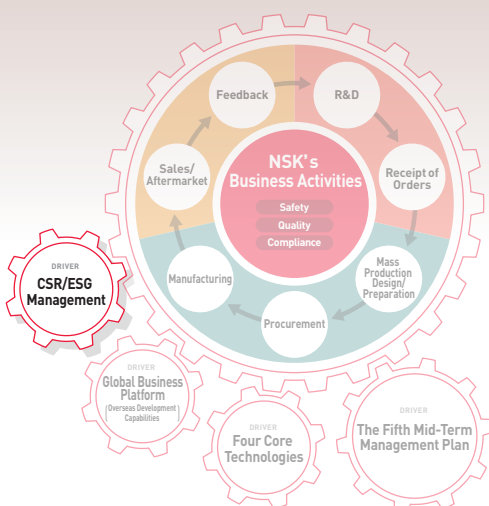
NSK respects and takes into consideration international norms such as the SDGs, which are the global community's shared goals, adopted at the United Nations. It is NSK's management policy and commitment always to think and take action with a global outlook.



Sustainable Society

NSK's CSR and Material

## NSK's CSR Activities and Value Created



### Environmental Initiatives

- **Environmental Management (P. 46)**  
Activities Aimed at Protecting the Global Environment
- Creating Environmentally Friendly Products
- Global Warming Countermeasures
- Measures for Resource Conservation and Recycling
- Reducing Use of Environmentally Harmful Substances
- Biodiversity Conservation

### Social Initiatives

- Research and Development
- **Quality Management (P. 44)**  
Creating Quality that Can Be Trusted
- **Safety Management (P. 45)**  
Creating Safe and Healthy Workplaces
- **Human Resource Management (P. 48)**  
Creating a Dynamic Work Environment
- Working with Local Communities

NSK clearly avows in its mission statement that “creating a safer, smoother society” and “protecting the global environment” are integral factors in all company operations. NSK officers and employees are firmly aware of NSK’s roles and responsibilities, and embraces our vision to contribute to the societies of today and tomorrow. The entire NSK team is working sincerely to expand the reach of our businesses and make social contributions in line with stakeholder expectations. The NSK Group will continue to pursue higher corporate value and sustainable growth through comprehensive CSR efforts.

## NSK Group Stakeholders

The NSK Group’s business is built on the trust of a variety of stakeholders. The NSK Group believes that active communication is the key to building better relationships with its stakeholders.

### Customers

The NSK Group’s customers are companies that purchase NSK’s products and also the end users of the devices and machines that incorporate NSK’s products. The Group aims to earn customer satisfaction with safe and high-quality products and services that meet customer needs, and seeks customer input through technology exchanges and everyday sales contacts.

### Employees

Employees, who create NSK’s superior technology, services, and safe and high-quality products, are the foundation of its business success. Accordingly, the Group aims to create workplaces where all employees can work with enthusiasm. Toward that end, the company’s current situation and workplace issues are shared in constructive dialogues between labor and management and in communication among employees in an effort to solve issues through labor-management and inter-departmental cooperation.

### Suppliers

The NSK Group’s business is dependent upon numerous suppliers. The Group aims to ensure mutual growth by sharing with suppliers the needs of its customers and other stakeholders via procurement policy briefings and the routine exchange of information and by cooperating with suppliers on initiatives such as technology development, quality improvement, the environment, and safety.

### Local Communities

The NSK Group’s activities depend upon the understanding of the members of the communities in which it does business. The Group aims to be valued as a member of local communities by building more mutual understanding through good communication with the members of the communities, understanding their needs, and contributing to their development.

### Shareholders and Investors

Shareholders and investors are important stakeholders, and they expect the NSK Group to keep growing. The NSK Group seeks to obtain their understanding by disclosing business and financial information in a timely and appropriate manner. To ensure sustainable growth and increase corporate value, the Group seeks to increase the transparency and soundness of management and to practice business that is well-balanced in terms of the society and environment.

### Future Generations

The NSK Group sees children and students, the torchbearers of the future, as important stakeholders. The Group is working to one day hand over a rich environment and safe society to the next generation and to help build a more sustainable society by supporting the growth of future generations through programs such as science classes and internships.

Improved  
Corporate  
Value of the  
NSK Group

Activities  
Issues

● Material Issues

#### Governance Initiatives

- **Corporate Governance (P. 51)**  
Realizing Highly Transparent, Sound Management
- **Compliance (P. 55)**  
Fostering Trust as a Company
- Risk Management  
For details, please refer to the following NSK website for “Business Risks and Other Risk Factors.”  
<http://www.nsk.com/investors/management/risk.html>
- **Supply Chain Management (P. 50)**  
Fair and Impartial Procurement

#### Value Created

##### Environmental contribution

(making products lighter, more compact, and with longer service lives)

##### Contribution to an advanced technological society

Realization of a more prosperous society

Growth of a wide range of industries

Advancement of mobility societies

Improvement of shareholder value

# CSR / ESG Management

## Material CSR Issues **1** Quality Management

### Creating Quality that Can Be Trusted

#### NSK's Approach

NSK aims to become “No. 1 in Total Quality.” In other words, the Company is working to achieve the industry’s best quality in everything it delivers—not only products and services but also information. NSK believes that this commitment to quality ensures that its products will satisfy customers all over the world.

#### Quality Assurance Vision 2026

To strengthen Group-wide initiatives, NSK’s management checks the status of quality control and directs all necessary measures in a top-down manner through meetings of the Quality Board, which is chaired by the president and composed of directors in charge of each business division headquarters. In 2015, NSK put in place the Quality Assurance Vision 2026 as a part of efforts to identify specific targets through to 2026. As indicated at the right of the page, this vision also clarifies the ideal state to which the Company aspires. Guided by this vision, NSK will work diligently to achieve a level of “NSK Quality” that engenders trust and contributes to the peace of mind and safety of customers.

In specific terms, the Company will endeavor to enhance the quality of its products, work and human resources, key elements that provide the underlying strength of its business activities, while at the same time incorporating the necessary quality to deliver attractive products that reflect the requirements of customers.

## NSK Quality

Safety/Smartness/Confidence for Customer

[Customer 1st] [100% conforming article]

#### The Ideal State to which the Company Aspires

- Social contribution by product quality
- Quality constitution appraised by customers
- All employees think and act based on the quality-first principle under high-quality ethics

○ Achieved, △ Partially Achieved, ✕ Not Achieved

#### The Fifth Mid-Term Management Plan (FY2016 to FY2018)

1. Fostering quality-first culture and human development
2. Enhancing preventive measures for quality monitoring and audit
3. Establishing a field quality responsibility system
4. Reasserting strict adherence to quality control basic matters
5. Enhancing site control ability based on 5 GEN-Principle\*

\*A set of Japanese principles that focus on “GEN-ba,” the ACTUAL frontline; “GEN-butsu,” the ACTUAL item or product; “GEN-jitsu,” the ACTUAL condition or situation; “GEN-ri,” the ACTUAL principle or theory; and “GEN-soku,” the ACTUAL rules or standards.

Fiscal 2016 Quality Priority Policies	Evaluation
1. Returning to the basics of the quality-first principle with full employee participation in quality awareness improvement activities	○
2. Correcting processes that have gone as far as quality as a starting point for preventing any recurrences	○
3. Receiving feedback from field (market) quality to design and increase the sophistication of active application technology	△
4. Re-streamlining systematic quality regulations and implement practical education	△
5. Implementing on-the-spot improvements by rank-based site visits and onsite interactive communication	△

#### Initiatives to Achieve Higher Quality

NSK classifies quality into four categories: the field quality, design quality, manufacturing quality, and quality of supplier components, and strives to enhance the standard of each.

As a measure to enhance field quality, we are working to establish a structure capable of proposing products and services that meet not only the quality standards that our customers demand but also the needs of the wider society.

To enhance our design standards and deliver even higher quality products, we use our knowledge and experience to establish voluntary internal targets that go beyond the basic quality levels our customers require.

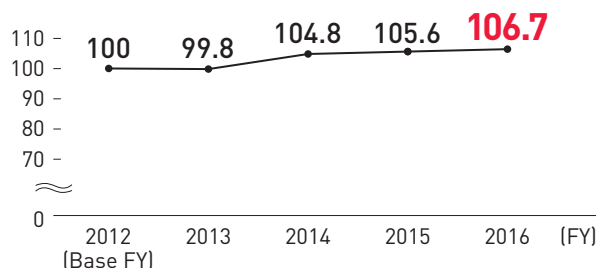
We also develop manufacturing processes that focus on the 4Ms (manpower, machinery, materials and methods) in order to further improve product quality.

To make high quality products, we need to ensure the parts and materials we use are also of the highest quality. To this end, NSK works with its suppliers to conduct quality improvement initiatives.

(Refer to page 5.)



▶ Degree of Customer Satisfaction (with FY2012 as a base of 100)

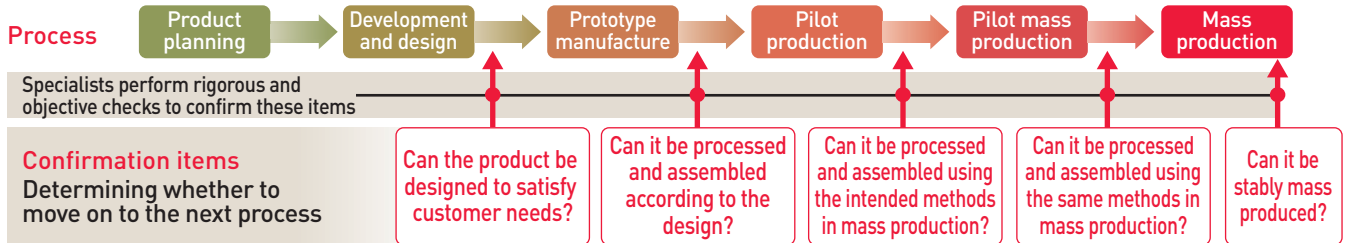


## To Build Quality into Each Process, the Company Is Promoting the NSK Product Development System (NPDS).

This system is used for new projects and is designed to achieve efficient mass production of high-quality products by solving problems at key points in each process before

moving on to the next stage. Moving forward, NSK will globally deploy its innovative NPDS quality management system.

### ► Outline of NPDS



## Material CSR Issues 2 Safety Management

### Creating Safe and Healthy Workplaces

#### NSK's Approach

To protect the safety and health of each and every employee, NSK undertakes initiatives with the following basic philosophy: "Safety is the first and foremost priority."

Striving to ensure workplace safety, the Company implements measures to address unsafe equipment and facilities while promoting a set of uniform global standards across the Group as a whole. At the same time, proactive measures are being taken to share information with employees and to ferment a culture in which workers openly caution each other through mutual education.

#### Occupational Safety and Health Management

NSK realizes how important it is to be proactive about safety and health at its workplaces, which support the Company's manufacturing operations, and to provide a work environment that allows all employees to reach their full potential. Based on this conviction, we are building a proprietary occupational safety and health management system that complies with OHSAS 18001 and other related regulations while striving to foster a "safety first" corporate culture that fully engages all employees at each site.

In fiscal 2016, we organized a Safety and Fire Prevention Committee that is chaired by the CEO. In addition to providing a forum to discuss safety on a global basis and unify the Company's policy, the committee shares best practices from each region while working to create safer and more accommodating workplaces.

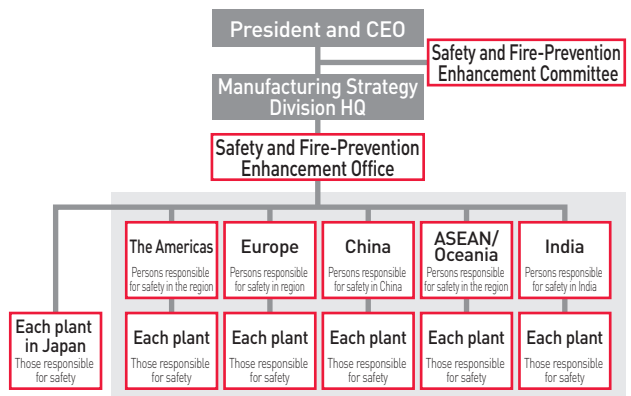
#### Overview of Activities and Main Initiatives in Fiscal 2016

In fiscal 2016, only a 5% reduction was achieved in the number of occupational accidents for the entire Group against the target of a 25% reduction compared to the previous fiscal year. In addition, we take the fact that one major fire occurred extremely seriously and are redoubling our efforts to establish measures to prevent serious accidents.

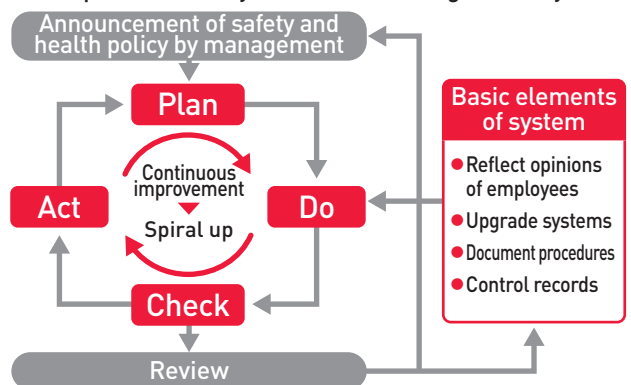
##### Main Initiatives in Fiscal 2016

- Promotion of risk assessments covering machine safety
- Rollout of "point and call" safety training
- Identification of areas where slippage risk is present and implementation of countermeasures, display of risk maps showing hazardous locations
- Organizational enhancements (establishment of Safety and Fire-Prevention Enhancement Committee chaired by the CEO)
- Standardization of safety training

#### ► Global Safety and Fire-Prevention Management System



#### ► Occupational Safety and Health Management System



#### ► Lost-Worktime Injury Rate

	FY2014	FY2015	FY2016
In Japan	0.44	0.32	0.28
Outside Japan	1.00	0.91	0.89
Global	0.80	0.70	0.68
Japan's Manufacturing Industry (Average)	1.06	1.06	1.15

Lost-worktime injury rate = Number of persons absent from work due to occupational accidents ÷ Total actual working hours × 1,000,000. Defined as occupational accidents involving one or more days of absence from work.

# CSR / ESG Management

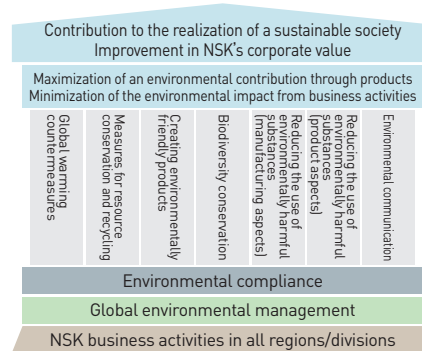
## Material CSR Issues **3** Environmental Management

### Activities for Global Environmental Protection

To realize a sustainable society, global environmental targets and environmental regulations by country and region have been established. Companies are required to run PDCA cycles for environmental management with the intention of balancing environmental conservation with financial gain.

NSK adheres to the principle that global environmental protection, as outlined in the Company's mission statement, must be an ever-present concern in all its business activities. Accordingly, the Group states in its Environmental Policy that environmental management forms the basis of its existence and pursuits. While raising the awareness of each of its employees, NSK works to create environmentally friendly products, implement global warming countermeasures, enact measures to promote resource conservation and recycling, and enforce measures to reduce the use of environmentally harmful substances.

### ► NSK's Environmental Management



### Material and Energy Balance

NSK works hard to continually reduce its environmental impact and to use energy and resources in the most effective manner by quantifying the amount of resources used in its business activities and the amount of greenhouse gases, including CO<sub>2</sub>, waste and other emissions, that it outputs.

### ► Input and Output of Global Business Activities (FY2016)

INPUT (Global)							
<b>Materials and parts</b>		<b>Energy</b>		<b>Water supply</b>		<b>Materials and parts (Japan) (Environmentally harmful substances)</b>	
Steel	<b>705 × 10<sup>3</sup> tons</b>	Energy	<b>16,312 TJ</b>	Water	<b>4,716 × 10<sup>3</sup> m<sup>3</sup></b>	PRTR*1-designated substances	
Oils and greases	<b>21.1 × 10<sup>3</sup> tons</b>	Fuel	<b>2,330 TJ</b>	Groundwater	<b>1,840 × 10<sup>3</sup> m<sup>3</sup></b>	<b>487.8 tons</b>	
		Electricity and heat (steam, etc. supplied from third parties)	<b>13,982 TJ</b>	General water	<b>2,274 × 10<sup>3</sup> m<sup>3</sup></b>		
				Industrial water	<b>601 × 10<sup>3</sup> m<sup>3</sup></b>		



OUTPUT (Global)							
<b>Atmospheric gases</b>		<b>Waste</b>		<b>Water quantity</b>		<b>Environmentally harmful substances (Japan)</b>	
Greenhouse gases (CO <sub>2</sub> equivalent)*2	<b>991.4 × 10<sup>3</sup> tons</b>	Total waste	<b>211.5 × 10<sup>3</sup> tons</b> <small>(Japan 105.5 × 10<sup>3</sup> tons, outside Japan 106.0 × 10<sup>3</sup> tons)</small>	Wastewater	<b>2,863 × 10<sup>3</sup> m<sup>3</sup></b>	Discharge/transfer of PRTR-designated substances	
NOx	<b>128 tons</b>	Recycled	<b>194.0 × 10<sup>3</sup> tons</b>	Rivers	<b>704 × 10<sup>3</sup> m<sup>3</sup></b>	<b>95.8 tons</b>	
SOx	<b>48 tons</b>	Landfill waste	<b>3.7 × 10<sup>3</sup> tons</b>	Sewage system	<b>2,159 × 10<sup>3</sup> m<sup>3</sup></b>	VOC*4	
		Incinerated waste and water treatment	<b>13.8 × 10<sup>3</sup> tons</b>	BOD*3	<b>2.3 tons</b>	<b>85.8 tons</b>	

\*1 Act on Confirmation, etc., of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (law concerning Pollutant Release and Transfer Register/PRTR). This Japanese law is intended to facilitate the improvement of chemical substance management by ensuring that the amounts released into the environment are ascertained and reported to the authorities.  
 \*2 The amount of greenhouse gas emissions is multiplied by each region's global warming coefficient. In Japan, calculated in conformity with the Ministry of the Environment and the Ministry of Economy, Trade and Industry's "Greenhouse Gas Emission Calculation and Reporting Manual." Outside Japan, calculated in conformity with the International Energy Agency (IEA)'s "CO<sub>2</sub> Emissions from Fuel Combustion."  
 \*3 An index indicating to degrees of water pollution organic materials, and the amount of oxygen required for the organic material to oxidize and decompose into microbes. The amount of the biochemical oxygen demand (BOD) load shown here is the BOD measurement value multiplied by the amount of the river water discharge.  
 \*4 Abbreviation for volatile organic compounds, which are considered to be one of the substances that cause photochemical smog.

### Creating Environmentally Friendly Products

#### Harnessing NSK's Four Core Technologies to Help Reduce the Environmental Impact of Human Societies

The products of the future must perform better than today's to help reduce the impact that human societies have on the natural environment. To contribute to a safer, smoother society and to help protect the global environment, as spelled out by its corporate philosophy, NSK is working hard to accurately determine the needs of its customers and the broader

society, as well as to develop environmentally friendly products and technologies that make the most of the Company's four core technologies (tribology, materials, numerical simulation, and mechatronics). By delivering these products and technologies to all corners of the globe, NSK aims to contribute to the sophistication of the machinery in which its products are incorporated and to the development of environmentally friendly products as well as to the reduction of the environmental impact of society.

**Other related information** For further information on environmental management (policy, framework, targets/achievements, environmental accounting), global warming countermeasures, measures for resource conservation and recycling, reducing the use of environmentally harmful substances, and biodiversity conservation, please refer to our CSR Report (NSK website: <http://www.nsk.com/sustainability/csrReport/index.html>).

## Basic Policy for the Development of Environmentally Friendly Products

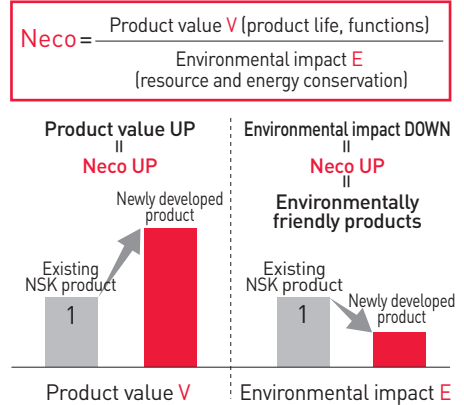
NSK minimizes the environmental impact of its products at every stage—from R&D and design to production, usage and disposal—by upholding the following standards:

1. Each product should contribute toward the energy and resource conservation of the machine in which it is installed.
2. The amount of energy and resources required during product manufacturing should be minimal.
3. Environmentally harmful substances should not be used in products or manufacturing processes.
4. Products should contribute to the health and safety of end users by having low emissions of vibration, noise, and dust.

### ► NSK Eco-Efficiency Indicators (Neco)

The Company conducts assessments of products under development by utilizing NSK eco-efficiency indicators (Neco) as a yardstick for quantitatively assessing the degree of their environmental friendliness. The Neco score is a numerical value obtained by dividing the product value V by the environmental impact E. The product value numerator V represents, in numerical form, the degree of improvement of a product in development were an existing product assessed at 1 with regard to assessment parameters that need to be increased to improve product value, such as service life, performance and accuracy. By comparison to an existing NSK product, the environmental impact denominator E represents assessment parameters, such as product weight, power consumption and friction loss, which must be reduced to decrease the environmental impact.

To use a bearing as an example, the longer its service life when compared to an existing product, the better its ability to withstand high-speed rotation, the lighter and more compact that bearing is, and the lower the friction loss, the higher its Neco value will be, and that bearing will be assessed as an environmentally friendly product. NSK is working to develop new products with a Neco score of 1.2 or higher and has developed 219 environmentally friendly products to date.



### ► Environmentally Friendly Products Developed in Fiscal 2016

In fiscal 2016, NSK developed eight new environmentally friendly products that help customers conserve energy and resources.

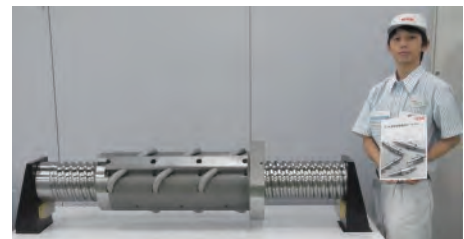
Product Name	Long-Life, Optimized Cylindrical Roller Bearings for the Free Side of a Steel/Continuous Casting Machine Guide Roll	High Performance Standard NSKHPST <sup>TM</sup> Series of Large Spherical Roller Bearings for Industrial Machinery	Ultra-High-Speed Spindles with Grease Lubrication for Grinding Processes	Highly Dust Resistant, Low Friction Loss Bearings for Office Equipment	Right/Left Hand Ball Screw Series of Super High Load Capacity ToughCarrier <sup>TM</sup> Single-Axis Actuators	S-HTF Series of Ball Screws for High-Load Drive	Super Long-life Needle Rollers for Automobile Transmissions	6th-Generation Low-Friction Tapered Roller Bearings for Automotive Transmissions
Technology Developed by NSK	Longer life	Longer life ----- Low heat generation	Improvement of high speeds ----- Improved waterproof performance	Low friction loss ----- Realization of high dust resistant performance	Super-high load capacity and longer life ----- High rigidity	Longer life and improved load-bearing capacity	Improved lifetime durability ----- Damage prevention of mating parts	Low friction loss
Environmental Benefits for NSK's Customers	Improved productivity	Improved productivity	Energy savings ----- Realization of clean environment	Energy savings ----- Increased reliability	Helps make production equipment more power conservative	Improved productivity	Improved automotive fuel economy	Improved automotive fuel economy
Neco	2.9	1.6	1.3	1.4	2.3	1.3	1.4	1.2

### Contributing to more energy-efficient, cleaner injection molding machines through super-large ball screw featuring world-top-class load capacity

Consuming 40%–60% less electricity than hydraulic injection molding machines, electric models feature superior energy-saving performance. In addition, as the movement of each part can be controlled directly with a ball screw and servomotor, electric injection molding machines make product quality consistent and shorten cycle times. Moreover, since no oil is needed to move hydraulic cylinders, they can contribute to the creation of safer and cleaner working environments.

NSK is contributing to the evolution of injection molding machines by promoting high load capacity and long service life of super-large ball screws for injection molding machines. In recent years, in accordance with the increasingly more stringent automobile fuel efficiency and exhaust emission regulations in each country and region, further reductions in automobile weights have been required. As a result, there is increasing pressure to replace metal and glass with lightweight resins for some large parts. The production of large resin parts requires larger injection-molding machines and has demanded that the ball screws used have a higher load capacity.

Having developed the necessary processing technology and production equipment, NSK commercialized a ball screw for high load drive applications that features world-top-class load capacity. With this ball screw, NSK will further help its customers and society as a whole to conserve energy.



# CSR / ESG Management

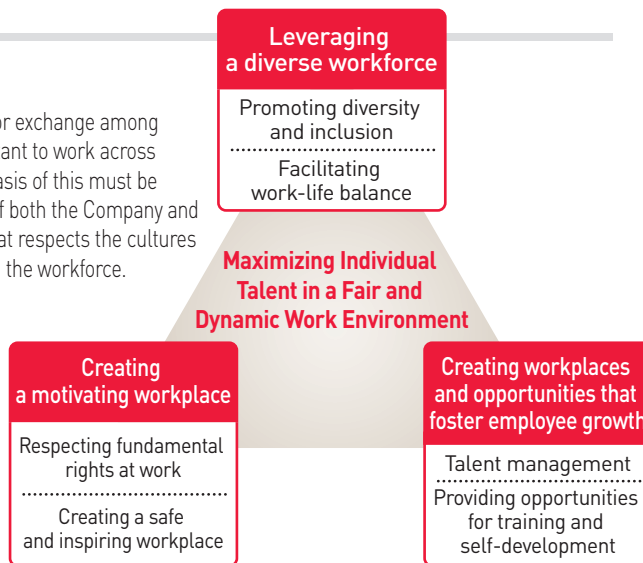
## Material CSR Issues 4 Human Resource Management

### Creating a Dynamic Work Environment

As globalization continues its advance, there are more and more opportunities for exchange among people of different nationalities and backgrounds. It has never been more important to work across national borders and regional boundaries to achieve prosperity for all, and the basis of this must be deeper mutual understanding. In order to contribute to the sustainable growth of both the Company and its employees, NSK is committed to creating a safe and motivating workplace that respects the cultures and practices of countries and regions worldwide, and that embraces diversity in the workforce.

#### NSK's Approach

In its Management Principles, NSK clearly states its aim to provide challenges and opportunities to its employees, channeling their skills and fostering their creativity and individuality. With the aim to maximize the individual talent of each employee, NSK will work to create an inspiring and purpose-driven workplace, and develop the talent to lead NSK forward.



### Respecting Fundamental Rights at Work

#### Prohibiting Discrimination and Respecting Fundamental Rights at Work

Respecting the Universal Declaration of Human Rights, NSK promotes activities based on the declaration's ideals. Having clearly stated its aim "to provide challenges and opportunities to our employees, channeling their skills and fostering their creativity and individuality" in its Management Principles (please refer to page 1), the Company also defines the "prohibition of unfair discrimination" and "respect for basic fundamental rights at work" in the NSK Code of Corporate Ethics. Prohibiting discrimination—on the basis of race, appearance, belief, gender, social status, lineage, ethnicity, nationality, age or disability—as well as harassment, forced labor and child labor, the Company creates workplaces where diverse human resources can work enthusiastically, while striving to provide equal opportunity in recruitment, job assignment, evaluations and other employment issues.

In addition to making NSK's stance on human rights better known among its employees, the Company identifies acts that run contrary to that stance through internal audits and its internal reporting system, and takes immediate action when necessary to correct it.

#### Employment Policy to Preserve the Stability of NSK and the Society at Large

As a company that is committed to *monozukuri*, NSK aims for sustainable growth. For that reason, NSK takes a long-term perspective on employment and places high value on the continual recruitment and development of outstanding human resources to lead its businesses. Having established a policy to prevent mass layoffs, the Company also engages in appropriate employment practices in accordance with the laws and ordinances of each country and region where it operates.

#### Labor-Management Relations Based on Dialogue

NSK regards sound labor-management relations as critical to the sustainable growth of the Company. One way in which the Company respects fundamental rights at work, as pledged in the NSK Code of Corporate Ethics, is by guaranteeing employees the right to communicate openly and directly with management without fear of retaliation, intimidation or harassment. Employees and managers work as partners and strive to communicate at a deeper level, sharing views on the work environment and business conditions, and discussing and implementing improvement measures. NSK is committed to creating workplaces where employees can proactively engage in their duties.

### Creating an Organization that Embraces Diversity

#### Promoting Diversity and Inclusion

It is NSK's conviction that employing people with diverse backgrounds—in gender, age, nationality, culture, lifestyle and values—will foster a work environment full of new perspectives and ways of thinking, which will in turn strengthen the Company's competitiveness and ability to avoid risks. For this reason, through diversity training and LGBT\* seminars for both executives and employees, and directed talks from the president and other members of senior management, NSK promotes the creation of a corporate culture that embraces the diversity and inclusion of people and the values they hold.

\*LGBT is an inclusive term for sexual minorities which stands for lesbian, gay, bisexual, and transgender.

#### Leveraging Global Talent

Through close coordination between its headquarters in Japan and regional HR offices throughout the world, NSK has undertaken a variety of initiatives to leverage its global talent across both national and regional boundaries. The Company is currently working to create a shared global infrastructure for HR that promotes standardization while leaving room for regional distinctions. This will include a common grading system for ranking executive posts, a deliberate system of promotion and development based on succession plans, competencies deemed necessary for leaders at NSK, and a guideline for global mobility.



## Promoting the Advancement of Women in the Workplace (Japan)

Despite recent trends in the industry, the rate of female employees at NSK remains at 10.7% (FY 2016, NSK non-consolidated and major group companies in Japan), and the rate of women in management positions also remains low at 1.2%. To promote gender diversity, NSK has started attempts to improve its female hiring rate and to expand the work options of female employees. The Company's efforts do not stop there, however: as a first step in cultivating diversity in talent and values at the management level, NSK conducts training for female managerial candidates to prepare them with the skills and mindset they will need to excel as a leader. NSK believes that diversity and inclusion will be encouraged and the competitiveness of the Company enhanced by increasing the number of female employees who actively demonstrate their abilities.

### Human Resource Development Programs

To develop the talent necessary to support sustainable growth, NSK employs a talent management system to ensure that each employee can realize their full potential. NSK is also working to promote career advancement and motivation by orchestrating strategic job rotations that serve to stretch the skills and abilities of its employees.

Through a variety of educational offerings and training programs that further refine its people's abilities, knowledge and character, NSK provides opportunities and forums to help in the development of its employees.

In addition to targeted training geared for managers and other levels of the organization, each year NSK runs both the Japan Management College and the Global Management College, which provide selective training for future leaders of the organization. NSK has also begun offering opportunities to study abroad or participate in liberal arts programs, with an aim to broaden horizons and develop character. The Company also offers professional education by function, such as the NSK Manufacturing Education and Training Center, established to facilitate the transfer of technical skills involved in manufacturing, and the NSK Institute of Technology (NIT), which conducts comprehensive technical training for engineers.

In fiscal 2016, NSK invested approximately ¥44,000 per person in employee training and development.

### Work Style Reforms (Japan)

NSK believes that having employees who enjoy and are actively engaged in both their work and personal lives will have a beneficial impact on its business activities. An improvement in employee productivity will lead to an improvement in their ability to produce quality work, which will ultimately cultivate a more fulfilling life both at work and home. For this reason, NSK strives to better manage employee working hours, to encourage employees to take their annual paid leave, and to provide a variety of work style options to fit the diverse lifestyles of its employees. With an aim of boosting employee job satisfaction, NSK also runs seminars and other programs to raise awareness—of both managers and employees—on the need for work style reform.



Work style reform seminar

### Support for Working Parents and Caregivers (Japan)

To create a more open, amiable workplace that responds to the needs of a diverse workforce, NSK's first step of action is providing support for parents of small children and caregivers. While the Company's priority in the past has been to stay legally compliant in this area, it is now beginning to take a more proactive role. Not only will NSK work to provide comprehensive support for these employees, but will also create a work environment where they can maximize their full potential. Many employees struggling with the time constraints of parenthood are still very eager to excel in the workplace. For these parents, NSK is offering flexible working hours on a trial basis, and has started an onsite childcare service on working public holidays when regular daycare facilities close down.

#### ▶ Support System for Parents and Caregivers\*1

	NSK	Japanese law
Parental leave	Through end of April following child's third birthday (first five days are paid)	Up to 18 months (non-paid)*2
Reduced hours for working parents	Through end of March of child's 6th grade year	Up to 3 years
Caregiver leave	Up to 1 year	Up to 93 days
Reduced hours for working caregivers	Up to 3 years	Up to 3 years
Exemption from half-day limit	Usually limited to 12 half-days per year, but unlimited for family care	
Re-employment registration system	Employees who resign to follow a transferring spouse can register for re-employment at NSK upon their return	

\*1 NSK and main group companies in Japan  
\*2 Changed to two years from October 1, 2017

### External Assessments: Eruboshi and Kurumin Certifications

In recognition for its efforts to support working parents and the advancement of women in the workplace, the Minister of Health, Labour, and Welfare awarded NSK certification for *Eruboshi*\*1 and *Kurumin*\*2.



1. *Eruboshi*: Based on the Act of Promotion of Women's Participation and Advancement in the Workplace, this accreditation awarded by the Minister of Health, Labour and Welfare goes to "companies and organizations working proactively to create work environments where women can play an active role."
2. *Kurumin*: Based on the Act for Measures to Support the Development of the Next-Generation Children, NSK formulated an action plan as a general business operator and received certification from the Minister of Health, Labour and Welfare as a corporation that supports child raising.

# CSR / ESG Management

## Material CSR Issues 5 Supply Chain Management

### Fair and Impartial Procurement

#### NSK's Approach

NSK proactively strives to meet the expectations of society through its supply chain while strengthening the procurement foundation that supports its business activities. To this end, NSK shares its approach to value creation with suppliers based on the belief that cooperation is key to further the development of the supply chain as a whole.

#### Supply Chain Management

NSK has built a system for supply chain management centered on the Procurement Division headquarters that promotes coordination between the functional division headquarters, such as CSR Div. HQ, the Global Environment Department, and QA Div. HQ, and its plants and the production and procurement departments at Group companies. Global procurement meetings attended by procurement officers from each world region are held twice a year to discuss action policies for CSR, the environment, and quality, as well as to review the state of progress on related initiatives.

#### Building Relationships with Suppliers Based on Trust

NSK endeavors to build relationships of trust and forge long-term cooperative relationships with its suppliers by holding procurement policy briefings for key suppliers, sending managers to suppliers to exchange information, and collaborating on quality and technology issues.

We have established an internal reporting system (whistleblower hotline) for anyone to anonymously convey their criticisms and opinions, enabling us to identify issues at an early stage and take corrective measures. In fiscal 2016, the hotline did not receive any calls.



Procurement policy briefing



Internal reporting system leaflet

#### Activities to Improve Quality at Suppliers

Through regularly scheduled technology and quality meetings, NSK shares issues with suppliers as a part of ongoing activities to improve quality. Representatives from NSK headquarters, regional headquarters and plants around the world visit suppliers to audit processes and suggest improvement measures with the objective of enhancing the level of quality.

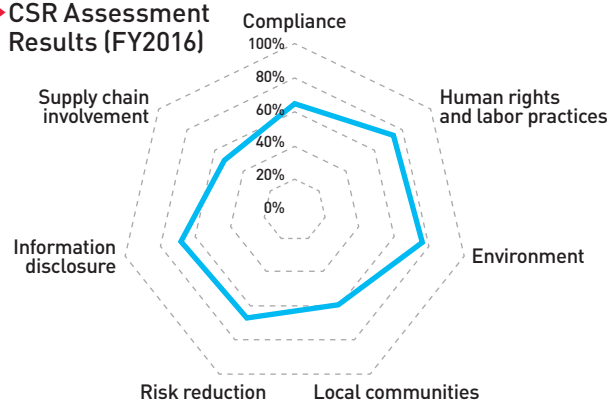
In fiscal 2016, NSK undertook a new initiative in Japan to prevent serious quality problems by coordinating more closely with key suppliers.

#### Promoting and Enhancing CSR Activities

NSK distributes the NSK Supplier CSR Guidelines to its suppliers to gain their understanding and approval of its initiatives to provide safe products, observe all legal requirements, respect human rights, ensure occupational safety, and protect the environment. In addition, basic business contracts contain clauses that pertain to ESG (Environment, Society, and Governance). We periodically ask our suppliers to take a CSR self-assessment test to monitor the state of their activities and reflect the results of these surveys in future measures.

In fiscal 2016, we asked approximately 500 suppliers in Japan to conduct a self-assessment, and 87% responded. Based on the results of the survey, we identified issues regarding the implementation of CSR activities at second-tier suppliers. NSK implored them to cooperate and improve their efforts at a procurement policy briefing held in January 2017.

#### CSR Assessment Results (FY2016)



#### Meeting Regulations for Information Disclosure about Conflict Minerals

NSK has a policy of not using conflict minerals and takes care in its procurement activities to avoid benefitting armed groups that violate human rights. If involvement by armed forces is suspected, NSK takes steps to avoid using the suspected parts or materials. In 2013, the NSK Supplier CSR Guidelines were revised to unequivocally prohibit the use of conflict minerals, and we have endeavored to raise awareness of that among our suppliers. Every year, we conduct a conflict mineral survey with cooperation from the suppliers of parts, steel and other materials used in NSK products. Surveys through 2016 have not identified any case of conflict minerals produced in restricted regions.

#### Other related information

For further information on supply chain management, please refer to our CSR Report [NSK website: <http://www.nsk.com/sustainability/csrReport/index.html>].

**Basic Philosophy**

NSK believes it is essential to have systems that ensure transparent, fair and timely decision making to raise our corporate value in a sustainable manner over the long term. To realize this objective, the Company is constructing its corporate governance systems based on the following four guiding principles.

**Policy on Creating a Corporate Governance Structure**

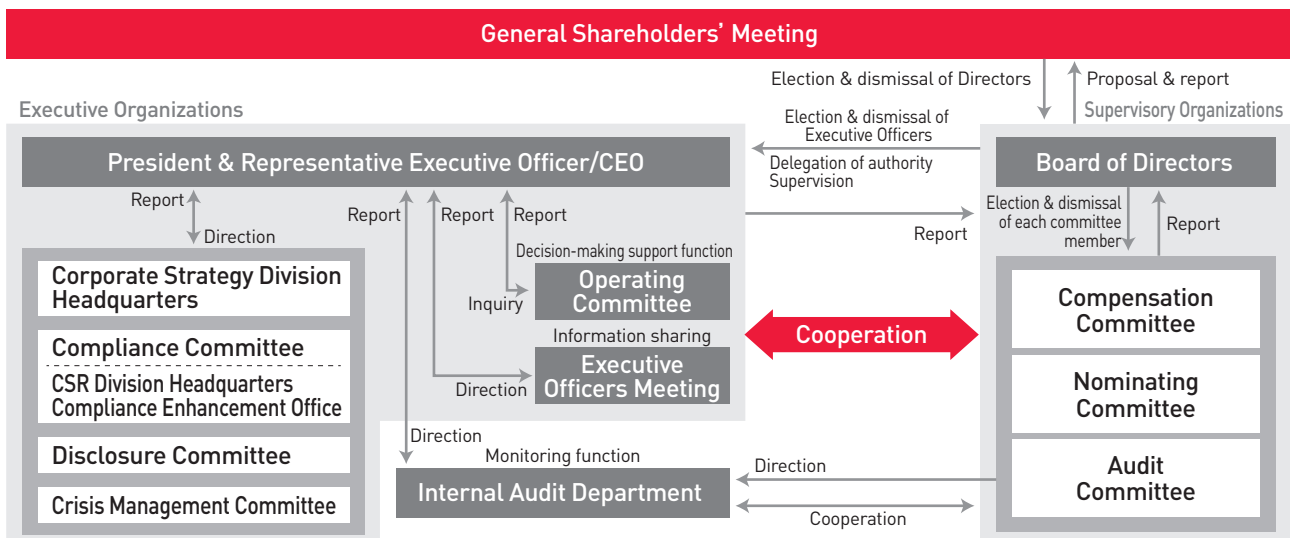
- 1) To increase the efficiency and agility of management by proactively delegating decision-making authority regarding the execution of operations from the Board of Directors to the Company's executive organizations.
- 2) To establish oversight of the executive organizations by supervisory organizations through the separation of the former and the latter.
- 3) To strengthen supervisory organizations' oversight of the executive organizations through cooperation between the former and the latter.
- 4) To improve the fairness of management by strengthening compliance systems.

**Corporate Governance Structure**

**Current Structure and Operating Status**

NSK has adopted a Company with Three Committees system as its form of corporate organization to better achieve the aforementioned basic philosophy. As the business execution entity, the CEO has the ultimate authority and responsibility for all operational executive functions and makes decisions concerning the execution of business by the executive officers appointed by directors. In line with that guidance, the executive officers execute business based on a division of responsibilities and duties. The Board of Directors determines fundamental management policies that aim to contribute to the sustained mid- and long-term improvement of corporate value, while properly supervising the state of operational executive functions as a supervisory organization. The Board of Directors comprises non-independent directors with insight into business and industry and independent directors who provide supervisory functions and advice from an objective standpoint, taking the perspective of outside stakeholders. In principle, the ratio of independent to non-independent directors is at least one to three. As a Company with Three Committees, NSK has three committees (Nominating, Audit and Compensation) consisting mainly of independent directors. In the fiscal year ended March 31, 2017, the Board of Directors met 10 times and the Nominating, Audit and Compensation committees convened meetings six times, 15 times and five times, respectively.

**▶ NSK's Corporate Governance Structure**



**Independence of Independent Directors**

NSK has set specific standards for independence, which are applied when appointing independent directors. By applying these standards, NSK mitigates the risk that a candidate might have a special relationship with the Company's management or its principal shareholders, or a conflict of interest with general shareholders. All four of NSK's independent directors meet these standards of independence. The Company's independent directors, who possess a wide range of experience and deep insight in business, management and fields of specialty, offer their advice while supervising management from an independent standpoint, thereby enhancing the validity of decision making by the Board of Directors.

**Initiatives Geared toward Further Enhancements**

**Evaluation of the Board of Directors' Effectiveness and Training of Board Members**

The Company verifies whether the functions of the Board of Directors are being properly fulfilled and, to further strengthen its effectiveness, has evaluations of the Board of Directors carried out by outside experts every year. Based on the results of those evaluations, the Company endeavors to increase the operational efficiency of the Board of Directors and improve the strategic long-term discussions of the Board of Directors. The Company provides training as necessary to directors when they are appointed. The Company sends its outside directors on tours of business sites in various regions to deepen their knowledge of matters distinct to the NSK Group to enhance discussions at the Board of Directors.

**▶ Strengthening NSK's Corporate Governance Structure (Year to March 31)**

- 2016** ● Became a Company with Three Committees in accordance with revisions to Japan's Companies Act
- 2013** ● Established the Compliance Committee
- 2011** ● Submitted a notification to the Tokyo Stock Exchange to confirm the independence of all four independent directors  
● Established independence criteria for the Company's independent directors
- 2007** ● Became a company with committees pursuant to Japan's Companies Act; restructured the Compensation, Nominating and Audit committees to each comprise two independent directors and one non-independent director  
● Established the Internal Control Project Team (later merged into the current Internal Audit Department)
- 2006** ● Established the Information Disclosure Team (current Disclosure Committee)
- 2005** ● Established the Nominating Committee  
● Adopted a company with committees system  
● Established the Management Monitoring Office (current Internal Audit Department) to undertake auditing functions and monitor the operations of the Company
- 2004** ● Established the Voluntary Audit Committee
- 2003** ● Established the Crisis Management Committee
- 2000** ● Adopted an executive officer system and subsequently appointed independent directors to the Company's Board of Directors  
● Established the Compensation Committee

# CSR / ESG Management

## Corporate Governance

### Directors/Officers' Compensation

#### 1. Policy for Directors/Officers' Compensation

The compensation package for NSK's Officers consists of basic compensation, which includes fixed compensation, a performance-based salary that fluctuates and stock compensation, whereas "directors' compensation" and "executive officers' compensation" are separately determined. When a director also serves as an executive officer, the total of each compensation amount shall be paid.

#### 2. Decision-Making Process for Directors/Officers' Compensation

##### [Directors' Compensation]

The directors' compensation package consists of basic compensation and stock compensation.

##### (1) Basic compensation

Basic compensation is determined based on whether the director is an independent director or a non-independent director in addition to the director's role on committees to which the director belongs and the Board of Directors.

##### (2) Stock compensation

To further enhance the commitment of directors to a sustainable increase in corporate value, NSK introduced a stock compensation program using a Board Benefit Trust system. Under the program, NSK grants directors shares of NSK stock at retirement based on a point system whereby points are awarded depending on whether the director is independent or non-independent and according to the value of the stock. However, NSK will compensate directors with money acquired by converting a certain portion of NSK's shares into cash. For directors who also serve as executive officers, performance shares as directors will not be provided.

##### [Executive Officer's Compensation]

The executive officer compensation package consists of basic compensation, a performance-based salary and stock compensation.

##### (1) Basic compensation

For basic compensation, the amount is determined according to

the title of the executive officer. Moreover, an additional amount will be paid to executive officers with representation rights.

##### (2) Performance-based salary

Using the consolidated sales operating income margin and the consolidated ROE targeted in the Company's mid-term management plan and the operating income margin and cash flow as numerical targets for a single fiscal year and an index to evaluate quality-contributing activity as criteria, the total amount of performance-based salary is calculated. For the compensation amount for the respective executive officers, the title and achievement level in the performance of job duties are evaluated for payment.

##### (3) Stock compensation

To further enhance the commitment of executive officers to a sustainable increase in corporate value, NSK introduced a stock compensation program using a Board Benefit Trust system. Under the program, NSK grants executive officers shares of NSK stock at retirement based on a point system whereby points are awarded depending on the title of the executive officer and according to the value of the stock. However, NSK will compensate executive officers with money acquired by converting a certain portion of NSK's shares into cash.

In addition, in the event a member of a management team of another company such as a subsidiary or an affiliate, etc., assumes an executive officer position, compensation will be determined separately.

#### 3. Directors/Officers' Compensation, etc.

The amount of compensation for directors and executive officers for the year ended March 31, 2017, was as follows.

##### ■ Compensation Total by Classification of Directors/Officers and Compensation Type and No. of Directors/Officers

Classification	Compensation, etc., Total (¥ Millions)	Fixed Compensation		Performance-Based Salary		Stock Compensation		Stock Options		Retirement Benefits	
		No. of Directors/Officers	Amount (¥ Millions)	No. of Directors/Officers	Amount (¥ Millions)	No. of Directors/Officers	Amount (¥ Millions)	No. of Directors/Officers	Amount (¥ Millions)	No. of Directors/Officers	Amount (¥ Millions)
Directors (Non-independent)	164	11	132	—	—	2	11	8	18	1	1
Directors (Independent)	60	4	43	—	—	4	6	4	10	—	—
Executive Officers	1,860	36	814	32	604	35	242	35	159	28	39

- Notes: 1. Compensation (excluding stock compensation and retirement benefits) for directors (non-independent) includes compensation for directors who also serve as executive officers.  
2. The previous compensation package for Officers of NSK comprised basic (fixed) compensation, performance-based salary, a stock option program (share subscription rights) and retirement benefits. However, at the Compensation Committee meeting held on May 16, 2016, it was decided to introduce a stock compensation program and end the stock option and retirement benefit programs.  
3. The amount of performance-based salary is the planned payment amount as of July 3, 2017, based on the results for the year ended March 31, 2017. The amount of performance-based salary as of July 1, 2016, based on the results for the year ended March 31, 2016, was ¥632 million.  
4. In the Board Benefit Trust system, the amount of stock compensation is commensurate with the number of points awarded for the fiscal year and booked as costs.  
5. The amount of stock options is equivalent to the cost recognized during the fiscal year within compensation related to share subscription rights that were allocated as stock options on August 22, 2014, and August 21, 2015.  
6. The amount of the retirement benefit is the accrued officers' retirement benefits during the period from April to June 2016, when the system was discontinued. Retirement benefits were ¥69 million for one director and ¥457 million for seven executive officers who retired during the fiscal year.  
7. Figures listed above are rounded down to one million yen.

##### ■ Directors/Officers Receiving a Total of ¥100 Million or More in Consolidated Compensation

Name	Consolidated Compensation, etc., Total (¥ Millions)	Title	Company	Amount for Each Item of Consolidated Compensation, etc.				
				Fixed Compensation (¥ Millions)	Performance-Based Salary (¥ Millions)	Stock Compensation (¥ Millions)	Stock Options (¥ Millions)	Retirement Benefit (¥ Millions)
Toshihiro Uchiyama	136	Director	NSK Ltd.	7	—	—	1	—
		Executive Officer	NSK Ltd.	42	45	23	14	2
Adrian Browne	133	Executive Officer	NSK Ltd.	65	45	1	4	16
Jürgen Ackermann	109	CEO	NSK Europe Ltd.	53	50	1	—	3
Steven Beckman	159	CEO	NSK Americas, Inc.	52	104	1	—	0

## Actions for Japan's Corporate Governance Code

NSK shall adhere to each principle of the Code. In addition, NSK's implementation status of the 11 items necessary for disclosure is as follows. For details, please refer to the following NSK website ①. This page is a summary of the relevant sections of the "NSK Corporate Governance Report" (in Japanese only).

① <http://www.nsk.com/company/governance/index.html> ② <http://www.nsk.com/investors/index.html>

### **[Principle 1-4. Cross-Shareholdings]**

(1) Policy for Cross-Shareholdings

From the perspective of improving corporate value over the medium to long term, NSK holds the shares of other listed companies as cross-shareholdings based on a comprehensive consideration of the business stability, growth, partnership and reliability. The Board of Directors receives periodic reporting for the objectives and rationale behind the cross-shareholdings and supervises such cross-shareholdings.

(2) Criteria of Exercising Voting Rights as to Our Cross-Shareholdings  
The exercising of voting rights as to our cross-shareholdings will be determined from the perspectives of whether the agenda leads to damaging shareholder value and whether there is a contribution to improving the corporate value of NSK and the companies in which NSK owns shares over the medium to long term.

### **[Principle 1-7. Related Party Transactions]**

NSK's Board of Directors approves transactions (related party transactions) between NSK and our executive officers/major shareholders in accordance with applicable laws and regulations including the Companies Act and internal regulations to ensure that such transactions do not harm the interests of the Company or the common interests of our shareholders and receives periodic reporting. Furthermore, the Audit Committee carries out audits on transactions based on necessity.

### **[Principle 3-1. Enhanced Information Disclosure]**

i) Company objectives, business strategies and business plans, etc. NSK has stipulated a mission statement, and based on the mission statement, the Board of Directors resolves mid- to long-term business strategies and business plans, etc. For our mission statement, please refer to page 1 of this NSK Report. For our business strategies and business plans, please refer to this NSK Report and NSK's website ② above.

ii) Basic Views and Guidelines on Corporate Governance  
Please refer to page 51 of this NSK Report.

iii) Policies and Procedures of the Compensation Committee in Determining the Compensation of Executive Officers and Directors

Please refer to page 52 of this NSK Report.

iv) Policies and Procedures in the Appointment of Executive Officers and the Nomination of Directors by the Nominating Committee  
The Company's Directors are expected to have extensive knowledge about business and management or have field of expertise, as well as high ethical standards as managers and insight into corporate governance, with the ability to make objective decisions while supervising business execution. For the selection of Directors, based on our expected composition of the Board of Directors and the qualifications of Directors according to the corporate governance system, candidates for Director are selected by the Nominating Committee and presented by the Board of Directors for a vote at the ordinary general meeting of shareholders.

v) Explanation of Individual Appointment and Nomination When the Nominating Committee Selects Executive Officers and Appoints Candidates for Directors

Reasons for the nomination of candidates for Director discussed in the Nominating Committee are described in the notice of the ordinary general meeting of shareholders.

### **[Supplementary Principle 4-1-1. Roles and Responsibilities of the Board of Directors]**

The Board of Directors decides basic management policies with the objective of contributing to the sustained improvement of corporate value over the medium to long term for the NSK Group. On this basis, the Board of Directors proactively delegates

authority to executive officers to make decisions related to business execution and supervises the state of business execution to ensure transparent and fair management and to facilitate rapid decision making. For more information about key decisions made by the Board of Directors, see NSK's website ①. The Board of Directors debates strategic long-term issues from the standpoint of stakeholders, creates long-term strategies and advises the executive officers.

### **[Principle 4-8. Effective Use of the Independent Directors]**

NSK has appointed four independent directors who have beneficial expertise for NSK, excellent personalities and wide knowledge, as well as the ability to fulfill their roles and responsibilities with the aim of contributing to the sustainable growth of the Company and increasing corporate value over the medium to long term. In principle, the ratio of independent to non-independent directors is at least one to three. Meetings consisting of only independent directors are held periodically to facilitate the open exchange of opinions and sharing of knowledge.

### **[Principle 4-9. Independence Standards for the Independent Directors]**

Please refer to page 51 of this NSK Report.

Please refer to our website ① above for details of the independence standards for independent directors.

### **[Supplementary Principle 4-11-1. Composition of the Board of Directors]**

Please refer to page 51 of this NSK Report.

### **[Supplementary Principle 4-11-2. Concurrent Positions of the Board of Directors]**

The concurrency of outside directors is disclosed in meeting convocation notices, business reports, securities reports, etc.

### **[Supplementary Principle 4-11-3. Evaluation of the Board of Directors Effectiveness]**

Please refer to page 51 of this NSK Report.

The results of the evaluation confirmed that NSK's Board of Directors effectively functions as a structure that makes transparent, fair and appropriate decisions on a timely basis. It also confirmed that steady progress has been made with activities aimed at improving the effectiveness of the Board of Directors based on the results of the effectiveness evaluation last year. NSK strives to increase the effectiveness of the Board of Directors to contribute to the further improvement of corporate value, such as by enhancing discussions about strategic long-term issues.

### **[Supplementary Principle 4-14-2. Training of the Officers]**

Please refer to page 51 of this NSK Report.

The Company provides training about the Companies Act and other laws and regulations, the Company's finances, operations and corporate governance. All directors receive detailed explanations about matters before they are discussed at Board of Directors meetings.

### **[Principle 5-1. Policy for a Constructive Dialogue with the Shareholders]**

Please refer to page 56 of this NSK Report.

The Company will not disclose or divulge insider information in dialogue with shareholders and investors. When disclosing important information regarding the Company that might influence investment decisions of investors in compliance with relevant laws and regulations, the Disclosure Committee confirms its timeliness and appropriateness. In addition, the Company internally regulates dialogues regarding book closings during one week before the disclosure of a book closing, which is referred to as the "Silent Period."

# CSR / ESG Management

## Corporate Governance

### Takeover Defense

NSK introduced response measures to Large-scale Purchases of NSK shares (“Takeover Defenses”) at the annual general meeting of shareholders held in June 2008, and subsequently renewed these Takeover Defenses with the approval of shareholders at the annual general meetings of shareholders held in June 2011, June 2014, and June 2017. At the annual general meeting of shareholders held in June 2017, the approval rate for the Takeover Defenses was 71.03% (compared with 68.4% at the June 2014 general meeting of shareholders).

NSK is a stock company, the shares of which are traded on capital markets, and the free trading of its stock by all shareholders and investors is permitted. The Company believes that, in the case of a large-scale purchase of NSK shares, the decision whether to accept such a purchase should ultimately be left to the shareholders.

However, taking into account such factors as social and economic changes and recent capital market conditions, there is a possibility that a sudden and unsolicited large-scale purchase of the Company’s shares could occur without necessary and sufficient information being disclosed, and without an opportunity to consider the proposal being given to the shareholders and investors of the target company, or without the target company’s board of directors being provided with information and time to express its opinion and prepare an alternative proposal. Such large-scale purchases of shares could damage NSK’s corporate value and the common interests of its shareholders, such as cases in which the purchaser does not intend to manage the Company reasonably or in good faith.

Therefore, NSK decided to introduce and subsequently renew the Takeover Defenses for the purpose of (i) allowing NSK’s shareholders, who will make the final decision, to sufficiently understand the specifics of such a proposal by any person attempting a large-scale purchase of shares and to make an appropriate decision, and (ii) securing and increasing NSK’s corporate value or the common interests of the Company’s shareholders.

Details of the Company’s Takeover Defenses are published on our website. Please refer to “Continuation of the Response Measures to Large-scale Purchases of the Company Shares (Takeover Defenses)” as of May 23, 2017.

<http://www.nsk.com/company/governance/index.html#tab4>

#### Major Changes Made in June 2017

**(1) It was decided to limit the period during which the Board of Directors can request the provision of information from the Large-scale Share Purchaser.**

The period is limited to 60 days from the date a list is provided containing the information requested from the Large-scale Share Purchaser

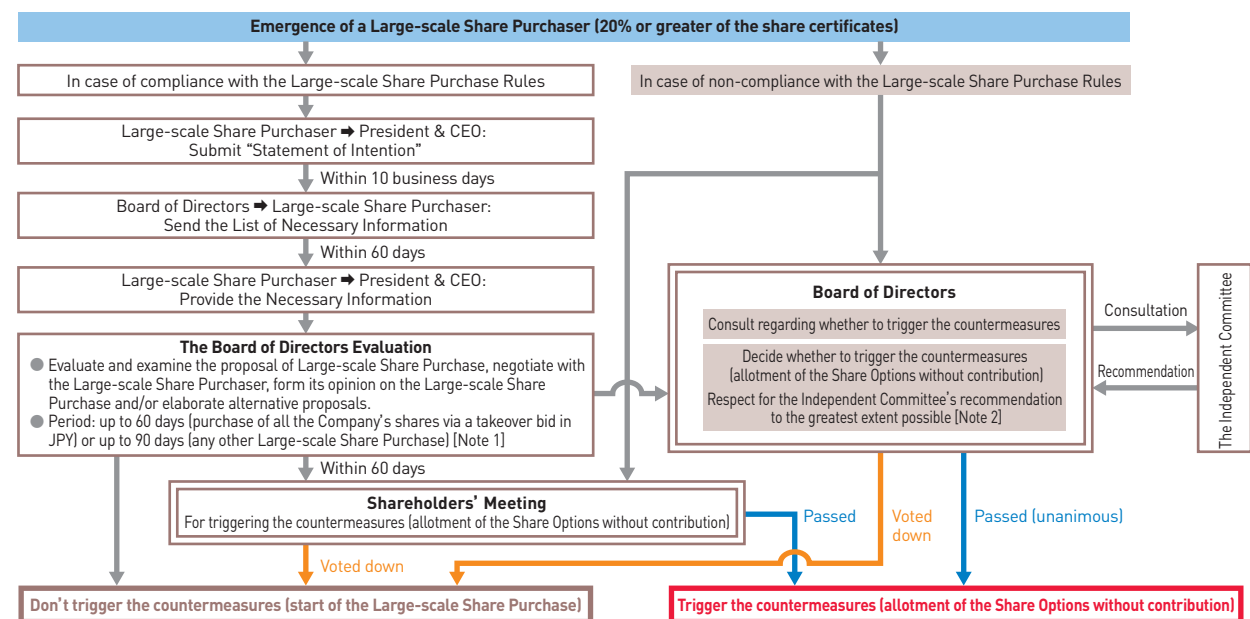
**(2) It was specified that the Board of Directors’ Evaluation Period can be extended only once.**

**(3) It was decided to establish the Independent Committee as an organization that is independent from the Board of Directors.**

The Independent Committee members shall be appointed from independent outside directors and other outside persons who shall be recognized as independent, etc. As of this report publication date, the members of the Independent Committee consist of four independent directors and one lawyer.

**The purpose of NSK’s Takeover Defenses is to ensure there is sufficient information and time for shareholders to examine this information before they make a final decision on a proposal by any person attempting a large-scale purchase of shares.**

#### ► Flow Chart of the Procedures Related to the Plan



[Note 1] Provided, however, that the period may, after consulting with the Independent Committee and by respecting the Independent Committee’s recommendation to the greatest extent possible, be extended up to an additional 30 days by unanimous resolution of the board of directors including the outside directors (provided that the extension may be made only once).

[Note 2] The board of directors may trigger the countermeasures in the following cases, provided, however, that the determination to trigger the countermeasures shall be made by unanimous resolution of the board of directors including the outside directors, after consulting with the Independent Committee and by respecting the Independent Committee’s recommendation to the greatest extent possible:

- ① when the Large-scale Share Purchaser does not comply with the Large-scale Share Purchase Rules;
- ② when the Large-scale Share Purchase falls under certain categories and such Large-scale Share Purchase is reasonably considered to materially harm the Company’s corporate value and shareholders’ common interests.

Except for the cases of [Note 1] and [Note 2], the resolution of the board of directors shall be made by a majority of the directors who are present at the meeting.

## Material CSR Issues **7** Compliance

### Basic Philosophy

The foundation of compliance at NSK is the NSK Code of Corporate Ethics, which outlines universal principles that must be followed by all officers and employees.

NSK aims to remain a company that is trusted by international society and local communities by adhering to the laws and regulations of each country in its corporate activities around the world, and by taking actions based on high ethical standards as a corporate citizen.

### NSK's Efforts to Enhance Compliance

NSK makes every effort to advance business activities based on CSR and stringent compliance with laws and regulations on a Companywide basis. Our main efforts include the continuous provision of mandatory compliance training and education for all officers and employees. In addition, we had issued the NSK Compliance Guidebook, which contains detailed explanations of the NSK Code of Corporate Ethics, in Japanese, English, Chinese, Korean, Polish, Indonesian and Thai by fiscal 2015 so that the content could be understood by employees in each country in their native language. Moreover, after confirming the importance of compliance, all officers and employees submitted a written oath of compliance adherence.

We continue to hold Global Legal and Compliance Meetings to report and discuss compliance matters. Compliance managers from regional headquarters gather at the head office to report and discuss their ongoing initiatives, share information about laws and regulations that require special attention in various countries and regions, and look ahead to implementing measures. The Compliance Enhancement Office continuously conducts internal audits of the state of compliance with the Antimonopoly Act of Japan and other competition laws by visiting business sites while coordinating with the Internal Audit Department.

Furthermore, in 2016, we newly designated July 26, the date when NSK was investigated by the Japan Fair Trade Commission in 2011, as "NSK Corporate Philosophy Day" in order to never forget the cartel incident that led to the inspection by the Fair Trade Commission and to prevent a reoccurrence. NSK uses this day as an opportunity to review and reconfirm our mission statement with a strong commitment to never cause any

misdeeds. On this day, via a live broadcast to sites in Japan and several other countries, the President gave a speech and invited outside lecturers to speak. Overseas sites are also respectively making efforts to comply.

NSK will continue to be united in our commitment to the enhancement of compliance by implementing various measures.

### Key Policies Implemented for Strengthening Compliance

#### Compliance Committee Meetings

Compliance Committee Meetings were held 21 times between the committee's establishment in March 2012 and February 2017. NSK continues to hold the meeting four times a year.

#### Global Legal and Compliance Meetings

In May 2016 and January 2017, Global Legal and Compliance Meetings were held with personnel in charge of compliance from regional headquarters in attendance. NSK continues to hold the meeting twice a year.

#### Compliance Conferences

Compliance Conferences were held in July and December 2016, with personnel in charge of compliance attending from each division and Group Company in Japan. NSK continues to hold the meeting twice a year.

#### Compliance Education

NSK conducted the following compliance education and training for officers and employees of the NSK Group.

##### 1. Antimonopoly Act training

Number of training sessions: 100 for the year ended March 31, 2017 (70 in Japan, 30 outside Japan)

##### 2. Compliance training (at plants, engineering sections and Group companies)

Topics: Compliance, subcontractor laws, data falsification prevention, etc.

##### 3. E-learning

Topics: Contracts, Antimonopoly Act of Japan, compliance, etc.

#### Activities to Raise Awareness Toward Compliance

##### 1. Issued the 2015 edition of the NSK Compliance Guidebook

##### 2. Compliance slogan contest, creation of compliance posters

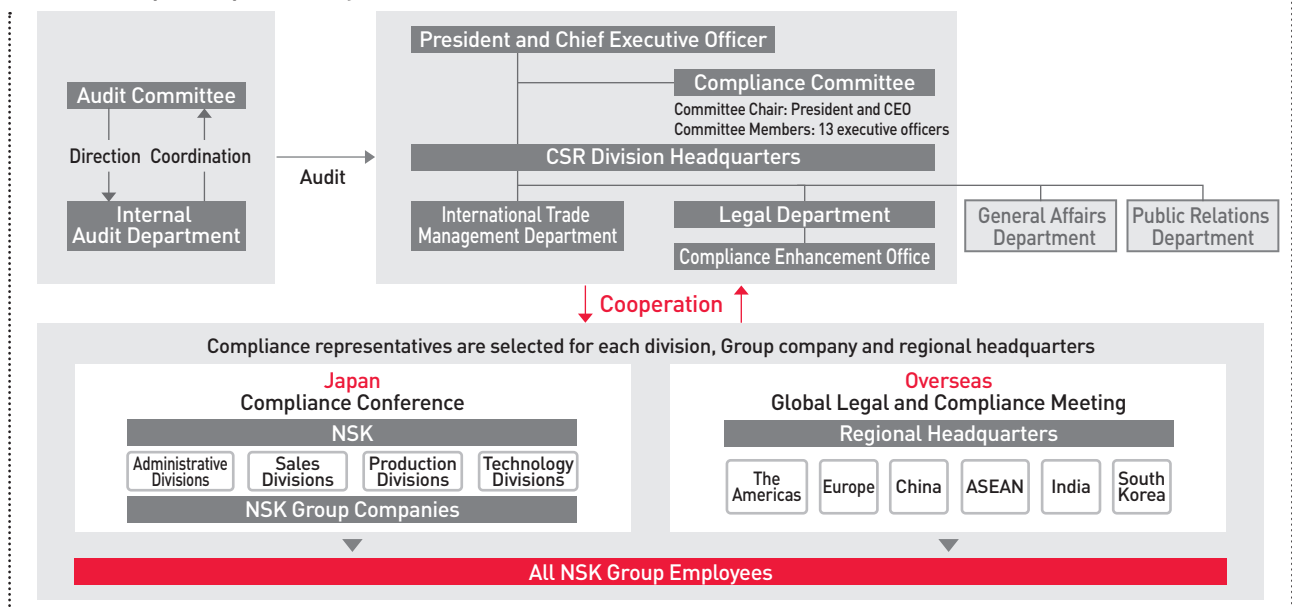
Of the 7,084 submissions received, two slogans were selected as winners and three slogans were selected as runners-up.

Posters using the two winning slogans were created and put on display at all business sites.

##### 3. Compliance newsletter

Since its inaugural edition in November 2012, a total of 43 editions have been published.

### ▶ NSK Group Compliance System



# CSR / ESG Management

## Dialogue with Shareholders and Investors

### 1 Basic Philosophy and Structure

In addition to disclosing management information in a fair and rapid manner, NSK is actively engaged in dialogue with shareholders and investors. In line with our aim to achieve sustainable mid- to long-term growth and the stable return of profits, we will continue to be a company that meets the expectations of our stakeholders, including investors and shareholders.

NSK positions IR activities as an important subject for management and organizes its IR office as a dedicated division under the direct control of the CEO and supervised by an executive officer responsible for IR. In cooperation with relevant divisions, the IR office discloses information on business, financial and non-financial (including ESG) matters in an easily understood, fair and appropriate manner.

### 2 Ordinary General Meeting of Shareholders

We recognize the Ordinary General Meeting of Shareholders as a place to engage in active dialogue with shareholders, particularly individual investors, and accordingly set the date to avoid days crowded with other companies' meetings. We also work to provide an accommodating environment, including by promptly disclosing and sending convocation notices and reports.

As of the end of March 2017, the shareholding ratio of foreign investors stood at 26%. In addition to the posting of the convocation notice in English on our website, we have since 2008 participated a platform for the electronic exercise of voting rights.

#### ▶ The 156th Ordinary General Meeting of Shareholders (June 23, 2017)

Number of shareholders present: **283**

Ratio of shareholder voting rights exercised: **85.5%**

### 3 Dialogue with Investors

#### Dialogue with institutional investors

NSK holds financial conferences for analysts and institutional investors in which the mid-term management plans and earnings results are presented by the president. Moreover, the Company holds a variety of IR events including individual interviews by analysts and institutional investors and small meetings, while also visiting investors outside Japan, participating in conferences sponsored by securities firms and convening business briefings.

Total number of dialogue opportunities in fiscal 2016: **527 companies**

#### Dialogue with individual investors

In addition to holding briefings for individual investors several times each year, NSK actively responds to questions and discloses information on our website.



Total number of individual investors participating in seven briefings held in fiscal 2016: **529**

The Fair Disclosure Rule will be implemented in Japan from 2018, with companies ensuring through the equal disclosure of information that market participants see no disparity in information received. In addition to promoting the fair distribution of information and paying close attention to dialogues with shareholders and investors, NSK is working to disseminate information to the widest possible audience by posting it on our Web site.

### 4 Feedback to Management

We have created a system in which opinions and comments obtained through IR activity and shareholders' meetings are communicated to the Board of Directors, senior executives and the relevant internal departments.

#### ▶ Main information reported at the Board of Directors meetings

- Summary of the Ordinary General Meeting of Shareholders (analysis of voting rights executed, dialogue with institutional investors)
- Report on visits to investors overseas (information sharing, including in regard to the opinions and interests of investors)



## Key Questions and Answers at Recent Meetings

### 1. The state of competition and the Company's position in the industry

NSK maintains the leading market share for bearings in Japan and the third largest market share in the world. Among other leading products, the Company has the largest global market share for ball screws and the third largest global market share for electric power steering (EPS). Despite increased competition in each product, NSK is ensuring its competitive advantages through its ability to offer solutions to a wide range of close customers, a global operating base and its technological strengths based on four core technologies.

### 2. The Company's view on overseas plant conditions and development

NSK currently has 64 production plants around the world: 21 in Japan, nine in the Americas, nine in Europe, 12 in China and 13 in Other Asia, giving a total of 43 plants outside Japan. In the Automotive Business, the Company's basic policy is to respond to the local procurement needs of customers through local production and local supply. Under this policy, NSK has been working on local plant development, while taking into consideration an appropriate volume balance. In the Industrial Machinery Business, which has multi-product, small-lot businesses, we are focused on prioritizing efficiency through bulk production, with optimized supply realized amid the use of some export products.

### 3. The Company's view on M&A

One of the most important management issues concerns the option of M&A when such an action could bolster the Company's technological edge and expand its business. We nevertheless believe it is important to maximize any potential effects of M&A by carefully conducting two PMIs: the Pre-Merger Investigation and the Post-Merger Integration (integration process of management, operations and mind-set). M&A activity in the past has included the U.K. bearing manufacturer UPI in 1990, the Polish state-owned company FLT Iskra in 1998 and making Amatsuji Steel Ball Mfg. a wholly owned subsidiary in 2006.

### 4. Growth strategy for the automotive powertrain business

Powertrain equipment consists of components that convey power from the original energy source to drive wheels. Although there are several types of transmissions, the Company's Fifth Mid-Term Management Plan targets an expansion in automatic transmissions (Step AT) as a key driver for growth in the automotive segment. Against the backdrop of a volume increase of Step AT in emerging economies and progress in the shift to multistep AT, which allows improved fuel efficiency and a smoother riding experience, AT-related products and needle bearing sales at NSK are expanding. Another reason for the sales expansion at NSK is that the customer using these NSK products is expanding its new business as a unit manufacturer.

### 5. The effect of the shift to electric vehicles (EVs)

Although the number of bearings used is expected to decline due to the ongoing shift toward electric vehicles, we believe there are new business opportunities where advanced technological capabilities are required. For example, we expect electrification of

component units that derive their power from the engine, as well as efficiency-oriented bearings to enhance the conservation of energy. Moreover, we are focused on expanding our business in new products and areas by making good use of NSK's technologies, including ball screws for use in electric brake systems, which are increasingly being used in new vehicles; components for motor-driven wheel hub motors; and EV drive units, which show promise as a deceleration mechanism necessary in the use of a compact high-speed motor as a power source.

### 6. The future of electric power steering (EPS) and the Company's growth strategy for the steering business

Electric power steering (EPS) has been widely installed due to the ease of assembly and fuel-saving concerns. Today, computerized steering control is becoming increasingly important as Advanced Driver Assistance Systems (ADAS) and autonomous driving continue to evolve, and accordingly EPS is now considered essential. Moreover, EPS demand appears likely to expand further due to an increase in automobile demand in emerging markets and a pickup in utilization rates in larger vehicles. NSK is particularly strong in column-type EPS, and while we look for an ongoing expansion in column-type EPS for smaller vehicles, we also look for growth through an expanded lineup of lower-assist EPS such as dual pinion-type EPS and rack-type EPS.

### 7. Strategies and priorities for the Industrial Machinery Business

Operational excellence is one of the two main pillars in our Fifth Mid-Term Management Plan. As one of the measures of this pillar, NSK is bolstering its structure by enhancing production capacity at the Shenyang plant in China and improving productivity by introducing new manufacturing methods and building a new facility at the Kirihara, Fujisawa plant. Moreover, the Company is focused on ensuring sustainable growth by expanding its presence in focus sectors. In addition to infrastructure-related fields such as railway and wind power generation, where demand appears likely to expand over the medium to long term, we are focused on expansion in capital goods such as machine tools in which NSK shows particular strength, as well as the medical and robotics fields, which are expected to show sustained growth, and aftermarket sales, where we are strengthening our efforts overseas.

### 8. The state of competition and differentiation in the Industrial Machinery Business outside Japan, particularly in China

It has been said that there are more than 1,000 bearing manufacturers in China and that the leaders are improving their technical capabilities and quality in the standard products. NSK is focused on avoiding price competition in low-end areas of demand and in standard products where differentiation is somewhat difficult. Rather, our basic strategy is to focus on growth in fields where we are able to utilize advanced product and production technologies based on our four core technologies. We will secure competitive advantage through the stable and continuous supply of high-quality products in these fields. In addition to promoting the local procurement of parts and materials meeting NSK quality standards, we are focused on improving competitiveness by strengthening local production capacity, largely by making good use of the know-how we have accumulated over the years.

# Management



## 1 Toshihiro Uchiyama N

Director,  
President and Chief Executive Officer  
(Number of Shares Owned: 80,700)

## 2 Saimon Nogami C

Director, Representative Executive Vice President,  
CFO,  
Responsible for Administrative Divisions  
Head of Corporate Strategy Division  
Headquarters  
(Number of Shares Owned: 36,000)

## 3 Shigeyuki Suzuki

Director, Representative Executive Vice President,  
Head of Automotive Business Division  
Headquarters,  
Head of Automotive Powertrain Division  
Headquarters-Automotive Business Division  
Headquarters  
(Number of Shares Owned: 52,000)

## 4 Yasuhiro Kamio

Director, Representative Executive Vice President,  
Head of Industrial Machinery Business Division  
Headquarters,  
Head of Japan Sales and Marketing Division  
Headquarters-Industrial Machinery Business  
Division Headquarters  
(Number of Shares Owned: 75,800)

## 5 Hirotohi Aramaki

Director, Executive Vice President,  
Responsible for Technology Divisions,  
Head of Technology Development Division  
Headquarters  
(Number of Shares Owned: 50,300)

## 6 Minoru Arai

Director, Senior Vice President,  
Responsible for Manufacturing Divisions,  
Responsible for Quality Assurance Division,  
Head of Manufacturing Strategy Division  
Headquarters,  
Head of Procurement Division Headquarters  
(Number of Shares Owned: 25,200)

## 7 Akitoshi Ichii

Director, Senior Vice President,  
Head of Corporate Planning Division  
Headquarters,  
Responsible for Asia  
(Number of Shares Owned: 53,461)

## 8 Toshihiko Enomoto A

Director  
(Number of Shares Owned: 14,116)

## 9 Kazuaki Kama N \*

Outside Director,  
Independent Director,  
Executive Corporate Advisor of IHI Corporation,  
Outside Director of Kyokuto Boeki Kaisha, LTD.,  
Outside Director of Konica Minolta, Inc.,  
Outside Director of Sumitomo Life Insurance  
Company  
(Number of Shares Owned: 2,000)

## 10 Ichiro Tai N A

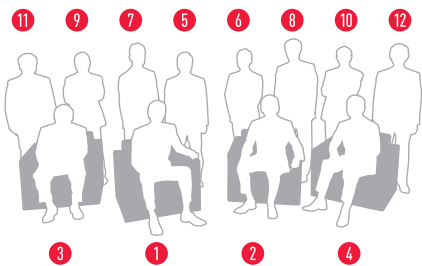
Outside Director,  
Independent Director  
(Number of Shares Owned: 3,700)

## 11 Yasunobu Furukawa A \* C

Outside Director,  
Independent Director,  
Certified Public Accountant,  
Outside Director of Keisei Electric Railway  
Co., Ltd.  
(Number of Shares Owned: 1,600)

## 12 Teruhiko Ikeda C \*

Outside Director,  
Independent Director,  
Advisor of Mizuho Trust & Banking Co., Ltd.,  
Outside Director of Sapporo Holdings Limited  
(Number of Shares Owned: -)



N : Nominating Committee    C : Compensation Committee  
A : Audit Committee    ★ : Chairperson

Notes: 1. For the career summary of each director, the independence of the independent directors and the reasons behind their appointments, please see the Notice of the 156th Ordinary General Meeting of Shareholders of NSK and Independent Directors/Auditors Notifications published on the following websites of the Tokyo Stock Exchange.

[Notice of the Ordinary General Meeting of Shareholders]  
<http://www2.tse.or.jp/disc/64710/140120170525484053.pdf>

[Independent Directors/Auditors Notifications] [Japanese only]  
<http://www2.tse.or.jp/disc/64710/140120160530405543.pdf>

2. Number of the Company's shares owned as of March 31, 2017

## Executive Officers and Group Officers

<b>President and Chief Executive Officer</b>	Toshihiro Uchiyama
<b>Representative Executive Vice Presidents</b>	Saimon Nogami Shigeyuki Suzuki Yasuhiro Kamio
<b>Executive Vice Presidents</b>	Hirotohi Aramaki Masatada Fumoto
<b>Senior Vice Presidents</b>	Yasutsugu Hada Nobuo Goto Koji Inoue Yukio Ikemura Hiroshi Suzuki Minoru Arai Hiroya Miyazaki Adrian Browne Shin Ikeda Katsumi Kobayashi Masami Shinomoto Hiromasa Orito Kazunori Iritani Akitoshi Ichii

<b>Vice Presidents</b>	Jürgen Ackermann Masaru Takayama Seiji Ijuin Nobuaki Mitamura Takashi Yamanouchi Kazuya Fukuda Kenichi Yamana Steven Beckman Susumu Ishikawa Tatsuya Atarashi Tomoyuki Yoshikiyo Guoping Yu Hideki Ochiai Kunihiko Akashi Hiroya Achiha
<b>Group Officers</b>	Seong-Il Jo Yoshinori Sugimoto Sakae Kuwashiro

## Consolidated Statements of Financial Position (IFRS)

(Millions of Yen)

As of March 31,		2016	2017
<b>Assets</b>			
Current assets	Cash and cash equivalents	175,515	<b>139,573</b>
	Trade receivables and other receivables	182,332	<b>200,954</b>
	Inventories	130,564	<b>131,810</b>
	Other financial assets	4,052	<b>12,284</b>
	Income tax receivables	2,174	<b>3,024</b>
	Other current assets	16,613	<b>18,637</b>
	<b>Total current assets</b>	<b>511,253</b>	<b>506,284</b>
Non-current assets	Property, plant and equipment	323,116	<b>329,183</b>
	Intangible assets	15,785	<b>17,174</b>
	Investments accounted for using equity method	22,179	<b>23,186</b>
	Other financial assets	86,163	<b>88,904</b>
	Deferred tax assets	20,455	<b>21,052</b>
	Net defined benefit assets	49,898	<b>54,969</b>
	Other non-current assets	3,522	<b>3,198</b>
	<b>Total non-current assets</b>	<b>521,121</b>	<b>537,670</b>
<b>Total assets</b>		<b>1,032,374</b>	<b>1,043,955</b>
<b>Liabilities and Equity</b>			
<b>Liabilities</b>			
Current liabilities	Trade payables and other payables	140,713	<b>150,212</b>
	Other financial liabilities	99,674	<b>111,240</b>
	Provisions	150	<b>60</b>
	Income tax payables	4,536	<b>4,540</b>
	Other current liabilities	48,172	<b>52,548</b>
	<b>Total current liabilities</b>	<b>293,247</b>	<b>318,603</b>
Non-current liabilities	Financial liabilities	179,654	<b>157,240</b>
	Provisions	1,855	<b>15,327</b>
	Deferred tax liabilities	35,540	<b>37,089</b>
	Net defined benefit liabilities	38,125	<b>24,771</b>
	Other non-current liabilities	5,080	<b>5,911</b>
	<b>Total non-current liabilities</b>	<b>260,255</b>	<b>240,340</b>
<b>Total liabilities</b>		<b>553,503</b>	<b>558,943</b>
<b>Equity</b>			
	Issued capital	67,176	<b>67,176</b>
	Capital surplus	79,603	<b>79,676</b>
	Retained earnings	278,524	<b>308,395</b>
	Treasury shares	(3,949)	<b>(17,937)</b>
	Other components of equity	33,306	<b>24,039</b>
	<b>Total equity attributable to owners of the parent</b>	<b>454,661</b>	<b>461,350</b>
	Non-controlling interests	24,210	<b>23,661</b>
<b>Total equity</b>		<b>478,871</b>	<b>485,011</b>
<b>Total liabilities and equity</b>		<b>1,032,374</b>	<b>1,043,955</b>

## Consolidated Statements of Income (IFRS)

(Millions of Yen)

Year ended March 31,	2016	2017
Sales	975,319	<b>949,170</b>
Cost of sales	755,663	<b>738,434</b>
Gross profit	219,655	<b>210,736</b>
Selling, general and administrative expenses	130,130	<b>132,021</b>
Share of profits of investments accounted for using the equity method	4,740	<b>5,086</b>
Other operating expenses	4,731	<b>18,458</b>
Operating income	89,534	<b>65,341</b>
Financial income	2,388	<b>2,576</b>
Financial expenses	4,714	<b>4,301</b>
Income before income taxes	87,208	<b>63,617</b>
Income tax expense	17,904	<b>14,619</b>
Net income	69,303	<b>48,997</b>
Net income attributable to:		
Owners of the parent	65,719	<b>45,560</b>
Non-controlling interests	3,584	<b>3,437</b>
(Earnings per share attributable to owners of the parent)		
Basic earnings per share (yen)	121.38	<b>86.08</b>
Diluted earnings per share (yen)	121.30	<b>86.03</b>

## Consolidated Statements of Comprehensive Income (IFRS)

(Millions of Yen)

Year ended March 31,	2016			2017		
	Before tax effect	Tax effect	Amount (net)	Before tax effect	Tax effect	Amount (net)
Net income			69,303			<b>48,997</b>
Other comprehensive income						
Items that will not be reclassified to profit or loss						
Remeasurements of net defined benefit liability (asset)	(27,875)	10,173	(17,702)	<b>(2,445)</b>	<b>(1,162)</b>	<b>(3,608)</b>
Net changes in financial assets measured at fair value through other comprehensive income	(17,149)	6,364	(10,785)	<b>9,923</b>	<b>(1,216)</b>	<b>8,707</b>
Share of other comprehensive income of investments accounted for using equity method	(576)	156	(420)	<b>213</b>	<b>(81)</b>	<b>131</b>
Total items that will not be reclassified to profit or loss	(45,601)	16,693	(28,907)	<b>7,691</b>	<b>(2,460)</b>	<b>5,231</b>
Items that may be reclassified to profit or loss						
Exchange differences on translating foreign operations	(27,706)	—	(27,706)	<b>(8,419)</b>	—	<b>(8,419)</b>
Share of other comprehensive income of investments accounted for using equity method	(570)	—	(570)	<b>(138)</b>	—	<b>(138)</b>
Total items that may be reclassified to profit or loss	(28,276)	—	(28,276)	<b>(8,558)</b>	—	<b>(8,558)</b>
Total other comprehensive income	(73,878)	16,693	(57,184)	<b>(866)</b>	<b>(2,460)</b>	<b>(3,327)</b>
Total comprehensive income for the period			12,119			<b>45,670</b>
Total comprehensive income for the period attributable to:						
Owners of the parent			10,198			<b>42,430</b>
Non-controlling interests			1,920			<b>3,240</b>

## Consolidated Statements of Changes in Equity (IFRS)

(Millions of Yen)

Year ended March 31, 2016	Equity attributable to owners of the parent			
	Issued capital	Capital surplus	Retained earnings	Treasury shares
Opening balance	67,176	79,191	230,214	(4,083)
Net income	—	—	65,719	—
Other comprehensive income	—	—	—	—
Total comprehensive income for the period	—	—	65,719	—
Purchase of treasury shares	—	—	—	(12)
Disposal of treasury shares	—	188	—	146
Share-based payment transactions	—	223	—	—
Cash dividends	—	—	(17,877)	—
Changes in the ownership interest in subsidiaries	—	—	—	—
Other	—	—	468	—
Total transactions with owners, etc.	—	412	(17,409)	134
Closing balance	67,176	79,603	278,524	(3,949)

	Equity attributable to owners of the parent				Total	Non-controlling interests	Total equity
	Other components of equity			Total			
	Exchange differences on translating foreign operations	Net changes in financial assets measured at fair value through other comprehensive income	Remeasurements of net defined benefit liability (asset)				
Opening balance	23,451	46,356	19,230	89,038	461,536	25,265	486,801
Net income	—	—	—	—	65,719	3,584	69,303
Other comprehensive income	(26,643)	(10,851)	(18,025)	(55,520)	(55,520)	(1,664)	(57,184)
Total comprehensive income for the period	(26,643)	(10,851)	(18,025)	(55,520)	10,198	1,920	12,119
Purchase of treasury shares	—	—	—	—	(12)	—	(12)
Disposal of treasury shares	—	—	—	—	335	—	335
Share-based payment transactions	—	—	—	—	223	—	223
Cash dividends	—	—	—	—	(17,877)	(2,974)	(20,852)
Changes in the ownership interest in subsidiaries	—	—	—	—	—	—	—
Other	—	(211)	—	(211)	257	—	257
Total transactions with owners, etc.	—	(211)	—	(211)	(17,074)	(2,974)	(20,049)
Closing balance	(3,191)	35,292	1,204	33,306	454,661	24,210	478,871

(Millions of Yen)

Year ended March 31, 2017	Equity attributable to owners of the parent			
	Issued capital	Capital surplus	Retained earnings	Treasury shares
Opening balance	<b>67,176</b>	<b>79,603</b>	<b>278,524</b>	<b>(3,949)</b>
Net income	—	—	<b>45,560</b>	—
Other comprehensive income	—	—	—	—
Total comprehensive income for the period	—	—	<b>45,560</b>	—
Purchase of treasury shares	—	—	—	<b>(15,008)</b>
Disposal of treasury shares	—	<b>27</b>	—	<b>1,021</b>
Share-based payment transactions	—	<b>383</b>	—	—
Cash dividends	—	—	<b>(21,905)</b>	—
Changes in the ownership interest in subsidiaries	—	<b>(339)</b>	—	—
Other	—	—	<b>6,216</b>	—
Total transactions with owners, etc.	—	<b>72</b>	<b>(15,689)</b>	<b>(13,987)</b>
Closing balance	<b>67,176</b>	<b>79,676</b>	<b>308,395</b>	<b>(17,937)</b>

	Equity attributable to owners of the parent				Total	Non-controlling interests	Total equity
	Other components of equity			Total			
	Exchange differences on translating foreign operations	Net changes in financial assets measured at fair value through other comprehensive income	Remeasurements of net defined benefit liability (asset)				
Opening balance	<b>(3,191)</b>	<b>35,292</b>	<b>1,204</b>	<b>33,306</b>	<b>454,661</b>	<b>24,210</b>	<b>478,871</b>
Net income	—	—	—	—	<b>45,560</b>	<b>3,437</b>	<b>48,997</b>
Other comprehensive income	<b>(8,340)</b>	<b>8,705</b>	<b>(3,495)</b>	<b>(3,130)</b>	<b>(3,130)</b>	<b>(196)</b>	<b>(3,327)</b>
Total comprehensive income for the period	<b>(8,340)</b>	<b>8,705</b>	<b>(3,495)</b>	<b>(3,130)</b>	<b>42,430</b>	<b>3,240</b>	<b>45,670</b>
Purchase of treasury shares	—	—	—	—	<b>(15,008)</b>	—	<b>(15,008)</b>
Disposal of treasury shares	—	—	—	—	<b>1,048</b>	—	<b>1,048</b>
Share-based payment transactions	—	—	—	—	<b>383</b>	—	<b>383</b>
Cash dividends	—	—	—	—	<b>(21,905)</b>	<b>(2,482)</b>	<b>(24,388)</b>
Changes in the ownership interest in subsidiaries	—	—	—	—	<b>(339)</b>	<b>(1,305)</b>	<b>(1,645)</b>
Other	—	<b>(6,136)</b>	—	<b>(6,136)</b>	<b>80</b>	—	<b>80</b>
Total transactions with owners, etc.	—	<b>(6,136)</b>	—	<b>(6,136)</b>	<b>(35,741)</b>	<b>(3,788)</b>	<b>(39,530)</b>
Closing balance	<b>(11,531)</b>	<b>37,862</b>	<b>(2,290)</b>	<b>24,039</b>	<b>461,350</b>	<b>23,661</b>	<b>485,011</b>

# Consolidated Statements of Cash Flows (IFRS)

(Millions of Yen)

Year ended March 31,	2016	2017
Operating activities		
Income before income taxes	87,208	<b>63,617</b>
Depreciation and amortisation	43,048	<b>43,354</b>
Increase (decrease) in net defined benefit liability and net defined benefit asset	(5,374)	<b>(20,133)</b>
Interest and dividend income	(2,378)	<b>(2,414)</b>
Interest expenses	4,728	<b>3,701</b>
Share of profits of investments accounted for using the equity method	(4,740)	<b>(5,086)</b>
Decrease (increase) in trade receivables	2,407	<b>(22,007)</b>
Decrease (increase) in inventories	519	<b>(3,756)</b>
Increase (decrease) in trade payables	(5,902)	<b>14,439</b>
Other	6,594	<b>13,446</b>
Subtotal	126,110	<b>85,161</b>
Interest and dividend received	5,126	<b>6,440</b>
Interest paid	(4,783)	<b>(3,746)</b>
Income tax paid	(17,831)	<b>(19,919)</b>
Net cash provided by operating activities	108,622	<b>67,936</b>
Investing activities		
Purchases of property, plant and equipment	(45,869)	<b>(53,297)</b>
Proceeds from sale of property, plant and equipment	272	<b>2,932</b>
Purchases of other financial assets	(49)	<b>(11,166)</b>
Proceeds from sale of other financial assets	3,994	<b>10,785</b>
Other	(3,560)	<b>(3,498)</b>
Net cash used in investing activities	(45,212)	<b>(54,243)</b>
Financial activities		
Proceeds from long-term loans	9,735	<b>6,914</b>
Repayments of long-term loans	(47,793)	<b>(17,963)</b>
Proceeds from issuance of corporate bonds	—	<b>20,000</b>
Payments for redemption of corporate bonds	—	<b>(20,000)</b>
Purchase of treasury shares	(5)	<b>(15,001)</b>
Dividends paid	(17,861)	<b>(21,882)</b>
Dividends paid to non-controlling interests	(2,974)	<b>(2,482)</b>
Other	(9,174)	<b>2,003</b>
Net cash used in financial activities	(68,073)	<b>(48,413)</b>
Effect of exchange rate changes on cash and cash equivalents	(4,195)	<b>(1,221)</b>
Net increase (decrease) in cash and cash equivalents	(8,858)	<b>(35,942)</b>
Cash and cash equivalents at beginning of the period	184,374	<b>175,515</b>
Cash and cash equivalents at end of the period	175,515	<b>139,573</b>

# Analysis of Business Results for the Year Ended March 31, 2017

## 1 Overview of the Year Ended March 31, 2017

NSK celebrated its 100th anniversary on November 8, 2016. To realize NSK's Mission Statement, NSK has established NSK Vision 2026 (Setting the Future in Motion), an overarching vision of the type of company it aims to become in the 10 years following its 100th anniversary.

Under NSK Vision 2026, the NSK Group has commenced its Fifth Mid-Term Management Plan, spanning the three years beginning April 2016. Under the slogan "embark on new chapter in evolution towards next 100 years" with two key policies of "operational excellence" and "innovate and challenge," we are addressing three main management tasks: achieving sustainable growth, reconstructing our profit base and expanding into new growth fields.

Looking at global conditions during the year ended March 31, 2017, the Japanese economy underwent a gradual recovery as consumer spending rose from a low, despite the underlying trend of a stronger yen. The U.S.

economy continued its steady growth, driven largely by solid consumer spending. The European economy continued a moderate recovery trend, primarily in the Eurozone. Meanwhile, the Chinese economy remained resilient, while other Asian economies showed signs of a gradual upturn. However, the future direction of the global economy remains uncertain given the United Kingdom's decision to exit the European Union and increasing concerns over global geopolitical risk.

Against the backdrop of this economic environment, consolidated net sales for the year ended March 31, 2017, totaled ¥949,170 million, a year-on-year decrease of 2.7%. From a profit perspective, operating income came to ¥65,341 million, a year-on-year decrease of 27.0%. Income before income taxes was ¥63,617 million, a year-on-year decrease of 27.1%, and net income attributable to owners of the parent was ¥45,560 million, a year-on-year decrease of 30.7%.

## 2 Business Segment Information

Details regarding the market environment and results by business segment are as follows.

### Industrial Machinery Business

Sales in the Industrial Machinery Business decreased year on year, although demand underwent a recovery after reaching a trough in the second quarter. Looking at the Company's results by geographic breakdown, sales in Japan were lower, primarily in the machine tool sector. In the Americas, sales in the semiconductor and aftermarket sectors increased. In Europe, sales declined primarily in the wind power and aftermarket sectors. In China, sales in the electrical and railcar sectors showed a steady increase. In other Asian countries, overall sales remained sluggish, despite higher demand in the semiconductor sector in South Korea.

With the appreciation of the yen also negatively affecting results, net sales in the Industrial Machinery Business totaled ¥226,924 million, a year-on-year decrease of 6.8%, and operating income was ¥14,660 million, a year-on-year decline of 27.3%.

### Automotive Business

The global automotive business continued its gradual expansion. Looking at the Company's results by geographic breakdown, sales in Japan increased, primarily in products for transmission systems. In the Americas, sales in the North American market decreased. In Europe, sales gradually recovered. In China, sales remained high, backed by special tax incentives for compact cars. Meanwhile, there was a general upward demand trend in other Asian countries.

Despite the above regional performance, the yen's appreciation negatively affected results. Accordingly, net sales in the Automotive Business totaled ¥696,271 million, a year-on-year decrease of 1.3%, and operating income totaled ¥64,577 million, a year-on-year decline of 8.8%.

## 3 Analysis of Financial Position

Total assets were ¥1,043,955 million, an increase of ¥11,580 million compared with total assets as of the end of the previous fiscal year. The main reasons for this were increases of ¥18,621 million in trade receivables and other receivables, ¥1,245 million in inventories, ¥8,231 million in other financial assets (current), ¥2,024 million in other current assets, ¥6,066 million in property, plant and equipment, ¥2,741 million in other financial assets (non-current) and ¥5,071 million in net defined benefit

assets, which offset a decrease of ¥35,942 million in cash and cash equivalents.

Total liabilities were ¥558,943 million, an increase of ¥5,440 million compared with total liabilities as of the end of the previous fiscal year. The main reasons for this increase were ¥9,499 million in trade payables and other payables, ¥11,566 million in other financial liabilities (current), ¥4,375 million in other current liabilities, ¥13,471 million in provisions (non-current) and ¥1,548 million in



deferred tax liabilities, which offset decreases of ¥22,413 million in financial liabilities (non-current) and ¥13,353 million in net defined benefit liabilities.

Total equity was ¥485,011 million, an increase of ¥6,140 million compared with total equity as of the end of the previous fiscal year. The main reasons for this increase were ¥45,560 million in net income attributable to owners of the parent, which offset ¥13,987 million in treasury shares, and ¥9,266 million in other components of equity attributable to such factors as appreciation in the value of the yen.

Total current assets decreased ¥4,969 million compared with the previous fiscal year-end, to ¥506,284 million. Total current liabilities increased ¥25,355 million

compared with the previous fiscal year-end to ¥318,603 million. As a result, the current ratio decreased from 1.74 times as of the previous fiscal year-end to 1.59 times. Gross interest-bearing debt decreased ¥10,752 million compared with the end of the previous fiscal year-end to ¥267,399 million. Net interest-bearing debt (interest-bearing debt net of cash and cash equivalents) was up ¥25,190 million compared with the previous fiscal year-end to ¥127,826 million. The net D/E ratio increased from 0.23 in the previous fiscal year to 0.28. Equity per share attributable to owners of the parent increased from ¥839.56 to ¥873.11. The equity ratio attributable to owners of the parent increased from 44.0% as of the previous fiscal year-end to 44.2%.

## 4 Cash Flows

Total cash and cash equivalents at the end of the period stood at ¥139,573 million, a year-on-year decrease of ¥35,942 million. Cash flows for the fiscal year under review are presented as follows.

### Cash Flows from Operating Activities

Net cash provided by operating activities totaled ¥67,936 million, a decrease of ¥40,686 million compared with the previous fiscal year. This included ¥63,617 million in income before income taxes, ¥43,354 million in depreciation and amortisation, and ¥14,439 million in trade payables. Meanwhile, the main outflows were ¥20,133 million in net defined benefit liability and net defined benefit asset, ¥22,007 million in trade receivables and ¥19,919 million in income tax paid.

### Cash Flows from Investing Activities

Net cash used in investing activities totaled ¥54,243 million, an increase of ¥9,031 million compared with the previous fiscal year. This included ¥53,297 million in purchases of property, plant and equipment.

### Cash Flows from Financial Activities

Net cash used in financial activities totaled ¥48,413 million, a decrease of ¥19,660 million compared with the previous fiscal year. The main inflow was ¥20,000 million in proceeds from issuance of corporate bonds. Meanwhile, the main outflows were ¥17,963 million in repayments of long-term loans, ¥20,000 million in payments for redemption of corporate bonds, ¥15,001 million in acquisition of treasury shares and ¥21,882 million in dividends paid.

## 5 Fiscal Policy

The NSK Group's finance is currently derived from its own funds and borrowings, etc. With regard to working capital, in the case of financing through borrowing, it is common to obtain short-term loans with a term of less than one year in the local currency used by each consolidated company. As of March 31, 2017, the outstanding balance of short-term loans was ¥62,206 million. Long-term funds, such as those for machinery and equipment for production, are financed primarily through long-term loans and corporate bonds. As of March 31, 2017, the outstanding balance of long-term loans and corporate bonds was ¥205,193 million, the

breakdown of which was loans from financial institutions of ¥145,193 million and unsecured corporate bonds were ¥60 billion.

Going forward, we aim to reduce our interest-bearing debt by strengthening our financial and earnings structure. The NSK Group believes that it is possible to finance the working capital and capital expenditure necessary to maintain growth through its sound financial situation, ability to generate cash flow from operating activities, commitment line contracts totaling ¥15 billion and the issuance of commercial paper amounting to ¥50 billion.

# Basic Knowledge of Bearings

Here, we provide basic information on bearings.

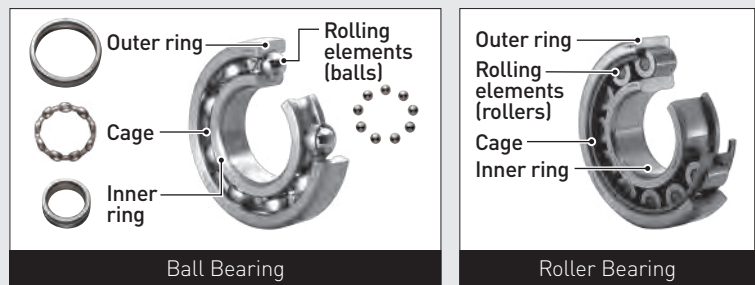
## Structure and Function

A surprisingly large number of bearings can be found all around us. Take automobiles, for example: There are 100 to 150 bearings in a typical car. Without bearings, the wheels would rattle, the transmission gear teeth would not be able to mesh, and the car would not run smoothly. Bearings are used not only in cars but in all kinds of machinery such as trains, airplanes, washing machines, refrigerators, air conditioners, vacuum cleaners, photocopy machines, computers and satellites. Bearings enhance the functionality of machinery and help to save energy. Bearings do their work silently, in tough environments, hidden in machinery where we cannot see them. Nevertheless, bearings are crucial for the stable operation of machinery and for ensuring top performance.

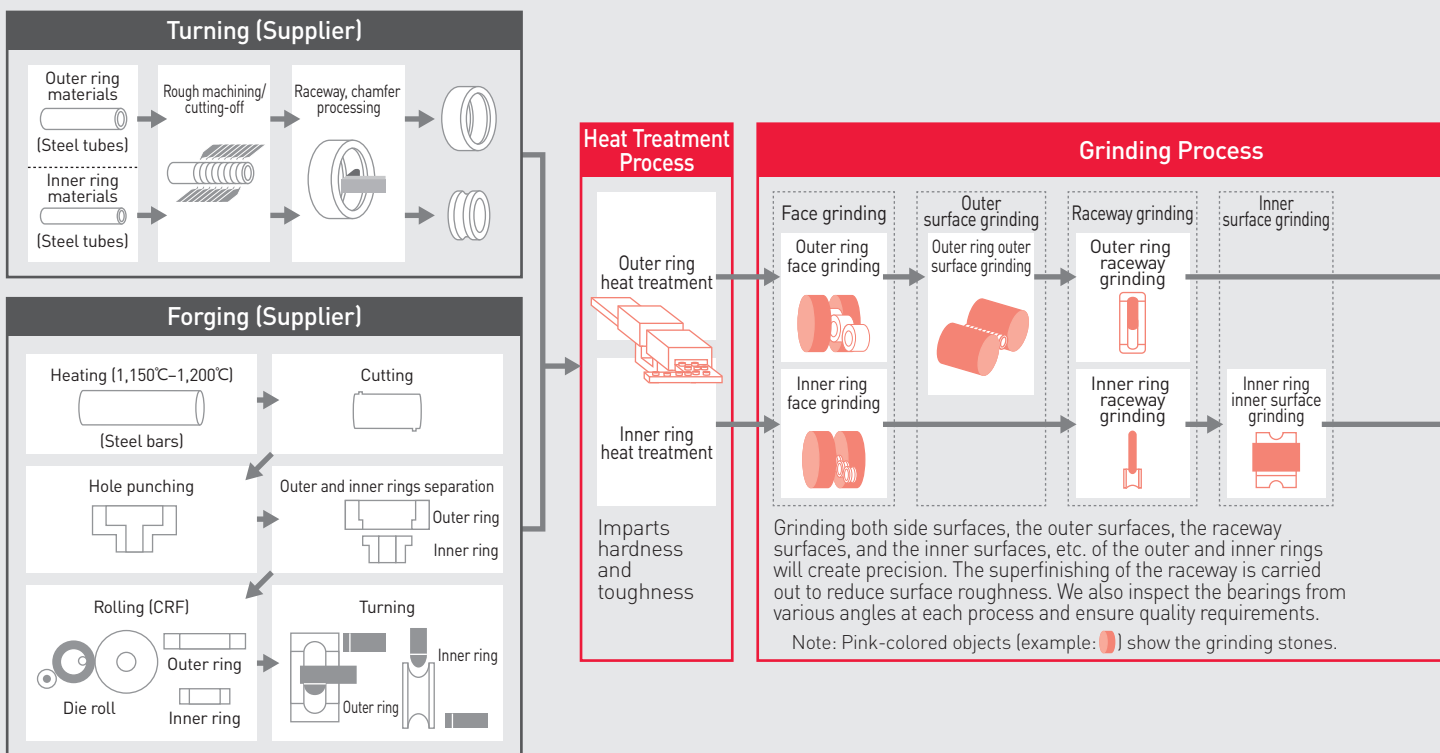
The term *bearing* incorporates the meaning of "to bear," in the sense of "to support," and "to carry a burden." This refers to the fact that bearings support and carry the burden of revolving axles.

### Structure

The ball bearings and roller bearings pictured to the right represent two typical types of the most basic bearings, known as rolling bearings. Rolling bearings are made up of four elements: an outer ring, an inner ring as well as rolling and cage elements and have an extremely simple basic structure.



## Main Manufacturing Processes for Bearings



Process into a ring shape by turning or forging the steel tubes, and turn the raceway and the inner surface of the rings (both outer and inner rings).

## Function









The basic function of bearings is principally to reduce mechanical friction. Reducing friction means:

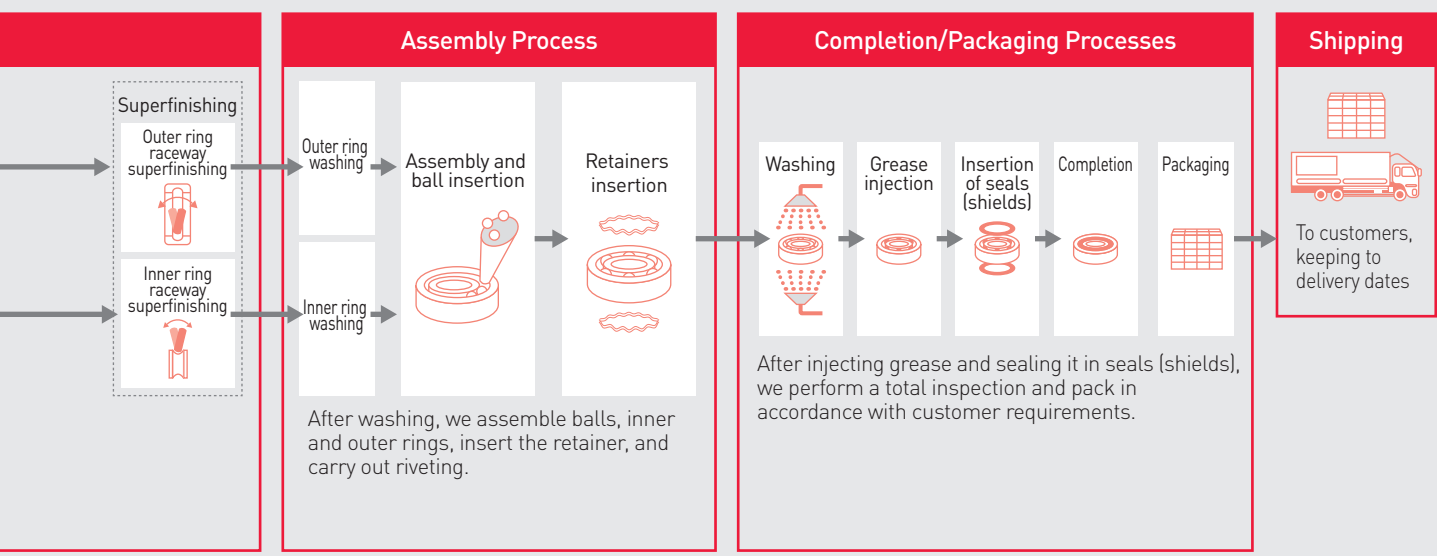
- 1.** Machinery will run more efficiently
- 2.** There will be less frictional wear, extending the operating life of the machinery
- 3.** Preventing abrasion burn and avoiding mechanical breakdown

Bearings also contribute to lower energy consumption by reducing friction and allowing the efficient transmission of power. This is just one way in which bearings are environmentally friendly.

## Types of Bearings

A brief overview of typical bearings is presented as follows.

- 1 Deep groove ball bearing**  
 This is the most widely used bearing in the world.
- 2 Angular contact thrust ball bearing**  
 In this type, the rolling element meets the inner and outer ring raceways at a contact angle. This bearing can carry radial and axial loads.
- 3 Thrust ball bearing**  
 Thrust ball bearings are capable of handling loads in the axial direction (axial loads). They can support heavy loads.
- 4 Cylindrical roller bearing**  
 The rolling elements are the cylindrical roller type.
- 5 Tapered roller bearing**  
 The rolling elements are of the tapered roller type. Because the rollers are tapered, this bearing is able to carry combined axial and radial loads.
- 6 Self-aligning roller bearing**  
 This bearing has an automatic aligning function to compensate for minute misalignments between the inner and outer rings during operation.
- 7 Thrust needle bearing**  
 This bearing is used in parts such as compressors that deliver the air in automobile air-conditioning units.
- 8 Cage and roller**  
 This is one of several kinds of bearings used in vehicles' manual transmissions. It is required to be highly durable.



# Glossary

Term	Meaning
Actuator	Actuators refer to mechanical components that, for example, play a role in the actuation of brakes and gear shifting of automobiles.
Aftermarket	Aftermarket refers to maintenance and repair demand. In NSK, aftermarket mainly means the demand and business for repair and replacement.
Alternator	An alternator is an electric generator to use and change engine rotation to electricity. The term <i>alternator</i> derives from alternating current.
AT	AT stands for <b>A</b> utomatic <b>T</b> ransmission. Automatic transmission is one type of transmission found in automobiles and motorcycles. ATs are equipped with a function that automatically changes the gear ratio in response to vehicle speed and the rotational velocity of the engine.
Ball Screw	A ball screw is a machinery part consisting of a screw shaft, nut and ball, etc. Ball screws convert rotation into linear motion and enable accurate positioning. In ball screws, a rolling element (ball) like the ones used in bearings is incorporated in the section where the groove of the screw and screw head contact each other and, similar to a bearing, the ball screw moves smoothly and features minute levels of friction resistance.
BCP	BCP stands for <b>B</b> usiness <b>C</b> ontinuity <b>P</b> lan. In a BCP, companies determine activities in normal times and the methods and means for continuing business in times of emergency to minimize damage to business assets and to allow continuation or early recovery of the core business in the event of emergency situations such as natural disasters, large fires and terrorist attacks.
Brake Boosters	One of the components of an automobile's brake is referred to as a brake booster. A system that helps reduce the amount of force needed from the driver to operate the brake. One type that makes use of the engine intake's negative pressure for its operation was mainstream, but the shift toward electrification is ongoing.
Clutch Assembly	Unit component used for automobile automatic transmissions (ATs) that consists of friction plates, separator plates, clutch housing, etc. Clutch assembly serves the function of transmitting or shutting off motive power.
CMS	CMS stands for <b>C</b> ondition <b>M</b> onitoring <b>S</b> ystem. One example of a CMS is a system for understanding/ analyzing the operational status of bearings (e.g., vibration, noise, rotational torque) based on various data by bearings with sensors installed.
Column-Type EPS	Column-type EPS is a type of Electric Power Steering which has a power assist element of a motor located on the steering column. The steering column is a component that conveys the turning of the steering wheel of vehicles to the steering gear, and the steering column adjusts the steering wheel position and mitigates the impact during a collision. NSK has been strong at steering column production and boasts a top-class world market share of column-type EPS.
Conflict Minerals	Minerals that lead to sources of funds for armed groups and antigovernment forces that violate human rights, the procurement of which gives rise to concerns about complicity in conflicts. Under the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act, companies listed on the U.S. market are obliged to investigate usage and disclose information every year with regard to the four minerals (tin, tantalum, tungsten and gold) mined in the Democratic Republic of Congo and adjoining countries.
CSR Procurement	CSR procurement refers to the procurement of raw materials and parts in consideration of compliance with laws and regulations, environmental protection, human rights, occupational safety and health.
Design Quality	Design quality is targeted quality and is quality set in the design phase and realized in order to satisfy the functions and performance of products.
ECU	ECU stands for <b>E</b> lectronic <b>C</b> ontrol <b>U</b> nit. By using electronic circuits, ECU is a device that controls the operation of a motor, etc. Among NSK's products, ECU used for electric power steering is particularly important.
Electric Power Steering	Please refer to "EPS."
Environmentally Friendly Products	Environmentally friendly products refer to the products that perform better than existing products in order to help reduce the impact human societies have on the natural environment. The NSK Group works on product manufacturing that contributes to a reduction of the impact on the environment by upholding the following standards: <ol style="list-style-type: none"> <li>1. Each product should contribute toward the energy and resource conservation of the machine in which it is installed.</li> <li>2. The amount of energy and resources required during product manufacturing should be minimal.</li> <li>3. Environmentally harmful substances should not be used in products or manufacturing processes.</li> <li>4. Products should contribute to the health and safety of end users by having low emissions of vibration, noise and dust.</li> </ol> (Please also refer to page 46.)
EPS	EPS stands for <b>E</b> lectric <b>P</b> ower <b>S</b> teering. An EPS is a mechanism that supports the turning of automobile steering wheels (in other words, enabling the turning of steering wheels even with light force) by using an electric motor instead of hydraulic power. EPS can be divided into three types (column type, pinion type and rack type) depending on the location of the motor to which the power assist is provided.
EV	EV stands for <b>E</b> lectric <b>V</b> ehicle. EVs are automobiles that drive the wheels by using electric motors as the power source.
Four Core Technologies	Four core technologies refer to NSK's core technologies. For details, please refer to page 34.
Friction Plate	Clutch component used for automobile automatic transmission (AT), etc. Manufactured by using an adhesive to attach friction material facings to a disk-shaped plate. Used in combination with a separator plate to transmit or cut torque.
GAM	GAM stands for <b>G</b> lobal <b>A</b> ccount <b>M</b> anager in NSK. GAMs coordinate the global platform projects of automobiles across regions.
Green Procurement	Green procurement refers to the procurement of raw materials in consideration of the environment. The NSK Group has stipulated the NSK Group Green Procurement Standards ( <a href="http://www.nsk.com/sustainability/csrReport/supplemental/greenps.html">http://www.nsk.com/sustainability/csrReport/supplemental/greenps.html</a> ).

Term	Meaning
Hub Unit Bearings	A hub for automobiles is the component where the wheels are screwed on. Hub unit bearings are used for the rotation part of the hub and are unit-type bearings integrated with coupling parts. Depending on the level of integration, there are various types of hub unit bearings.
IoT	IoT stands for the <b>I</b> nternet <b>o</b> f <b>T</b> hings. IoT is a concept to generate new value by collecting data via the Internet from sensors embedded on various things such as automobiles, home appliances, industrial machines and public infrastructure, and analyzing such data. IoT leads to such technological innovation as efficiency increases in machine control in plants, advertising according to individual tastes, detailed adjustment of power supply and monitoring senior citizens through home appliances.
KAM	KAM stands for <b>K</b> ey <b>A</b> ccount <b>M</b> anager in NSK. KAMs coordinate with Global Account Managers for key customers in each region and build close relationships with customers as the contact person in individual regions. By taking advantage of such close relationships with customers, KAMs have a role in regional sales activity and response in technological matters.
Linear Guide	A linear guide is a machinery part that is used for the section to support the linear motion of machines. Linear guides are one of the linear motion products and are used for machine tools, transfer machines and platform screen doors at stations, etc.
Lower-Assist EPS	Lower-assist EPS refers to rack-type EPS and pinion-type EPS (single pinion, dual pinion) that provide power assist near the tires among the types of electric power steering. Column-type EPS provides assist near the steering wheel.
Mother Plant	We position plants with outstanding capacity such as excellent technical ability and significant production capacity as Mother plants. In NSK, Mother plants have the role of transferring technology, etc., to the plants located overseas.
MRO	MRO stands for <b>M</b> aintenance, <b>R</b> epair or <b>R</b> eplacement, <b>O</b> peration. In NSK Report 2017, we make references to the demand for maintenance and repair services of industrial machines and equipment in the Industrial Machinery Business.
Needle Bearing	Bearing with needle-type rolling elements. Low cross-sectional height and high load capacity helps realize space-saving.
NIT	NIT stands for <b>N</b> SK <b>I</b> nstitute of <b>T</b> echnology, which is an internal educational institute for our engineers to master more advanced technology.
NSK Manufacturing Education and Training Center	The NSK Manufacturing Education and Training Center was established in 2005 for the purpose of passing on technical skills in the production section to the next generation and fostering production site leaders.
OHSAS 18001	OHSAS stands for <b>O</b> ccupational <b>H</b> ealth and <b>S</b> afety <b>A</b> ssessment <b>S</b> eries. This standard was issued by the British Standards Institution (BSI) as OHSAS 18001 in 1999 with support from 13 institutions such as standardization-related groups and certification institutions around the world. OHSAS 18001 is a mechanism for managing occupational safety and health management risks that relate to workers such as health hazards and occupational accidents and for improving the performance.
Omni-Wheel	Having a number of small, barrel-shaped, multi-directional rollers attached in its circumferential direction, this wheel can freely move not only forward and backward but also to the left and right.
Operational Excellence	In this report, operational excellence refers to "efforts to enhance front-line capability to increase the competitiveness of the NSK Group's business."
Per Production Unit	Per production unit refers to the standard amount of raw materials, workforce, power, etc., that are necessary to produce a certain amount of industrial products. "CO <sub>2</sub> emission per production unit" means CO <sub>2</sub> (carbon dioxide) emissions discharged in the process of production of a certain amount of a product.
Planetary Gear	Planetary gear refers to an epicyclic gearing mechanism consisting of three elements—sun gear, planetary gear and ring gear.
Powertrain	Powertrain describes the main components that generate power and deliver to the drive wheel in automobiles.
Product Quality	Product quality is also called resulting quality, and it is the quality of products actually manufactured. Product quality is realized by control of the manufacturing phase.
PSI Management	The PSI of PSI Management stands for <b>P</b> roduction, <b>S</b> ales and <b>I</b> nventory. PSI Management refers to the appropriate management and operation of production, sales and inventory.
QCDDSM	QCDDSM stands for <b>Q</b> uality, <b>C</b> ost, <b>D</b> elivery, <b>D</b> evelopment, <b>S</b> ervice and <b>M</b> anagement. The QCDDSM elements are generally focused on by the manufacturing industry including NSK.
Rack-Type EPS	Rack-type EPS is electric power steering that assists tire direction movement with a rack shaft in the steering gear section. (Please also refer to "Lower-Assist EPS.")
Sales Channel	Sales channels mean sales routes. Distributors play a role in the product supply to end users as sales channels.
Smart Factory	Smart Factory in this report refers to a new concept factory set up in the Fifth Mid-Term Management Plan. The status of equipment and processing in each process during manufacturing is understood with data in real time, which is utilized for quality control, equipment maintenance and product traceability. The understanding and management of big data are realized by advancements in Information Technology (IT). The evolution of the informatization of things such as IoT is the technology behind the Smart Factory.
UK Modern Slavery Act 2015	The Modern Slavery Act 2015 c.30 was established in 2015 in the United Kingdom to respond to crimes such as human trade, forced labor and sexual exploitation.
Warranty	Product warranty, under which the original manufacturer of a product or product dealer shall provide the purchaser with regulations to respond to the free repair or replacement of the product for a certain period of time and in accordance with certain conditions. In the case of automobiles, the deciding condition is the period of time that has elapsed since the purchase of a new car or the mileage driven. There are cases where the warranty periods for core units, such as engines and transmissions, and for each component differ.

# NSK Group

As of March 31, 2017

Region	Company name	Consolidated equity	Outline of business
Japan	NSK STEERING SYSTEMS CO., LTD.	100.0%	Manufacture of automotive components
	NSK MICRO PRECISION CO., LTD.	55.0%	Manufacture and sales of automotive bearings, etc.
	NSK MICRO PRECISION CO., LTD. (NAGANO)	100.0%	Manufacture of automotive bearings, etc.
	AMATSUJI STEEL BALL MFG. CO., LTD.	100.0%	Manufacture and sales of steel balls
	AKS EAST JAPAN CO., LTD.	100.0%	Manufacture of steel balls
	NSK KYUSHU CO., LTD.	100.0%	Manufacture of precision machinery & parts
	ASAHI SEIKI CO., LTD.	73.8%	Manufacture of industrial machinery bearing parts, etc.
	NSK TOYAMA CO., LTD.	100.0%	Manufacture of industrial machinery bearing parts
	SHINWA SEIKO CO., LTD.	82.4%	Manufacture of automotive bearing parts, etc.
	KURIBAYASHI SEISAKUSHO CO., LTD.	73.5%	Manufacture and sales of automotive bearing parts
	NSK MACHINERY CO., LTD.	100.0%	Manufacture of machine tools, etc.
	NSK REAL ESTATE CO., LTD.	100.0%	Real estate management and rental, etc.
	NISSEI BLDG. MANAGEMENT LTD.	70.0%	Management of Nissei Building
	NSK-CHUGAI, LTD.	65.0%	Insurance agent and sales of electrical components, etc.
	NSK HUMAN RESOURCE SERVICES LTD.	100.0%	Consignment services for salary and welfare, education and recruitment
	NSK LOGISTICS CO., LTD.	100.0%	Distribution service
	NSK NETWORK AND SYSTEMS CO., LTD.	100.0%	Design and development for computer systems, etc.
ADTECH CORPORATION	100.0%	Research and development of automotive components	
NSK OVERSEAS HOLDINGS CO., LTD.	100.0%	Holding company of subsidiaries	
NSK-WARNER K.K.	50.0%	Manufacture and sales of automotive-related products	
CHITOSE SANGYO CO., LTD.	50.0%	Manufacture of automotive-related products	
INOUE JIKUKE KOGYO CO., LTD.	40.0%	Manufacture and sales of industrial machinery bearings	

## THE AMERICAS

U.S.A.	NSK AMERICAS, INC.	100.0%	Control of American subsidiaries and affiliates
	NSK CORPORATION	100.0%	Manufacture and sales of automotive bearings, etc.
	NSK PRECISION AMERICA, INC.	100.0%	Manufacture and sales of precision machinery & parts
	NSK LATIN AMERICA, INC.	100.0%	Sales of industrial machinery bearings, etc.
	NSK STEERING SYSTEMS AMERICA, INC.	100.0%	Manufacture and sales of automotive components
	NSK-AKS PRECISION BALL COMPANY	100.0%	Manufacture and sales of steel balls
Canada	NSK CANADA INC.	100.0%	Sales of industrial machinery bearings, etc.
Mexico	NSK RODAMIENTOS MEXICANA, S.A. DE C.V.	100.0%	Sales of industrial machinery bearings, etc.
	NSK BEARINGS MANUFACTURING, MEXICO, S.A. DE C.V.	100.0%	Manufacture of automotive bearings, etc.
Brazil	NSK BRASIL LTDA.	100.0%	Manufacture and sales of industrial machinery bearings, etc.
Argentina	NSK ARGENTINA S.R.L.	100.0%	Sales of industrial machinery bearings, etc.
Peru	NSK PERU S.A.C.	100.0%	Sales support of industrial machinery bearings, etc.

## EUROPE

U.K.	NSK EUROPE LTD.	100.0%	Control of European subsidiaries and affiliates
	NSK UK LTD.	100.0%	Sales of industrial machinery bearings, etc.
	NSK BEARINGS EUROPE LTD.	100.0%	Manufacture of automotive bearings, etc.
	NSK STEERING SYSTEMS EUROPE LTD.	100.0%	Manufacture of automotive components
	NSK PRECISION UK LTD.	100.0%	Manufacture of precision machinery & parts
	AKS PRECISION BALL EUROPE LTD.	100.0%	Manufacture and sales of steel balls
Germany	NSK EUROPA HOLDING GMBH	100.0%	Holding company of subsidiaries in Germany
	NSK DEUTSCHLAND GMBH	100.0%	Sales of industrial machinery bearings, etc.
	NEUWEG FERTIGUNG GMBH	100.0%	Manufacture of industrial machinery bearings
France	NSK FRANCE S.A.S.	100.0%	Sales of industrial machinery bearings, etc.
Italy	NSK ITALIA S.P.A.	100.0%	Sales of industrial machinery bearings, etc.
Spain	NSK SPAIN S.A.	100.0%	Sales of industrial machinery bearings, etc.

Region	Company name	Consolidated equity	Outline of business
Netherlands	NSK EUROPEAN DISTRIBUTION CENTRE B.V.	100.0%	Distribution service
Poland	NSK BEARINGS POLSKA S.A.	95.5%	Manufacture of automotive bearings, etc.
	NSK POLSKA SP. Z O.O.	100.0%	Sales of industrial machinery bearings, etc.
	NSK STEERING SYSTEMS EUROPE (POLSKA) SP. Z O.O.	100.0%	Manufacture of automotive components
	NSK NEEDLE BEARING POLAND SP. Z O.O.	100.0%	Manufacture of automotive bearings
	AKS PRECISION BALL POLSKA SP. Z O.O.	100.0%	Manufacture and sales of steel balls
Turkey	NSK RULMANLARI ORTA DOGU TIC. LTD. STI (NSK BEARINGS MIDDLE EAST TRADING CO., LTD.)	100.0%	Sales of industrial machinery bearings, etc.
South Africa	NSK SOUTH AFRICA (PTY) LTD.	100.0%	Sales of industrial machinery bearings, etc.
<b>ASIA</b>			
China	NSK (CHINA) INVESTMENT CO., LTD.	100.0%	Control of Chinese subsidiaries and affiliates, sales of bearings, etc.
	KUNSHAN NSK CO., LTD.	85.0%	Manufacture of automotive bearings, etc.
	CHANGSHU NSK NEEDLE BEARING CO., LTD.	100.0%	Manufacture of automotive bearings
	NSK STEERING SYSTEMS DONGGUAN CO., LTD.	100.0%	Manufacture of automotive components
	ZHANGJIAGANG NSK PRECISION MACHINERY CO., LTD.	100.0%	Manufacture of automotive bearing parts, etc.
	SUZHOU NSK BEARINGS CO., LTD.	100.0%	Manufacture of automotive bearings
	AKS PRECISION BALL (HANGZHOU) CO., LTD.	100.0%	Manufacture and sales of steel balls
	NSK (CHINA) RESEARCH AND DEVELOPMENT CO., LTD.	100.0%	Research and development of automotive bearings, etc.
	NSK-WANDA ELECTRIC POWER ASSISTED STEERING SYSTEMS CO., LTD.	90.0%	Manufacture of automotive components
	NSK-YAGI PRECISION FORGING (ZHANGJIAGANG) CO., LTD.	82.0%	Manufacture of automotive bearing parts, etc.
	SHENYANG NSK PRECISION CO., LTD.	100.0%	Manufacture of precision machinery & parts
	SHENYANG NSK CO., LTD.	100.0%	Manufacture of industrial machinery bearings
	HEFEI NSK CO., LTD.	100.0%	Manufacture of automotive bearings, etc.
Hong Kong	NSK HONG KONG LTD.	70.0%	Sales of industrial machinery bearings, etc.
Taiwan	TAIWAN NSK PRECISION CO., LTD.	70.0%	Sales of precision machinery & parts
Singapore	NSK ASEAN AND OCEANIA PTE. LTD.	100.0%	Control of ASEAN and OCEANIA subsidiaries and affiliates
	NSK INTERNATIONAL (SINGAPORE) PTE LTD.	100.0%	Sales of industrial machinery bearings, etc.
	NSK SINGAPORE (PRIVATE) LTD.	100.0%	Sales of industrial machinery bearings, etc.
Indonesia	PT. NSK BEARINGS MANUFACTURING INDONESIA	100.0%	Manufacture of automotive bearings, etc.
	PT. NSK INDONESIA	100.0%	Sales of industrial machinery bearings, etc.
	PT. AKS PRECISION BALL INDONESIA	100.0%	Manufacture and sales of steel balls
Thailand	NSK BEARINGS MANUFACTURING (THAILAND) CO., LTD.	74.9%	Manufacture and sales of automotive bearings
	SIAM NSK STEERING SYSTEMS CO., LTD.	74.9%	Manufacture and sales of automotive components
	NSK ASIA PACIFIC TECHNOLOGY CENTRE (THAILAND) CO., LTD.	100.0%	Development of products, etc.
	NSK BEARINGS (THAILAND) CO., LTD.	49.0%	Sales of industrial machinery bearings, etc.
Malaysia	NSK BEARINGS (MALAYSIA) SDN. BHD.	51.0%	Sales of industrial machinery bearings, etc.
	NSK MICRO PRECISION (M) SDN. BHD.	100.0%	Manufacture of automotive bearings, etc.
	ISC MICRO PRECISION SDN. BHD.	100.0%	Manufacture of automotive bearings, etc.
Vietnam	NSK VIETNAM CO., LTD.	100.0%	Sales of industrial machinery bearings, etc.
Australia	NSK AUSTRALIA PTY. LTD.	100.0%	Sales of industrial machinery bearings, etc.
New Zealand	NSK NEW ZEALAND LTD.	100.0%	Sales of industrial machinery bearings, etc.
India	NSK INDIA SALES CO. PVT. LTD.	100.0%	Sales of industrial machinery bearings, etc.
	NSK BEARINGS MANUFACTURING INDIA PRIVATE LIMITED	100.0%	Manufacture and sales of automotive bearings
	RANE NSK STEERING SYSTEMS PRIVATE LTD.	51.0%	Manufacture and sales of automotive components
South Korea	NSK KOREA CO., LTD.	100.0%	Manufacture and sales of automotive bearings, etc.

# Information for Investors / Company Data

As of March 31, 2017

## Corporate Address

NSK Ltd.  
Nissei Bldg., 1-6-3 Ohsaki, Shinagawa-ku,  
Tokyo 141-8560, Japan  
Tel: +81-3-3779-7111  
Fax: +81-3-3779-7431

## Contact Information

For questions or additional information, please contact:  
IR Office, NSK Ltd.

Nissei Bldg., 1-6-3 Ohsaki, Shinagawa-ku,  
Tokyo 141-8560, Japan  
Tel: +81-3-5487-2564 Fax: +81-3-3779-7442  
E-mail: ir@nsk.com

## NSK's Website

▶ <http://www.nsk.com/>

## Annual Meeting of Shareholders

The Annual Meeting of Shareholders was held on June 23, 2017.

## Common Stock

Authorized: 1,700,000,000 shares  
Issued: 551,268,104 shares (Treasury shares: 20,352,518)

## Number of Shareholders

25,325

## Transfer Agent

Mizuho Trust & Banking Co., Ltd.  
1-2-1 Yaesu, Chuo-ku, Tokyo 103-8670, Japan

## Listing

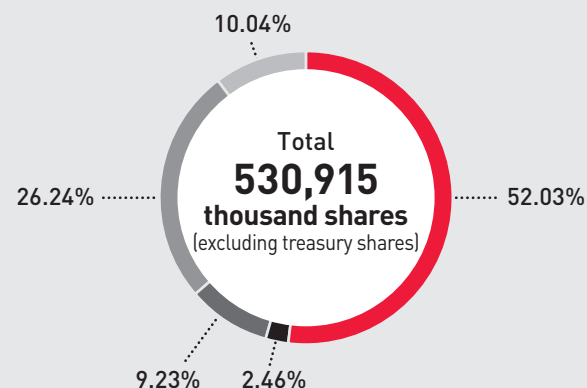
Tokyo

## Security Code

6471

## Breakdown of Shareholders (Thousand shares)

- Financial Institutions... 276,226
- Foreign Investors... 139,304
- Securities Companies ... 13,080
- Individuals / Others... 53,314
- Other Japanese Corporations... 48,989



## Other Information Concerning the Company

### IR-Related Information

<http://www.nsk.com/investors/>

### Further Financial Information

[http://www.nsk.com/investors/library/financial\\_announcement.html](http://www.nsk.com/investors/library/financial_announcement.html)

### CSR-Related Information

Please refer to the Company's CSR website and CSR Report for more details on CSR activities and other related information.

<http://www.nsk.com/sustainability/>



CSR Report 2017

## Highly Evaluated by Outside Agencies (SRI/ESG)

Over and above their financial aspects, companies that merit high evaluations for their environmental and social contributions are being recognized for their promise of long-term sustainable growth. These companies are also attracting interest from a socially responsible investment (SRI) perspective while forging an increasingly important presence among a wide range of institutional investors. Acknowledged for its integrity, NSK has been included in the following internationally recognized SRI/ESG indices as of September 2017.

<p>MEMBER OF <b>Dow Jones Sustainability Indices</b> In Collaboration with RobecoSAM</p> <p><a href="http://www.sustainability-indices.com/">http://www.sustainability-indices.com/</a></p>	<p><b>FTSE4Good</b></p> <p><a href="http://www.ftse.com/products/indices/FTSE4Good">http://www.ftse.com/products/indices/FTSE4Good</a></p>	<p><b>FTSE Blossom Japan</b></p> <p><a href="http://www.ftse.com/products/indices/blossom-japan">http://www.ftse.com/products/indices/blossom-japan</a></p>
<p><b>ETHIBEL</b> EXCELLENCE</p> <p><a href="http://forumethibel.org/content/ethibel_sustainability_index.html">http://forumethibel.org/content/ethibel_sustainability_index.html</a></p>	<p><b>Euronext vigeo eiris</b> INDICES WORLD 120</p> <p><a href="http://www.vigeo-eiris.com/">http://www.vigeo-eiris.com/</a></p>	<p>Corporate Responsibility <b>Prime</b> rated by <b>oekom research</b></p> <p><a href="http://www.oekom-research.com/index_en.php?content=methodik">http://www.oekom-research.com/index_en.php?content=methodik</a></p>
		<p><b>Morningstar SRI</b></p> <p><a href="http://www.morningstar.co.jp/sri/about.htm">http://www.morningstar.co.jp/sri/about.htm</a></p>

## NSK Report 2016

NSK Report 2016, which NSK issued as an integrated report for the first time last year, was recognized with a best integrated reporting award at the 4th WICI Japan Award for Excellence in Integrated Reporting. This was the first time that NSK had won this award.



NSK Report 2016





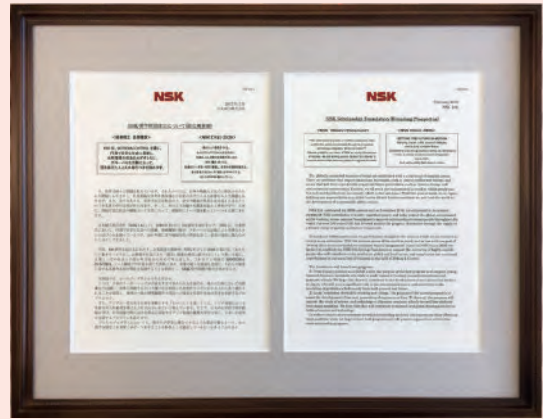
## Establishment of NSK Scholarship Foundation

# TOPICS

Taking the opportunity presented by the 100th anniversary of NSK's founding in November 2016 while bearing in mind the various issues the world is facing, we established the NSK Scholarship Foundation with the aim of supporting the development of advanced human resources that will contribute to solving those issues. The Foundation has established the following two programs.

- 1 A program to assist Japanese exchange students who have a strong desire to play a significant role in the international arena and contribute to the world and who wish to study abroad at research institutions and graduate schools
- 2 A program to assist Asian exchange students who wish to study science and technology at Japanese graduate schools with the aim of contributing to progress in those fields

Having established the Scholarship Foundation, NSK will continue to support next-generation human resource development.



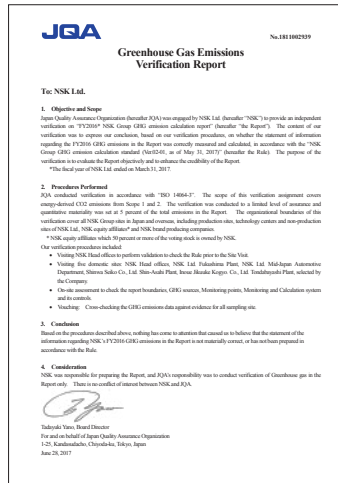
Founding Prospectus

## Third-Party Assurances

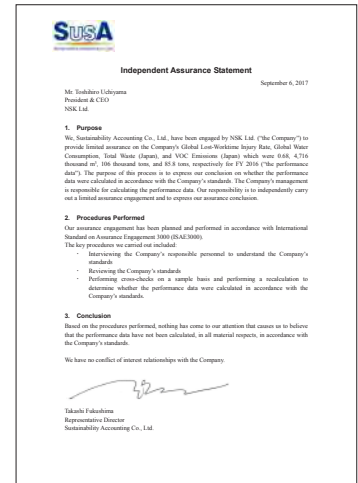
To ensure the reliability and accuracy of NSK Report 2017 as an integrated report, NSK obtained assurances from an external third party for the following data information described in this report.

### Items Subject to Assurance

- Lost-Worktime Injury Rate (P. 45)
- Greenhouse Gases Emissions (P. 46)
- Total Waste (Japan) (P. 46)
- Water Consumption (P. 46)
- VOC Emissions (P. 46)



Greenhouse Gas Emissions Verification Report



Independent Assurance Statement

## At the Time of Publishing NSK Report 2017

Last year, NSK celebrated its 100th anniversary and published an integrated report, NSK Report 2016, for the first time. Having reached the 100-year milestone, we focused on providing detailed information to help stakeholders gain a better understanding of NSK's value creation process. We also touched on NSK Vision 2026, which represents the form NSK wants to reach in 10 years' time.

For NSK Report 2017, we showcase specific examples of NSK's value creation process, remain aware of the need to show the relationships between various stakeholders and NSK creation value, and review the description of CSR/ESG management. We also provide a taste of the progress made in addressing issues and the direction in which we are aiming through the executive interview that covers the global business platform that underpins NSK's growth.

For this report, not only the members of the departments in charge but also various involved parties working together gave

consideration to NSK's value creation framework and future, and jointly worked on the report. As the executive officer responsible for the creation of this report, I expressly stated that the preparation process be valid and that the information contained be accurate.

In the years to come, NSK will work to enrich the NSK Report, which summarizes financial information and non-financial information, and will use it as one of its tools for dialogue with stakeholders. I would be delighted to be able to receive the frank views and requests from everyone who reads this report.

Vice President  
Deputy Head of  
Finance Division Headquarters  
Responsible for IR

Kenichi Yamana





MOTION &  
CONTROL™  
**NSK**



円滑でくらしやすい地球のために

NSK used environmentally friendly paper and printing methods for this publication.

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