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#### Editorial Policy

The NSK Group carries out a variety of governance, social, and environmental initiatives to do its part in creating a sustainable society. We produce the CSR Report to explain these initiatives in detail. With this report, care was taken to facilitate understanding of the overall picture and progress of each initiative by including the policy, structure, targets and performance, the activities in fiscal 2015, and data measuring progress.

#### Scope of Coverage

- **Period of Coverage**  
Primarily fiscal 2015 (April 1, 2015 to March 31, 2016).  
Activities conducted outside this period are indicated with the inclusion of a date.
- **Organizations Covered**  
NSK Ltd. and its consolidated subsidiaries (90 companies in all).  
Affiliates accounted for using the equity method (16 companies).
- **Scope of Performance Data**  
All sites in the NSK Group.  
The scope is indicated separately for information with a different scope.
- **Reporting Cycle**  
Published annually.
- **Date Published**  
January 2017

#### Reference Guidelines

G4 Sustainability Reporting Guidelines by the Global Reporting Initiative (GRI)  
ISO 26000: 2010 Guidance on Social Responsibility by the International Organization for Standardization (ISO)  
Environmental Reporting Guidelines (2012 edition) by the Ministry of the Environment of Japan

#### Third-Party Assurance / Verification

We received third-party assurance from Sustainability Accounting Co., Ltd., regarding fiscal 2015 performance in governance, social, and environmental areas to improve the reliability of this report. Also, we received third-party verification from the Japan Quality Assurance Organization regarding emissions of greenhouse gases.

#### Related Methods of Disclosure

See the NSK Report 2016 and NSK's website for financial and non-financial information about the NSK Group.



NSK Report 2016



NSK's website <http://www.nsk.com/>

#### Assessment by External Organizations

Social responsibility indexes (SRIs) include companies recognized for long-term sustainable growth because they merit high evaluations for environmental and social contributions as well as financial performance. A broad range of institutional investors are attributing greater importance to such companies. As of March 2016, NSK is included in the following internationally recognized SRIs.

**Dow Jones Sustainability Indices**  
<http://www.sustainability-indices.com/>



**FTSE4Good Index Series**  
<http://www.ftse.com/products/indices/FTSE4Good>



**Ethibel Investment Register**  
<http://forum.ethibel.org/content/home.html>



**Morningstar Socially Responsible Investment Index**  
<http://www.morningstar.co.jp/sri/index.htm>



**Euronext Vigeo Eiris Indices**  
<http://www.vigeo.com/csr-rating-agency>



**Corporate Responsibility Prime**  
<http://www.oekom-research.com/>



# About the NSK Group

Ever since the invention of the wheel, human creativity has focused on the challenge of achieving smooth, continuous rotation. Today, everything in modern life that moves is the result of progress toward the ultimate goal of friction-free motion with zero energy loss. Focused on “Responsive and Creative MOTION & CONTROL™,” at NSK we continue to pursue this ultimate goal. Our work starts with fundamental research and extends through bearings for automotive applications, industrial machinery, precision products and many other fields. The numerous NSK products developed through this pursuit continue to make the world turn, smoothly supporting the dreams of each new era and leading the quest for zero energy loss.

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- **Message from the President ..... P.12**
- **Fiscal 2015 CSR Activity Performance and Fiscal 2016 Targets ..... P.14**

# The NSK Group's Business and Company Overview

## Company Overview

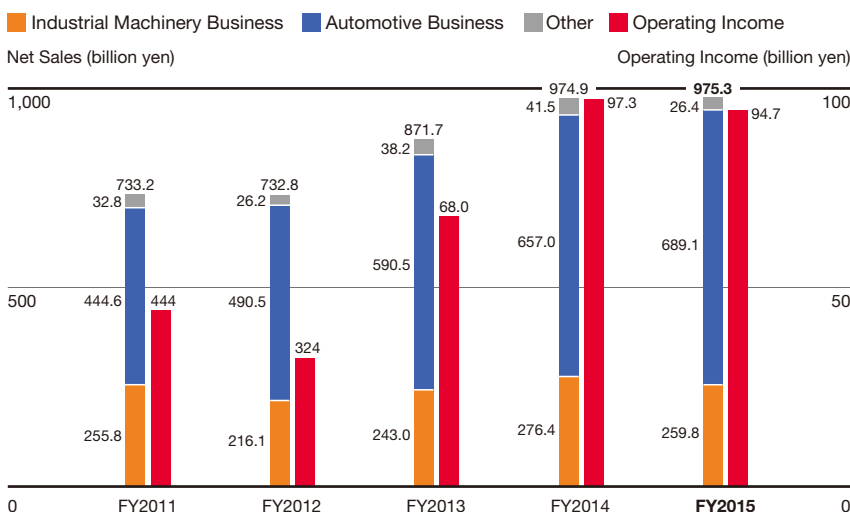
Company Name	NSK Ltd.
Established	November 8, 1916
Capital	67.2 billion yen*
Group Companies	Within Japan: 20* Outside Japan: 70*
Head Office	Nissei Bldg., 1-6-3 Ohsaki, Shinagawa-ku, Tokyo 141-8560, Japan
Number of Employees (Consolidated)	31,587*

\* As of March 31, 2016

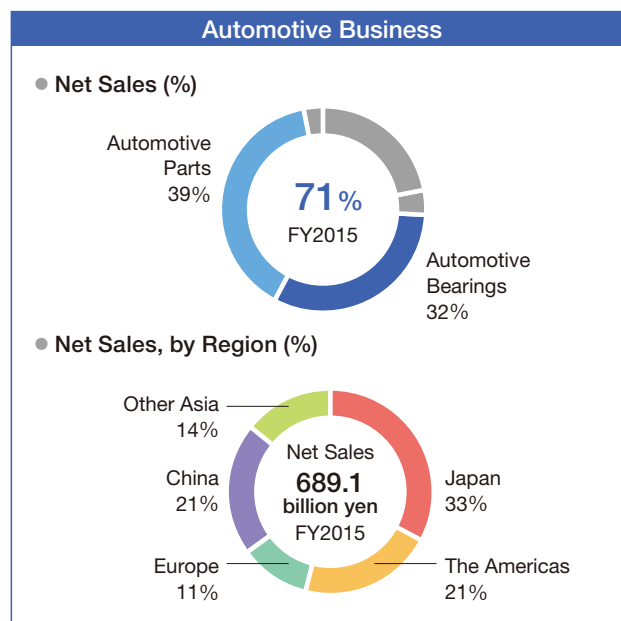
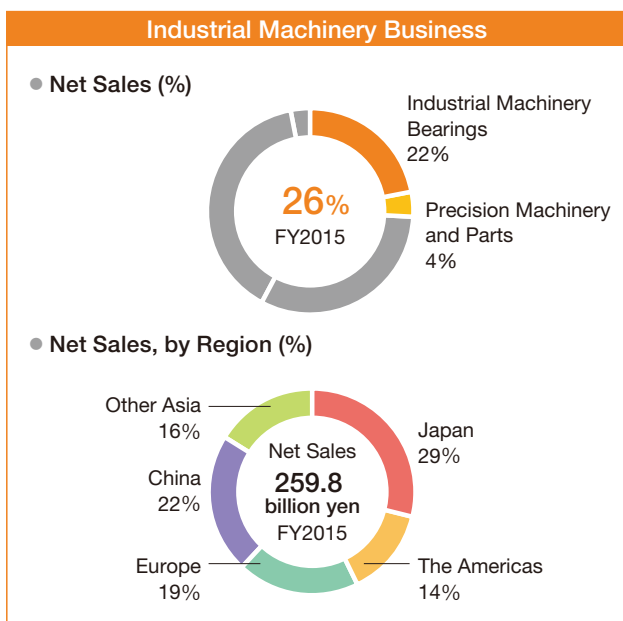
## Financial Highlights (FY2015) [Japanese Generally Accepted Accounting Principles (JGAAP)]

Sales	975.3 billion yen
Operating Income	94.7 billion yen
Capital Expenditures	54.4 billion yen
R&D Expenses	11.2 billion yen
Total Assets	1,038.2 billion yen
Net Assets	473.6 billion yen

### Net Sales / Operating Income (Consolidated)



## Business Segments



Reference data is available on NSK's website.

[www.nsk.com](http://www.nsk.com) > Investors

● Financial Highlights

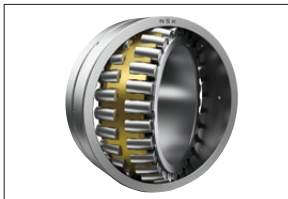
## NSK Group Businesses



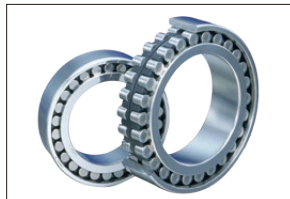
### Industrial Machinery Business

#### Industrial Machinery Bearings

Bearings reduce friction in the rotating parts of machinery and enable smooth rotation. NSK's bearings are used in a range of products and machines, including home appliances such as vacuum cleaners, railway vehicles such as bullet trains, steelmaking equipment, wind turbines for power generation, large industrial machinery, airplanes, and satellites.



NSKHPS™  
Large Spherical Roller Bearings



Double Row Cylindrical Roller Bearings,  
High Rigidity Series

#### Precision Machinery and Parts

The NSK Group's precision machinery and parts are the core components in the machine tools and industrial robots used to manufacture automobiles, personal computers, and other products. They are also found in equipment used to produce semiconductors and in injection molding machines. The NSK Group's precision machinery and parts play a crucial role on the front-line of manufacturing.



HMD/HMS Series Ball Screws for  
High-Speed Machine Tools



Megatorque Motor™ PB Series



### Automotive Business

#### Automotive Bearings

Some 100 to 150 bearings are incorporated into a single automobile. The NSK Group provides numerous products that support the diverse automotive needs of society, including various bearings used in the engine, transmission, and electrical components as well as the hub unit bearings that support the axle.



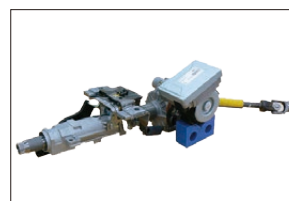
Hub Unit Bearings with  
High-Reliability Seal



Super Long-Life Planetary Shafts with  
Cage and Roller

#### Automotive Parts

The NSK Group's automotive parts include many important components that control forward motion, turning, and stopping in automobiles, such as steering systems that transmit the driver's movement of the steering wheel to the vehicle's wheels, and clutches that are used in automatic transmissions. The Group's products also contribute to automobile safety, comfort, and environmental performance.



Functional Safety Compliant Electric  
Power Steering



Low-Drag Clutch Assemblies

NSK Group Sites Worldwide (as of March 31, 2016)

Headquarters

6 in 6 countries

Production Sites

64 in 13 countries

Sales Sites

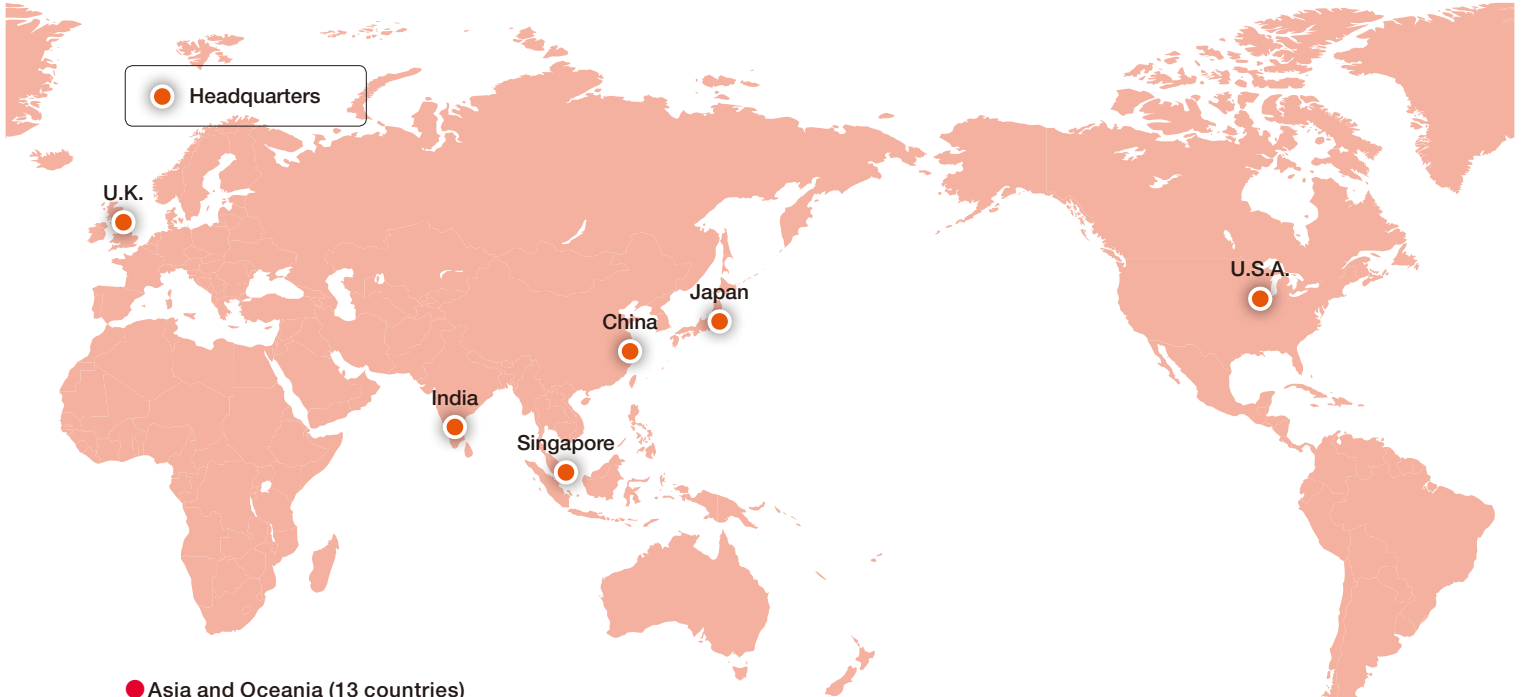
120 in 29 countries

Representative Offices

6 in 5 countries

R&D Centers

14 in 9 countries



● Asia and Oceania (13 countries)

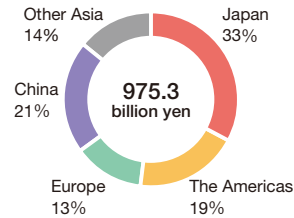
	Headquarters	Production Sites	Sales Sites	Representative Offices	R&D Centers
Japan	1	21	32		6
China	1	12	18	1	1
Taiwan			3		
Korea		2	2		1
Singapore	1		2		
Indonesia		3	2		
Thailand		2	6		1
Malaysia		2	4		
Philippines				1	
Vietnam			1	1	
India	1	4	9		
Australia			4		
New Zealand			1		
Sub-total	4	46	84	3	9

● The Americas (6 countries)

	Headquarters	Production Sites	Sales Sites	Representative Offices	R&D Centers
U.S.A.	1	7	10		1
Canada			3		
Mexico		1	1	1	
Brazil		1	5		1
Peru			1		
Argentina			1		
Sub-total	1	9	21	1	2

Breakdown of Net Sales, by Region

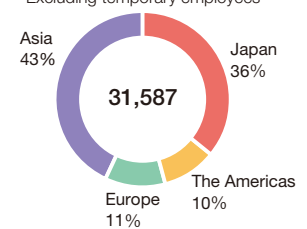
(Based on customer location; FY2015)



Breakdown of Employees, by Region

(Consolidated, as of March 31, 2016)

\* Excluding temporary employees



● Europe, Middle East and Africa (11 countries)

	Headquarters	Production Sites	Sales Sites	Representative Offices	R&D Centers
U.K.	1	4		2	1
Germany		1		2	1
France				1	
Italy				1	
Netherlands				1	
Spain				1	
Poland		4	3		1
Russia				1	
Turkey				1	
United Arab Emirates				1	
South Africa				1	
Sub-total	1	9	15	2	3



Reference data is available on NSK's website.

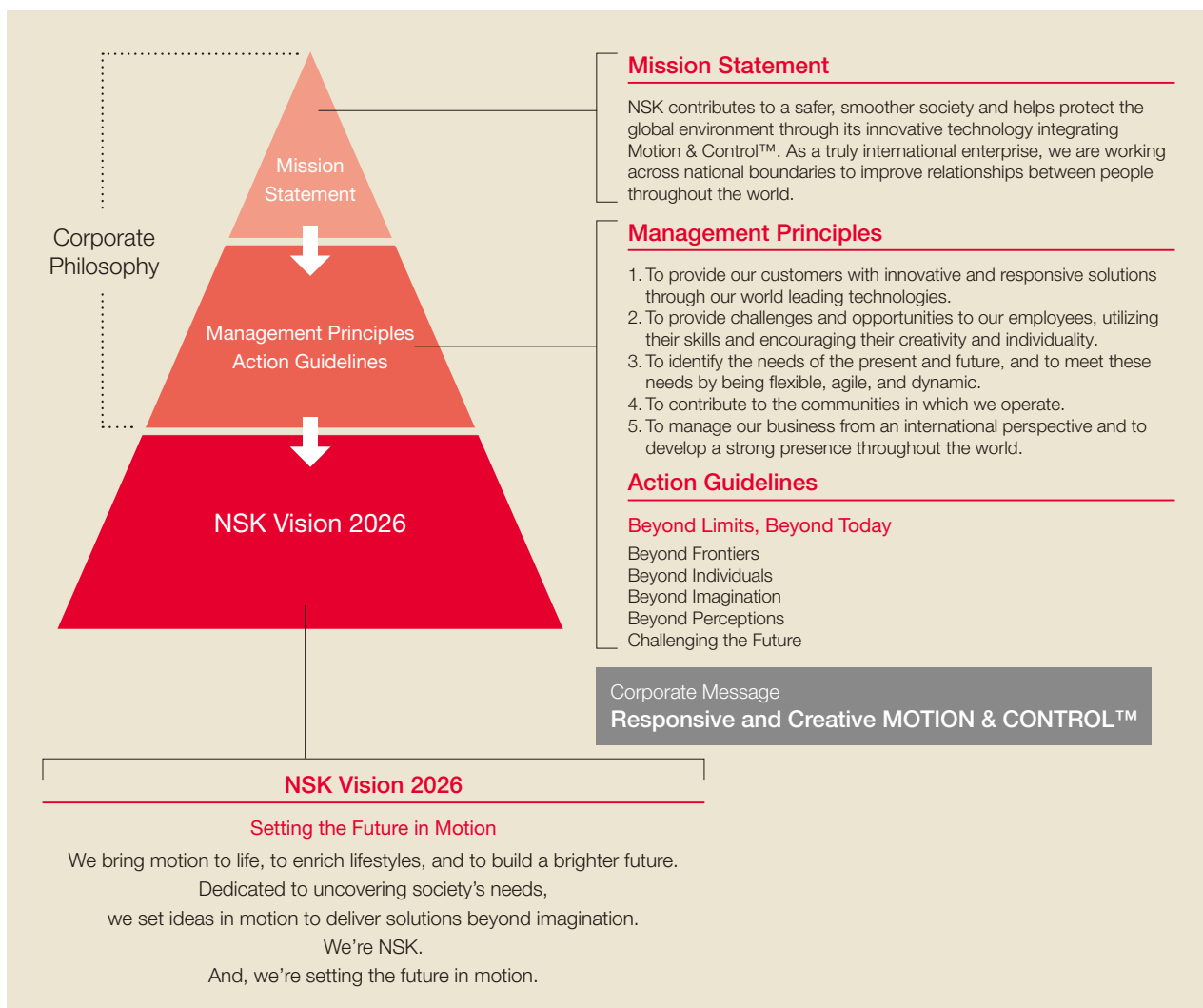
[www.nsk.com](http://www.nsk.com) > Company > Global Network

● Global Network

## NSK Corporate Philosophy and NSK Vision 2026

The NSK Corporate Philosophy is made up of four parts: a Mission Statement, Management Principles, a Corporate Message, and Action Guidelines. The Corporate Philosophy underlines NSK's vision for the company. It was established at the time of NSK's 75th anniversary, in 1991. At that time, it had already been 30 years since NSK started to go global, and the Company was well on its way to meeting the demands of the age of globalization, including the localization of production and expansion of sites outside Japan. Given this context, the Company articulated what it needed to be in order to become an excellent corporation in the 21st century, during which globalization would advance even more, setting the goal of being "a company that is needed, loved, and respected in every region of every country in the world." Further, NSK believed that sharing, instilling, and putting into practice its vision would be the key to realizing its Group-wide aim of being a truly outstanding global company. Ever since then, NSK has run its business based on the Corporate Philosophy.

Yet, when NSK reflected, in the run-up to its 100th anniversary, on the Corporate Philosophy's degree of penetration, it seemed insufficient. Accordingly, considering that the Group's employees are spread around the world and that it now has many younger employees, NSK Vision 2026 was established to serve as the guide to achieving the Company's Mission Statement and to make the Corporate Philosophy clear and accessible, so that employees can translate it into specific actions. NSK Vision 2026 expresses with a specific message the ideal state to which the Company aspires in the medium- to long-term. Going forward, NSK will carry out group-wide activities in pursuit of further growth based on this vision.



Reference data is available on NSK's website.

[www.nsk.com](http://www.nsk.com) > Company > Vision & Philosophy

● Vision & Philosophy



## The NSK Group's View of CSR

NSK's Mission Statement makes clear the Group's commitment to contributing to the development of society and to the protection of the global environment, and NSK's Management Principles set the course to realizing these goals. The NSK Group's products have the special characteristic of aiding the smooth functioning of a wide range of machinery, and they support the reliability, safety, and energy efficiency of the machines into which they are incorporated. The NSK Group regards its fundamental corporate activity as contributing to smoothly running, safe societies, protection of the global environment, and the realization of sustainable societies through the supply of those products—that is, through the Group's main business. The NSK Group aims to achieve greater corporate value and sustainable growth by ensuring that all directors and employees are firmly committed to the Group's purpose and by making sincere efforts to contribute to business growth and society by taking the perspective of customers and other stakeholders.



### NSK's CSR Activities and Material Issues



## The NSK Group's 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.

The Group is also striving to build a corporate culture in which each site, each department, and each and every officer and employee recognizes the needs of stakeholders and the broader society and can reflect those needs in their own everyday work.



### 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 develop and provide high-quality, safe, reliable products that meet customer needs, and seeks customer input through technology exchanges and everyday sales contacts.

#### Communication with Customers

The NSK Group pays attention to customer needs and the appraisals made when the machines using its products are used in society. The Group makes earnest efforts to solve problems customers face, approaching manufacturing in a manner that earns the trust of customers and the broader society.

Accordingly, the Group seeks to foster communication with customers through exhibitions that showcase new products and seminars to introduce technologies. It also strives to enhance its dissemination of information, including via its websites, and to improve its responses to inquiries.



NSK's booth at the Tokyo Motor Show



NSK's website

## Suppliers

The NSK Group's business is dependent upon numerous suppliers. The Group aims to ensure mutual growth by communicating with suppliers about the needs of customers and other stakeholders and by pursuing joint technical development, quality, CSR and other activities.

### ● Procurement Policy Briefings

NSK holds procurement policy briefings every year and asks suppliers to comply with laws and regulations and to give consideration to environmental protection, human rights, safety and health.

### ● NSK Supplier CSR Guidelines

NSK distributes the NSK Supplier CSR Guidelines to its suppliers with the aim of working in step with them to address issues such as human rights, labor rights, and compliance. See p. 29 for details.

### ● NSK Group Green Procurement Standards

The NSK Group Green Procurement Standards set out requests for environmental initiatives, such as the management of environmentally harmful substances, so that the Group can work with suppliers to promote environmental management throughout the supply chain, starting at the stage of parts and materials. See p. 74 for details.

## Employees

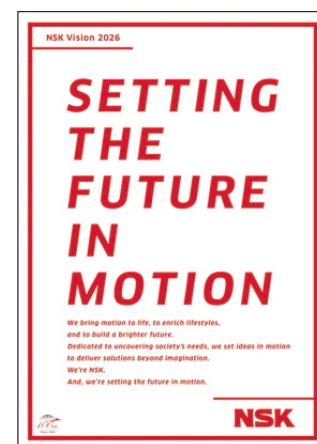
Employees, who create NSK's superior technology, services, and high-quality products and who support the Group's business success, are an important asset of the Group—the foundation of its business success. The Group believes that the source of its business growth is employees who engage enthusiastically in their work and enjoy high job satisfaction. While fostering communication between all parties concerned, the Group aims to create workplaces that enable all employees to reach their full potential.

### ● Spreading the Vision to Employees

NSK is carrying out a variety of measures to deepen employees' understanding of NSK Vision 2026 and ensure that all employees are conducting their business activities based on the vision. The Group provides opportunities for employees to think about the vision, such as by putting up posters in workplaces, showing videos that depict the vision, and holding workshops. At the Vision Workshop, held at Group sites worldwide, employees listen to a message from NSK management, engage in group discussions about the need for the vision while reflecting on their own experiences, and think about how NSK should be in 10 years.

### ● E-Learning and Training

NSK provides annual e-learning programs to officers and employees. With a curriculum including CSR, compliance, internal controls, information security, environmental management, logo regulations, and more, e-learning is a tool for people to acquire knowledge and information needed as a member of the NSK Group. Moreover, at group training sessions, such as those for new hires and newly appointed managers, instruction is provided suited to people's respective positions.



NSK Vision 2026 poster



## 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. Additionally, NSK seeks to provide a steady return of profit and is determined to remain a company that lives up to the expectations of shareholders and investors.

### ●IR Structure

NSK regards IR activities as an important management issue. Senior management, from the president down, works to promote active disclosure as well as dialogue with shareholders and investors. To ensure effective dialogue and disclosure, NSK has established the IR Office as a dedicated department under the direct control of the president, managed by the executive officer responsible for IR.

NSK has also laid out a cross-organizational structure tasked with disclosing business strategies and financial and non-financial ESG information in clear, fair, and appropriate ways, based on cooperation between the IR Office and other divisions such as each business division, corporate planning, accounting/financial affairs, public relations, general affairs, and legal affairs.

### ●Communication with Shareholders and Investors

To enable shareholders and investors to make fair investment decisions, NSK works to hold a variety of IR events and enhance the information tools it provides.

#### ■ IR Events

NSK holds a variety of IR events, such as financial conferences, business sessions, visits to investors outside Japan, and sessions for individual investors. The Company strives to communicate and share information related to business performance, as well as mid- to long-term strategies and their progress, at financial conferences for institutional investors and analysts.

Moreover, the Company strives to maintain dialogue with shareholders and institutional investors in and outside Japan through 1-on-1 meetings, conference calls, and conferences sponsored by securities firms.

#### ■ Information Tools

NSK announces its financial situation and current business topics through the publication of integrated reports (NSK Report) and business reports ("the NSK Group Report"). It discloses information such as materials from financial conferences and financial data on the Investors section of its website in a timely manner.



NSK Report 2016

### ●Feedback to Management

Opinions and other comments received in shareholder and investor dialogues are conveyed to management and the appropriate divisions.

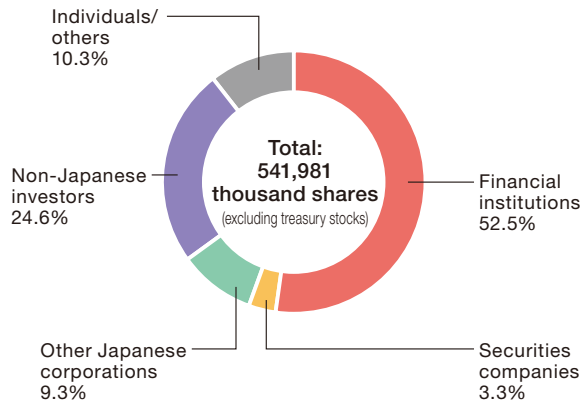
### ●Control of Insider Information

NSK does not communicate insider information (important facts that are undisclosed) during dialogue with shareholders and investors. Before the Company makes legally required disclosures of important information that could affect investors' investment decisions, the NSK Disclosure Committee checks the timeliness and appropriateness of the disclosure. Additionally, a certain amount of time before the quarterly announcement of financial results is treated as a silent period, during which the company refrains from discussing financial closing information.

## Dividend Policy

NSK places great importance on shareholder returns. NSK will maintain its basic policy of issuing a dividend with a payout ratio around 30% on a consolidated basis and ensure that its dividends reflect its financial condition.

### ● Breakdown of Shareholders (Number of Shares, as of March 2016)



## Local Communities

The NSK Group has developed a global business with nearly 200 business sites around the world. The Group aims to be valued as a member of local communities by fostering good communication with the members of the communities in which it does business, understanding their needs, and contributing to their development. (See pp. 54 – 56 for details.)

## 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.

### ● Bearing Lab: Science Museum Exhibition Updated

NSK updated its exhibition at the Science Museum\* in Tokyo's Kitanomaru Park based on a new concept. The traditional theme of NSK's exhibition booth—to get people to intuitively grasp friction and bearings—was kept the same, while updating the space so that visitors can “see, feel, and experience” the content.

\* A science museum established by the Japan Science Foundation to promote public understanding of science and technology as well as industrial technology. NSK has supported the Foundation since its establishment through a permanent exhibition focused on friction and bearings, and as a supporting member.



NSK's exhibition booth: Bearing Lab

### ● Children's Science Classes

NSK holds plant tours and science classes in and outside Japan to make science more familiar and interesting to children.

Fiscal 2015 was the ninth year of the NSK Science Class held at the Science Museum in Chiyoda-ku, Tokyo (in March 2016). Around 40 children participated in an experience simulating the work of an engineer.



NSK Science Class

Message  
from the  
President



**Toshihiro Uchiyama**  
President and Chief Executive Officer, NSK Ltd.

## Looking Toward the Next 100 Years, We Are Evolving in Order to Deliver New Value to Society

### Our 100th Anniversary and NSK Vision 2026

In November 2016, NSK celebrated the 100th anniversary of its foundation. Since its establishment as Japan's first manufacturer of bearings in 1916, NSK has continued to contribute to the development of society by expanding its product lineup from bearings, to precision machinery and parts, through to automotive components, and by extending its reach from Japan to the entire world. I would like to express my sincere appreciation to all of our stakeholders for their support over the past century.

Looking back over the past 100 years, our customers have played a vital role in nurturing NSK. We have listened earnestly to calls for innovation and higher performance products, and we have worked hard to meet those requests by constantly striving to create products that surpass expectations. Now, as the Company heads into its next 100 years, I believe we must review the essence of NSK's social mission and reconsider whether our businesses and the products we make are truly up to the task. As the first step in this journey, we established NSK Vision 2026 to guide our progress over the next ten years. With the goal of *Setting the Future in Motion*, we are taking a more proactive stance in our mindset, behavior, and decision-making criteria in order to keep increasing the range and quality of our products and services.

#### 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.

See p. 6 for details.

## Review of the Fourth Mid-Term Management Plan and Progress Toward Fifth Mid-Term Management Plan Goals

Our Fourth Mid-Term Management Plan, which spanned fiscal 2013 to fiscal 2015, has come to an end. We began our new three-year mid-term management plan in fiscal 2016.

Under the Fourth Mid-Term Management Plan, we carried out initiatives based on the dual approaches of “growth with focus on profitability” and “development of management capability to handle ¥1 trillion in sales volume,” in line with our vision of “establishing corporate fundamentals appropriate for a company with net sales of ¥1 trillion.” In terms of growth with focus on profitability, we achieved our numerical targets for net sales and operating income by increasing sales for electric power steering (EPS) systems and reinforcing our business operations in emerging nations, including China. As for the development of management capability to handle ¥1 trillion in sales volume, we accomplished results in such areas as the evolution of our global management system and enhancement of governance and compliance. However, we still have some way to go to reach our goal of establishing corporate fundamentals appropriate for a company with net sales of ¥1 trillion. Accordingly, we will continue efforts to standardize tasks and to establish corporate fundamentals that are highly resilient in the face of economic fluctuations.

Our Fifth Mid-Term Management Plan, positioned as our first step for the next 100 years, focuses on two key tasks. The first is “operational excellence.” We will pursue efficiency in all of our manufacturing, sales, technical, and administrative functions in order to achieve stronger corporate fundamentals and increase the competitiveness of our core businesses. The other task is “innovate and challenge.” We will secure a level of profitability necessary to reinvest in innovation for the next stage of development, aiming to achieve further growth.

## Helping to Build a More Sustainable World

The business environment is shifting rapidly, with trends such as globalization, the expansion of emerging markets, the advancement and increasing sophistication of technology, and changing demographics. Today, companies are expected to play an active role in ushering in a sustainable world, while at the same time increasing their capacity to respond to change.

In 2015, the international community made two landmark agreements toward the resolution of issues such as human rights problems and global environment problems. One is the 2030 Agenda for Sustainable Development, adopted at the UN Sustainable Development Summit, with its Sustainable Development Goals (SDGs). The second is the Paris Agreement, adopted at the 2015 Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 21).

The Sustainable Development Goals (SDGs) call on the international community to cooperate to solve such issues as respect for human rights, the elimination of poverty and hunger, and the resolution of environmental problems, while at the same time pursuing prosperity. The Paris Agreement, meanwhile, set out the goal of achieving net zero emissions of greenhouse gases with anthropogenic causes by the second half of this century, in order to hold the increase in the global average temperature to well below 2 °C.

Amidst this sweeping trend, the NSK Group is determined to play a substantial role in building a more sustainable world. We will make our safety, quality, and compliance even stronger in order to meet the expectations of the public. Moreover, we will improve our capabilities in technology, production, sales, and management to propel the evolution of high-quality and environmentally friendly manufacturing. Looking ahead 10 to 20 years into the future, we will set out the immediate actions the NSK Group must take, focusing not only on matters such as environmental protection and respect for human rights, but also on the further globalization of our business operations, the rollout of initiatives to strengthen the supply chain, and the development of innovative technologies and groundbreaking new products. In this way, we will move into the next century of our history by continuing to earn the trust of society and pursuing sustainable growth beyond this milestone. Going forward, the officers and employees of the NSK Group will make a concerted drive toward our mission of contributing to a safer, smoother society and protecting the global environment, as spelled out in our corporate philosophy.

One of the keys for the NSK Group to increase its ability to set the future in motion is to become a richly diverse organization in which each employee is free to think flexibly and respond actively to change, based on diverse values. We must not cling stubbornly to established practices but instead respect and accept, as an organization, diverse human resources and values. In other words, diversity is critical to our success. I will pursue the creation of a corporate culture and work environment where all employees can make the most of their abilities and individuality while experiencing satisfaction in their job. I believe this will ultimately lead to further innovation.

## In Conclusion

I would like to once again express my sincere appreciation to all of our stakeholders for their ongoing support. The NSK Group is committed to deepening communication by conveying to our stakeholders, through the CSR Report, clear and highly transparent information on the details and progress of our social and environmental initiatives. We welcome your frank feedback in relation to this report or our business activities, and we look forward to your continued understanding and support.



Reference data is available on NSK's website.

[www.nsk.com](http://www.nsk.com) > Investors > IR Events

● Release of Mid-Term Plan (FY'13-FY'15)

[www.nsk.com](http://www.nsk.com) > NSK is Turning 100 > NSK Vision 2026

● NSK Vision 2026

[www.nsk.com](http://www.nsk.com) > Sustainability > 2016 CSR Report Questionnaire

● Questionnaire

## Fiscal 2015 CSR Activity Performance and Fiscal 2016 Targets

Category		FY2015 target
<b>Governance (Management Structure Supporting Sustainable Growth)</b>		
Corporate Governance	Strengthening of corporate governance	<ul style="list-style-type: none"> <li>•Strengthen corporate governance structures to ensure fair and transparent decision-making by considering stakeholders' positions</li> </ul>
	Strengthening of risk management	<ul style="list-style-type: none"> <li>•Conduct internal audits of finance, purchasing and compliance based on regional risk assessment in the Americas, Europe, China, and ASEAN</li> <li>•Conduct audits on group governance systems of regional headquarters</li> <li>•Conduct compliance self-check at all global sites</li> <li>•Issue and distribute group internal audit standards</li> </ul>
	Development of group crisis management systems	<ul style="list-style-type: none"> <li>•Materialize crisis management systems and clarify management cycles, based on the Group crisis management standards</li> </ul>
Risk Management	Disaster preparedness	<p>(Measures to deal with the risk of large-scale earthquakes in Japan)</p> <ul style="list-style-type: none"> <li>•Implement measures to deal with issues to ensure BCP (head office and business sites)</li> <li>•Verify and revise BCP effectiveness through training (Expansion of scopes of continual production phase at production sites and initial response phase at business sites)</li> </ul> <p>(Risks associated with disasters at outside Japan sites)</p> <ul style="list-style-type: none"> <li>•Identify group-wide severe disaster risks</li> <li>•Implement measures to minimize damages from severe disaster risks</li> </ul>
	Reduction of risks associated with procurement	<ul style="list-style-type: none"> <li>•Continue to develop replacements for parts</li> <li>•Visualize global supply chain data</li> <li>•Develop supply chain disaster response system</li> <li>•Continue to expand BCP measures to suppliers</li> </ul>
Compliance	Strengthening of compliance	<ul style="list-style-type: none"> <li>•Expand scope of compliance training and enhance training content</li> <li>•Reflect the results of compliance awareness survey in the content of training programs</li> </ul>
	Promotion of CSR procurement	<ul style="list-style-type: none"> <li>•Distribute the "NSK Supplier CSR Guidelines" in Occidental countries</li> <li>•Improve activities using the "NSK Supplier CSR Guidelines" and the "Self-Assessment Check-Sheets"</li> <li>•Continue to conduct and respond to conflict minerals surveys (supply chain surveys, response to customer's surveys)</li> </ul>
	Security export	<ul style="list-style-type: none"> <li>•Improve technical intelligence management systems for production plants</li> </ul>
<b>Quality Assurance (Creating Quality to Earn the Confidence of Society)</b>		
Improving Quality		<ul style="list-style-type: none"> <li>•Start operating self-audit systems for special processes besides heat treatment</li> </ul>
Raising Customer Satisfaction		<ul style="list-style-type: none"> <li>•Improve maintenance quality and enhance customer value by focusing on development of human resources</li> <li>•Enhance education systems for technical support staff</li> </ul>
<b>Good Labor Practices (Creating a Dynamic Work Environment)</b>		
Providing Opportunities and Workplaces that Foster the Growth of Employees		<ul style="list-style-type: none"> <li>•Strengthen development of regional management personnel and global human resources</li> </ul>
Creating Safe and Healthy Workplaces		<ul style="list-style-type: none"> <li>•Strengthen health and safety initiatives globally</li> </ul>
<b>Working with Local Communities (Social Contributions Targeting Community Development)</b>		
Social Contributions Targeting Community Development		<ul style="list-style-type: none"> <li>•Continue awareness building efforts in priority areas for social contribution</li> <li>•Continue to share information on initiatives among business sites</li> </ul>
<b>Environment (Activities for Global Environment Protection / Environmental Voluntary Action Plan)</b>		
Environmental Management	Acquisition and maintaining of environmental management system certification	<ul style="list-style-type: none"> <li>•Maintain ISO 14001 certification at all subject sites</li> <li>•Obtain ISO 14001 certification within three years of starting full-scale operations at a site</li> </ul>
	Measures for complying with environmental laws and regulations and coping with environmental risks	<ul style="list-style-type: none"> <li>•Zero instances in which emissions standards are exceeded</li> <li>•Zero instances of oil and other leakage-related environmental accidents</li> </ul>
Creating Environmentally Friendly Products		<ul style="list-style-type: none"> <li>•Create environmentally friendly products and technologies</li> </ul>
Global Warming Countermeasures	Reduction of CO <sub>2</sub> emissions per production unit (saving energy)	<ul style="list-style-type: none"> <li>•In/outside Japan (Manufacturing): Reduce CO<sub>2</sub> emissions per production unit by 4% (base year: FY2011)</li> <li>•In Japan (Distribution): Reduce CO<sub>2</sub> emissions per ton-kilometer by 4% (base year: FY2011)</li> </ul>
	Reduction of CO <sub>2</sub> emissions	<ul style="list-style-type: none"> <li>•In Japan (Manufacturing): Reduce CO<sub>2</sub> emissions to no more than FY2011 level</li> </ul>
	Resource conservation initiatives	<ul style="list-style-type: none"> <li>•In Japan (Manufacturing/Development/Design): Continue to reduce waste of resources by changing machining processes</li> <li>•In/outside Japan (Manufacturing): Reduce water withdrawal per production unit by 4% (base year: FY2011)</li> </ul>
Measures for Resource Conservation and Recycling	Maintaining of zero emissions	<ul style="list-style-type: none"> <li>•In Japan (Manufacturing): Maintain zero emissions (landfill disposal rate no more than 0.01%)</li> </ul>
	Increasing of the recycling rate	<ul style="list-style-type: none"> <li>•In Japan (Manufacturing): Achieve a waste recycling rate of 99.99% or more</li> <li>•Outside Japan (Manufacturing): Achieve a waste recycling rate 99.0% or more</li> </ul>
	Reduction of waste emissions per production unit	<ul style="list-style-type: none"> <li>•In Japan (Manufacturing): Reduce industrial waste emissions per production unit by 32% or more (base year: FY2011)</li> <li>•In Japan (Distribution): Reduce packaging material waste per production unit by 8% (base year: FY2007)</li> </ul>
Reducing Use of Environmentally Harmful Substances	Strengthening of environmentally harmful substances management system	<ul style="list-style-type: none"> <li>•Conduct on-site audits at key suppliers</li> <li>•Investigate status of NSK List of Environmentally Harmful Substances at suppliers</li> </ul>
	Reduction of use of environmentally harmful substances	<ul style="list-style-type: none"> <li>•In Japan (Manufacturing): Reduce handling of PRT-Designated substances per production unit by 25% from FY2011</li> <li>•In/outside Japan (Manufacturing): Completely phase out use of machining fluids containing chlorine additives</li> </ul>
Biodiversity Conservation	Biodiversity education	<ul style="list-style-type: none"> <li>•Conduct biodiversity education</li> </ul>
	Expansion of initiatives aimed at biodiversity conservation	<ul style="list-style-type: none"> <li>•Develop initiatives for preserving biodiversity through social contribution activities</li> </ul>

\* For targets by FY2018, please see Mid-Term Goals (FY2016-2018) in each chapter.



● Achieved
 ▲ Partially achieved
 ✘ Not achieved

Performance in FY2015	Evaluation	FY2016 target	Page
<ul style="list-style-type: none"> <li>Improved corporate governance structure to reflect Japan's amended Companies Act and other social requirements such as the Corporate Governance Code</li> </ul>	●	<ul style="list-style-type: none"> <li>Create a more effective corporate governance structure driven by management by the Board of Directors</li> </ul>	pp. 17-20
<ul style="list-style-type: none"> <li>Conducted internal audits of finance, purchasing and compliance based on regional risk assessment in the Americas and China</li> <li>Conducted audits on group governance systems of regional headquarters for the Americas and Europe together with the internal audit departments in the Americas and Europe</li> <li>Conducted compliance self-checks at all global sites</li> <li>Established group internal audit standards and rules (October 2015)</li> <li>Held the 3rd global internal audit conference (June 2016)</li> </ul>	●	<ul style="list-style-type: none"> <li>Conduct audits of sites selected in consideration of risk assessment results and a comprehensive view</li> <li>Conduct financial and purchasing basis audits in China and ASEAN together with regional internal audit departments</li> <li>Visit all global sites to conduct compliance audits</li> </ul>	
<ul style="list-style-type: none"> <li>Materialized crisis management systems and clarified management cycles, based on the Group crisis management standards</li> </ul>	●	<ul style="list-style-type: none"> <li>Build crisis management systems and instill management cycles</li> </ul>	
<ul style="list-style-type: none"> <li>Implemented measures to deal with issues to ensure BCP (head office and business sites)</li> <li>Verified and revised BCP effectiveness through training (Expansion of scopes of continual production phase at production sites and initial response phase at business sites)</li> </ul>	●	<ul style="list-style-type: none"> <li>Improve BCP effectiveness against large-scale earthquakes (Expansion of scope of training and implementation of measures for issues)</li> </ul>	pp. 20-23
<ul style="list-style-type: none"> <li>Identified severe disaster risks at some Group companies</li> <li>Implemented measures to minimize damage from severe disaster risks at some Group companies</li> </ul>	▲	<ul style="list-style-type: none"> <li>Clarify the response structure and implement measures to minimize damage from severe disaster risks</li> </ul>	
<ul style="list-style-type: none"> <li>Continued to develop replacements for parts</li> <li>Visualized global supply chain data (expanded to ASEAN and China)</li> <li>Conducted drills to confirm the safety of suppliers</li> <li>Continued to expand BCP measures to suppliers</li> </ul>	●	<ul style="list-style-type: none"> <li>Continue to develop replacements for parts</li> <li>Visualize global supply chain data and continue improving accuracy</li> <li>Continue conducting drills to confirm the safety of suppliers</li> <li>Continue to expand BCP measures to suppliers</li> </ul>	
<ul style="list-style-type: none"> <li>In Japan: Expanded scope of compliance training to plans, engineering departments, and Group companies</li> <li>Outside Japan: Enhanced training content with inclusion of competition law, bribery, and harassment</li> <li>In response to the results of compliance awareness survey, strengthened compliance education and ensured thorough awareness of the whistle-blowing hotline</li> </ul>	●	<ul style="list-style-type: none"> <li>Strengthen awareness building to prevent the cartel incident from fading from memory</li> <li>Establish a new compliance culture</li> <li>Improve compliance awareness at Group companies</li> <li>Expand scope of regions included in the compliance awareness survey outside Japan</li> </ul>	
<ul style="list-style-type: none"> <li>Distributed the Guidelines in Occidental countries</li> <li>Provided assessment results of "Self-Assessment Check-Sheets" to suppliers as feedback</li> <li>Continued to conduct and respond to conflict minerals surveys (supply chain surveys, response to customer's surveys)</li> </ul>	●	<ul style="list-style-type: none"> <li>Distribute the "NSK Supplier CSR Guidelines" worldwide</li> <li>Improve activities using the "NSK Supplier CSR Guidelines" and the "Self-Assessment Check-Sheets"</li> <li>Continue to conduct and respond to conflict minerals surveys (supply chain surveys, response to customer's surveys)</li> </ul>	pp. 23-29
<ul style="list-style-type: none"> <li>Developed a technology provision inspection system associated with equipment maintenance and overhauling</li> <li>Developed a drawing inspection system associated with procurement outside Japan</li> </ul>	●	<ul style="list-style-type: none"> <li>Improve export control system for automotive parts</li> </ul>	
<ul style="list-style-type: none"> <li>Started operating self-audit systems for special processes besides heat treatment</li> <li>Carried out development of maintenance personnel</li> </ul>	●	<ul style="list-style-type: none"> <li>Foster quality-first culture and human development</li> <li>Enhance preventive quality monitoring and auditing</li> <li>Reassert strict adherence to quality control basic matters</li> <li>Enhance site control ability based on 5 GEN-Principle</li> </ul>	pp. 34-41
<ul style="list-style-type: none"> <li>Continued holding the NSK Global Management College</li> <li>At the Global Production Meeting, reported safety status and provided future directions on safety to each representative for regional headquarters</li> <li>Started to manage lost-worktime injury rate globally</li> </ul>	●	<ul style="list-style-type: none"> <li>Provide opportunities and workplaces that foster the growth of employees</li> <li>Make the most of diverse human resources</li> <li>Create environments where employees can work with vitality</li> </ul>	pp. 42-53
<ul style="list-style-type: none"> <li>Conducted awareness building activities through training and education</li> <li>Distributed a CSR Communication Report introducing case studies to employees</li> </ul>	●	<ul style="list-style-type: none"> <li>Take measures to invigorate social contributions</li> </ul>	pp. 54-56
<ul style="list-style-type: none"> <li>Maintained certification at all subject sites</li> <li>One site obtained certification</li> <li>Instances in which emissions standards were exceeded: One in Japan (sewerage), one in China (sewerage), and one in ASEAN (air)</li> <li>Zero instances of oil and other leakage-related environmental accidents</li> <li>Created nine environmentally friendly products</li> </ul>	●	<ul style="list-style-type: none"> <li>Maintain ISO 14001 certification at all subject sites (respond to FY2015 revisions)</li> <li>Obtain ISO 14001 certification within three years of starting full-scale operations at a site</li> <li>Zero instances in which emissions standards are exceeded</li> <li>Zero instances of oil and other leakage-related environmental accidents</li> <li>Create environmentally friendly products and technologies</li> </ul>	pp. 58-61
<ul style="list-style-type: none"> <li>In Japan: Reduced CO<sub>2</sub> emissions per production unit by 8.4% (base year: FY2011)</li> <li>Outside Japan: Reduced CO<sub>2</sub> emissions per production unit by 27.0% (base year: FY2011)</li> <li>CO<sub>2</sub> emissions per ton-kilometer increased by 5.1% (base year: FY2011)</li> </ul>	●	<ul style="list-style-type: none"> <li>In Japan (Manufacturing): Reduce CO<sub>2</sub> emissions per production unit by 9.1% (base year: FY2011)</li> <li>Outside Japan (Manufacturing): Reduce CO<sub>2</sub> emissions per production unit by 27.2% (base year: FY2011)</li> <li>In Japan (Distribution): Reduce CO<sub>2</sub> emissions per ton-kilometer by 10.4% (base year: FY2011)</li> </ul>	pp. 65-68
<ul style="list-style-type: none"> <li>Reduced CO<sub>2</sub> emissions by 4.6% (base year: FY2011)</li> <li>Reduced waste of resources by changing machining processes</li> <li>In Japan: Reduced water withdrawal per production unit by 28.3% (base year: FY2011)</li> <li>Outside Japan: Reduced water withdrawal per production unit by 21.3%</li> <li>Maintained zero emissions (landfill disposal rate was 0.0001%)</li> <li>In Japan: Recycling rate was 99.9999%</li> <li>Outside Japan: Recycling rate was 96.1%</li> </ul>	●	<ul style="list-style-type: none"> <li>In Japan (Manufacturing): Reduce CO<sub>2</sub> emissions to no more than FY2011 level</li> <li>In Japan (Manufacturing/Development/Design): Continue to reduce waste of resources by changing machining processes</li> <li>In Japan (Manufacturing): Reduce water withdrawal per production unit by 28.5% (base year: FY2011)</li> <li>Outside Japan (Manufacturing): Reduce water withdrawal per production unit by 21.6%</li> <li>In Japan (Manufacturing): Maintain zero emissions</li> <li>In Japan (Manufacturing): Achieve a waste recycling rate of 100% or more</li> <li>Outside Japan (Manufacturing): Achieve a waste recycling rate 96.6% or more</li> </ul>	pp. 69-72
<ul style="list-style-type: none"> <li>Reduced industrial waste emissions per production unit by 27.4% (base year: FY2011)</li> <li>Reduced packaging material waste per production unit by 24.9% (base year: FY2007)</li> </ul>	▲	<ul style="list-style-type: none"> <li>In Japan (Manufacturing): Reduce industrial waste emissions per production unit by 27.5% or more (base year: FY2011)</li> <li>In Japan (Distribution): Reduce packaging material waste per production unit by 25.9% (base year: FY2007)</li> </ul>	
<ul style="list-style-type: none"> <li>In Japan: Conducted on-site audits at 38 key suppliers</li> <li>Investigated status of NSK Environmentally Harmful Substances at 307 suppliers</li> <li>Outside Japan: Conducted on-site audits at 29 key suppliers</li> <li>Investigated status of NSK List of Environmentally Harmful Substances at 200 key suppliers</li> </ul>	●	<ul style="list-style-type: none"> <li>In and outside Japan (Procurement): Conduct on-site audits at key suppliers, and investigate status of NSK List of Environmentally Harmful Substances at suppliers</li> </ul>	pp. 73-75
<ul style="list-style-type: none"> <li>Reduced handling of PRTR-designated substances per production unit by 23.6% from FY2011</li> <li>Completely phased out use of machining fluids containing chlorine additives</li> <li>Outside Japan: Conducted education on biodiversity in China, the US, and India</li> <li>In Japan: Conducted forest maintenance experience at three plants</li> </ul>	●	<ul style="list-style-type: none"> <li>In Japan (Manufacturing): Reduce handling of PRTR-designated substances per production unit by 24.6% from FY2011</li> <li>Conduct biodiversity education</li> <li>Develop initiatives for preserving biodiversity through social contribution activities</li> </ul>	pp. 76-77

Chapter  
**1**

# Governance

## Management Structure Supporting Sustainable Growth

Any company that wants to be worthy of the trust and hopes of society must exercise strong corporate governance. Strengthening governance structures and practicing sound, highly transparent management also does much to increase corporate value.

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# Corporate Governance

## Basic Approach

NSK recognizes that having a system for implementing transparent, fair, and swift decision-making is critical to its effort to continue increasing corporate value. Toward that end, it has established a corporate governance structure based on the following four policies.

### ● Policies of the Corporate Governance Structure

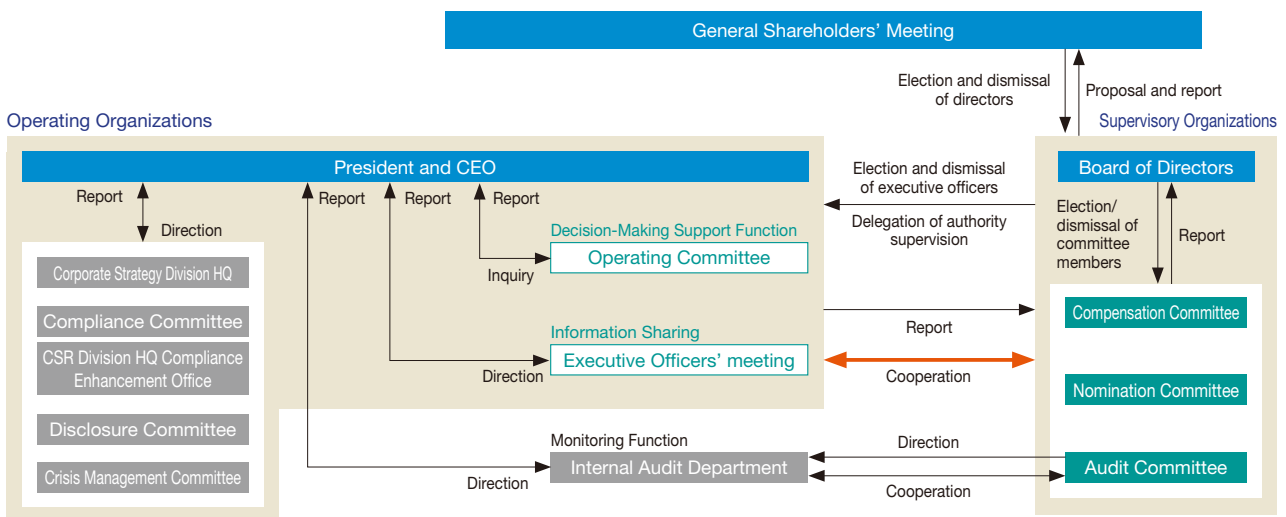
- (1) Improve management efficiency and flexibility by delegating more authority from the Board of Directors to operational organizations;
- (2) Ensure the supervision of the operational organizations by the supervisory organizations by separating the former and the latter;
- (3) Strengthen the supervision of the operational organizations by the supervisory organizations through close coordination between the former and the latter; and
- (4) Increase management fairness by strengthening the compliance system.

NSK has articulated this basic approach to corporate governance and its structure in its Corporate Governance Rules, which guide the directors and executive officers as they manage the Company's business.

## Corporate Governance Structure

NSK has adopted a “company with a nomination committee, etc.” structure for corporate governance. By clearly defining the executive and supervisory roles, the Company increases management soundness and transparency and practices fair and swift decision-making. NSK will continue working to strengthen its governance system to address social expectations, pursuing sustainable growth and enhanced corporate value over the medium- to long-term.

### ● Corporate Governance Structure (as of July 2016)



## Effectiveness of the Supervisory Function

The Board of Directors is defined as the organization that makes decisions regarding important management matters, such as basic management policies, and serves as a supervisory body for the operating organizations. In order to strengthen this supervisory function, NSK established the Nomination Committee, Audit Committee, and Compensation Committee, each of which comprises a majority of independent directors.

## Board of Directors

NSK's Board of Directors consists of 12 directors. As of July 2016, the makeup of the Board of Directors is as follows.

● Executive directors: 6 ● Non-executive directors: 2 ● Independent directors: 4

The chairperson of the Board of Directors is nominated by a one-third consensus of the Board. Two vice-chairpersons are elected by the Board of Directors, and one of them is required to be an independent director.

In the fiscal year ended March 31, 2016, the Board of Directors met 10 times, with a 97.5% attendance rate on the part of independent directors.

### Policy Regarding the Appointment of Directors

NSK's Board of Directors is expected to fulfill a supervisory function over management in light of the actual conditions of business. For this reason, director candidates are required to have deep knowledge of general business management or of NSK's business, as well as deep insight into corporate governance and other specialized fields. Persons who can contribute to NSK's sustainable growth and medium- to long-term enhancement of corporate value are appointed considering a good balance of the Board of Directors.

### Supplementary Requirements Regarding the Independence of Independent Directors

One criterion for appointment as an independent director is that candidates have no special relationship with NSK's management team or principal shareholders and are at no risk of having a conflict of interest with general shareholders. When making appointments, the Company also checks to make sure candidates will be able to secure enough time to fulfill their duties as NSK directors in accordance with company rules.

Each NSK independent director meets this criterion relating to independence established by NSK as well as independence criteria established by the Tokyo Stock Exchange, and each has been reported to the Tokyo Stock Exchange as an independent officer.

### Criteria for Independence of Independent Directors

The following persons are ineligible to become independent director candidates of NSK Ltd. (NSK).

- 1) Persons holding positions at a company which constituted 2% or more of the previous year's consolidated sales of NSK, or persons who held such a position until recently.
- 2) Persons holding positions at a company which made 2% or more of its previous year's consolidated sales to NSK or a subsidiary of NSK, or persons who held such a position until recently.
- 3) Persons holding positions at a financial institution which NSK relies on for funding, or persons who held such a position until recently.
- 4) Consultants, accounting or legal professionals receiving significant financial compensation in addition to compensation for the NSK independent director position, or persons who held such a position until recently.
- 5) Persons belonging to a company or organization which held 10% or more of NSK's total stock at the end of the most recent financial reporting period, or persons belonging to such a company or organization until recently.
- 6) Persons belonging to a company or organization of which NSK holds 10% or more of the total shares outstanding at the end of the most recent financial reporting period, or persons belonging to such a company or organization until recently.
- 7) Relatives within the second degree, or family members living in the same household as persons specified in items 1) to 6) (excluding non-key posts). ("Key posts" are generally assumed to refer to executive or senior managers of relevant companies or trading partners, chartered public accountants belonging to relevant audit firms, and legal professionals belonging to relevant legal firms.
- 8) Persons who hold executive positions at NSK or a subsidiary of NSK, or relatives within the second degree or family members living in the same household of persons who held such positions until recently.

The wording "recently" in the items above shall be assumed to be a period of three years or less from the date NSK elects directors.

### Self-Assessment of the Board of Directors

Outside experts are used to conduct analyses and evaluations of the administrative performance and effectiveness of the Board of Directors in an effort to validate the function of the Board of Directors and further enhance its effectiveness.

The evaluation results are used to ensure that the Board of Directors is functioning effectively as a system for conducting transparent, fair, and appropriate decision-making. They also help to identify issues for further improvement, such as the streamlining of the operation of the Board of Directors and the enhancement of training.



Reference data is available  
on the following website.

Tokyo Stock Exchange / <http://www2.tse.or.jp/disc/64710/140120160530405538.pdf>

● Notice of the Ordinary General Meeting of Shareholders

## ■ Training for Directors and Auditors

Training on applicable laws and regulations such as Japan's Companies Act, NSK's financial, business, and governance matters, and other topics is provided to directors and auditors as needed, such as at the time of appointment. Visits to business sites in different locations are conducted especially for independent directors to deepen their knowledge of matters particular to the NSK Group and encourage lively discussion at board meetings. In addition, detailed explanations are given in advance regarding the agenda of board meetings.

## ● Nomination Committee

The Nomination Committee consists of three people: one internal director and two independent directors. The Nomination Committee decides on the appointment and dismissal of directors.

In the year ended March 2016, the Compensation Committee was convened five times. The attendance rate for independent directors was 100%.

## ● Audit Committee

The Audit Committee consists of three people: one internal director who is not concurrently an executive officer and two independent directors. The Audit Committee audits the directors' and executive officers' execution of duties as well as the NSK Group's governance and corporate risk.

A full-time secretariat has been established as an organization to assist the Audit Committee, which conducts audits in cooperation with the Internal Audit Department.

In the year ended March 2016, the Audit Committee met 14 times. The attendance rate for independent directors was 100%.

## ● Compensation Committee

The Compensation Committee consists of three people: one internal director and two independent directors. The Compensation Committee decides the compensation policy and individual compensation values for directors and executive officers.

In the year ended March 2016, the Compensation Committee was convened five times. The attendance rate for independent directors was 100%.

## ■ Policy and Record Regarding Officer Compensation

Compensation for NSK's officers aims to provide longer-term incentives with a package consisting of fixed compensation, performance-based salary, stock options, and retirement benefits. Compensation for directors and compensation for executive officers are decided separately. Where a director is concurrently an executive officer, compensation is paid for both positions combined. The period covered by performance-based salary is up to about three years.

## ■ Total Amount of Officer Compensation and Proportions of Fixed Compensation and Performance-Based Salary

### 1. Director compensation: Director compensation, as a general rule, consists of fixed compensation and stock options.

- (1) **Fixed compensation:** Fixed compensation is decided based on factors such as position as an independent or internal director, committee membership, and role in the Board of Directors.
- (2) **Stock options:** Stock options are issued according to position as an independent or internal director, aiming to ensure that directors and shareholders share common interests, with the goal of increasing performance for the entire NSK Group and raising corporate value.
- (3) **Other:** Retirement benefits (pension) are granted to internal directors who are not concurrently executive officers according to the number of years in office.

### 2. Executive officer compensation: Executive officer compensation consists of fixed compensation, performance-based salary, stock options, and retirement benefits.

- (1) **Fixed compensation:** The amount of fixed compensation is decided according to an executive officer's position, and executive officers with the right of representation receive an additional amount.
- (2) **Performance-based salary:** The total amount of performance-based salary is decided based on the consolidated operating income margin and consolidated ROE given in the Mid-Term Plan as well as on single-year numerical goals for return on operations, cash flow, and indicators that evaluate quality activities. The amount of salary for each individual is paid based on his or her position and evaluation of performance on duties.
- (3) **Stock options:** Stock options are issued according to an executive officer's position, aiming to ensure that executive officers and shareholders share common interests, with the goal of increasing performance for the entire NSK Group and raising corporate value.
- (4) **Retirement benefits:** Retirement benefits are paid as a lump sum based on the fixed compensation paid and the number of years in office and as a pension based on the position held at the time of retirement and the number of years in office.



Reference data is available  
on NSK's website.

[www.nsk.com](http://www.nsk.com) > Company > Corporate Governance

● Corporate Governance Report (only in Japanese)

[www.nsk.com](http://www.nsk.com) > Investors > IR Documents

● Securities Report

## ● Total Compensation Paid for the Year Ended March 2016

	Total of Compensation, etc.	Fixed Compensation		Performance-Based Salary		Stock Options		Retirement Benefits	
		No. of Directors/Officers	Amount	No. of Directors/Officers	Amount	No. of Directors/Officers	Amount	No. of Directors/Officers	Amount
Directors (Non-independent)	¥132 million	9	¥113 million	—	—	9	¥17 million	2	¥2 million
Directors (Independent)	¥54 million	6	¥42 million	—	—	6	¥12 million	—	—
Executive Officers	¥1,990 million	38	¥801 million	33	¥643 million	39	¥187 million	32	¥357 million

\* Compensation for directors (non-independent) includes compensation for directors who also serve as executive officers.

\* The amount of performance-based salary is the payment amount as of July 1, 2016, based on the results for the year ended March 31, 2016. The payment amount of performance-based salary as of July 1, 2015, based on the results for the year ended March 31, 2015, was ¥794 million.

\* The amount of the retirement benefit is the accrued officers' retirement benefits in the year ended March 31, 2016. Retirement benefits to three executive officers who retired in the year ended March 31, 2016, were ¥176 million.

\* Figures listed above are rounded down to one million yen.

## ● Compensation by Officer

Name	Total of Consolidated Compensation, etc.,	Title	Company	Amount of Each Item of Consolidated Compensation, etc.			
				Fixed Compensation	Performance-Based Salary	Stock Options	Retirement Benefits
Toshihiro Uchiyama	¥122 million	Director	NSK Ltd.	¥6 million	—	¥1 million	—
		Executive officer	NSK Ltd.	¥38 million	¥43 million	¥12 million	¥20 million
Bernard Lindsay	¥208 million	CEO	Consolidated subsidiary NSK Americas Inc.	¥68 million	¥114 million	¥7 million	¥17 million
Adrian Browne	¥128 million	Executive officer	NSK Ltd.	¥78 million	¥24 million	¥4 million	¥20 million
Jürgen Ackermann	¥100 million	CEO	Consolidated subsidiary NSK Europe Ltd.	¥58 million	¥32 million	¥5 million	¥3 million

\* Only officers whose total consolidated compensation is ¥100 million or higher are listed.

## Strengthening the Business Execution Function

As a “company with a nomination committee, etc.,” NSK has actively delegated decision-making for business execution to its executive officers in an effort to improve management efficiency and flexibility. As for operating organizations, the Company has put in place a system under which 35 executive officers appointed by the Board of Directors execute business under the direction of the president and CEO in accordance with policies established by the Board of Directors.

### ● Operating Committee

An Operating Committee chaired by the president and CEO has been established as an organization to assist with decision-making on business execution. The president and CEO refers to the results of discussions of the Operating Committee when making final decisions on business execution.

### ● Executive Officers' Meeting

An Executive Officers' Meeting has been established as a place to report on the business organizations. Executive officers regularly report to the president and CEO on the status of business execution in the areas that they are responsible for. In this way, NSK shares information on business execution and tries to unify the direction and understanding of business development to appropriately ensure the efficiency and flexibility of business execution.

## Internal Controls and Risk Management

### ● Basic Approach

With the global expansion of its business, the NSK Group recognizes the great importance of initiatives to minimize risk. Accordingly, it is taking steps to ensure that various risks are properly identified and managed.



Reference data is available on NSK's website.

[www.nsk.com](http://www.nsk.com) > Investors > IR Documents

● Securities Report (only in Japanese)

## ● Establishment of an Internal Control System

NSK's Basic Policies for Establishment of an Internal Control System specified matters needed to develop a system for ensuring that the NSK Group's business is conducted appropriately and in accordance with the law, articles of incorporation, and internal rules, and also to enable checks by the Audit Committee to be carried out effectively.

Since these policies were first adopted by a resolution of the Board of Directors in April 2006, they have been revised with subsequent changes in social expectations of companies. The Board of Directors checks and votes on the content of these policies every year.

## ● Risk Management Systems

NSK has established a fundamental policy for risk management and risk management systems as part of its in-house rules. NSK classifies and organizes risks identified by the Group into business risks, disaster risks, compliance risks, and risks to reliability of financial reporting. It designates responsible divisions that supervise the prevention of risks and countermeasures in the event that a risk materializes.

### ■ Identification of Risk

Every year, all of the business sites perform their own risk assessment, where they analyze the status of internal risk management, changes in the social environment, the frequency of risk occurrence, the size of impact, and other factors. This is done to identify risks that should be addressed and ensure appropriate responses. In addition, each business site identifies the risks that it needs to manage, and submits a monthly risk report to the headquarters in charge of risk. The Internal Audit Department then performs a Group-wide risk assessment based on the site risk assessment results, before creating the annual audit plan and conducting audits in cooperation with the Audit Committee. Monthly risk monitoring also helps confirm that the Group's risk management systems are sufficient.

By employing practices like these, the NSK Group not only prevents risks from materializing, but also strives to foster a corporate culture that is prepared to respond appropriately should a risk materialize.

## ● Status of the Development of Internal Control and Risk Management Systems

The following organizations in the NSK Group perform a critical role in the creation and operation of internal control systems and risk management systems.

### ■ Internal Audit Department

Serves as an internal audit organization, and is responsible for conducting audits to determine the legitimacy, adequacy, efficiency, etc., of operations, and for monitoring performance of operations. Also responsible for overseeing the evaluation of the effectiveness of internal controls over financial reporting.

### ■ Corporate Strategy Division HQ

Cooperates with each business, functional and regional headquarters, supports the president and CEO, and oversees and manages general risks related to management of the NSK Group. Responsible for maintaining and enhancing the internal control systems necessary for the operation of the NSK Group's global business.

### ■ Compliance Committee

Creates policies designed to strengthen the compliance of the overall NSK Group, sets and promotes measures to strengthen compliance to realize these policies, and monitors and supervises their implementation. Periodically reports to the Board of Directors on the progress of these activities.

### ■ CSR Division HQ Compliance Enhancement Office

Responsible for enacting measures to strengthen compliance, based on the policies set by the Compliance Committee. Conducts educational initiatives to ensure that the Company acts as a good corporate citizen with a sense of social responsibility in all situations, and plans, proposes, enacts, and monitors measures to ensure compliance with laws, rules, and corporate ethics. Also reports periodically to the Compliance Committee on the progress of compliance strengthening measures.

### ■ Disclosure Committee

Responsible for ensuring appropriate and timely disclosure of important corporate information that is likely to influence investors' investment decisions, based on the relevant laws and regulations.

### ■ Crisis Management Committee

Responsible for preparing and strengthening the management system against major risks to the Company, such as natural disasters, pandemics, or major accidents, in order to prevent such risks from arising or minimize damage, also responsible for leading a swift and appropriate response in the event of a disaster.

### ● Internal Control over Financial Reporting

The Internal Audit Department assessed the status of design and operation of internal control over the NSK Group's financial reporting for the year ended March 31, 2016. Based on this assessment, the Company concluded that its internal control over financial reporting was effective. The Group also obtained an audit certification (unqualified opinion) from its external auditing firm evaluating the assessment process as effective.

### ● Responding to Disaster Risk

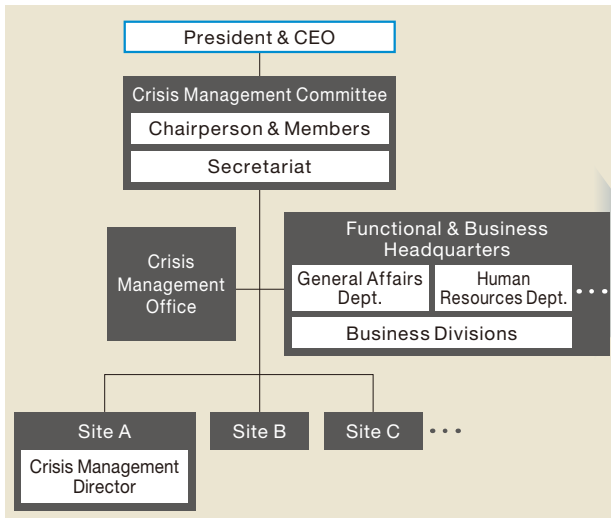
#### ■ Crisis Management Systems for Disaster Risk

The NSK Group has established a permanent Crisis Management Committee to oversee Group-wide initiatives to address disaster risk, including natural disasters, infectious disease outbreaks, and other major incidents. The Committee plans and implements measures to prevent crises and minimize damage in the event that these risks materialize, and is also responsible for establishing and improving business continuity plans (BCP).

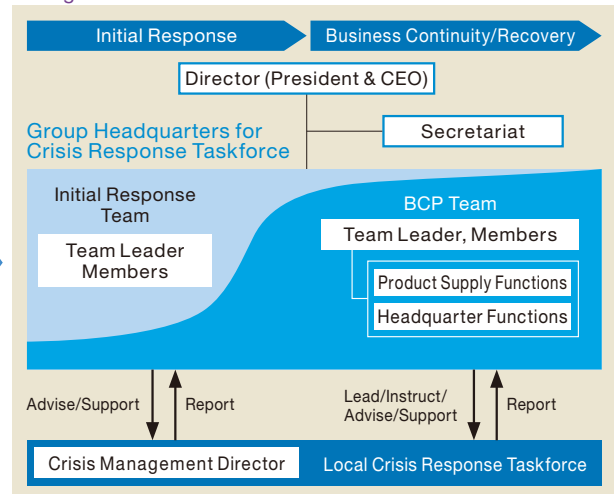
In the event of a crisis, crisis response task forces are set up at the head office as well as at the site of the crisis, and relevant departments cooperate to handle the situation quickly and accurately according to the circumstances.

#### ● Crisis Management Structure for Disaster Risks

##### Normal Times



##### Emergencies



#### ■ Strengthening Risk Response Capabilities with Business Continuity Planning

The NSK Group has established a business continuity plan (BCP) addressing the risk of major earthquakes in Japan. In fiscal 2015, the Group added concrete plans for crisis preparation, including creating a complete organizational structure and introducing the necessary procedures and tools for preparedness at all the business sites of Group companies in Japan. It also conducted drills to confirm the viability of the plan and then addressed the issues that emerged during the drills.

The Group also continued to take steps to minimize the potential for damage, including earthquake-proofing buildings and preventing equipment from falling over or moving, enhancing emergency communication and reporting systems, and adopting earthquake-resistant IT infrastructure.

In fiscal 2016, the Group continues to reinforce its risk response capabilities, while also addressing issues and expanding the scope of sites where drills are conducted.

In regions outside Japan, the Group is implementing measures to minimize damage during a crisis and establishing BCPs for severe disaster risks.



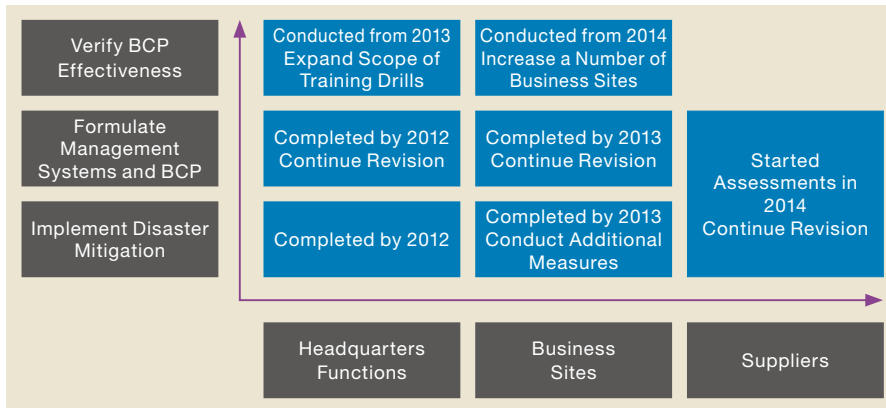
### ■ Initiatives to Build a Disaster-Resistant Supply Chain

The NSK Group has built a system for quickly identifying the extent of damage at suppliers in the event of a disaster. The Group continues to work to create a structure that will enable rapid assessment of problems after a disaster and facilitate a precisely targeted response in cooperation with suppliers. Drills are conducted regularly to ensure sites are sufficiently prepared to use the system appropriately in an emergency.

The Group has also asked major suppliers to create their own BCPs and verified their progress in order to strengthen risk management throughout the supply chain. By continuing to forge cooperative relationships with suppliers, the Group is determined to build a more disaster-resistant supply chain.

### ● BCP Formulation Status

#### Initiative Levels and BCP Formulation Scope



## Compliance

### Basic Approach

#### Acting with the Highest Ethical Standards and Striving to Maintain the Trust of Society

The NSK Group specifies the common standards of conduct that all officers and employees should adhere to in the NSK Code of Corporate Ethics. The Group aims to continue growing as a global enterprise that earns the trust of the international and local communities by following relevant laws and regulations in each country where it operates, across all of its corporate activities, and by acting with high ethical standards as a good corporate citizen.

Toward that end, the Group has put in place policies and a management system related to compliance, constantly enhances its education and training for officers and employees, conducts internal audits, and has established an internal whistle blowing system. It also strives to fulfill its corporate social responsibility through initiatives such as preventing information leaks and addressing issues related to conflict minerals.

### ● NSK Code of Corporate Ethics (Established: February 22, 2002, Revised: May 1, 2014) (Excerpts)

The NSK Code of Corporate Ethics sets out the universal approach for the Company and its officers and employees as they engage in a range of corporate activities, in accordance with the NSK Group vision and philosophy.

\* NSK Code of Corporate Ethics applies to NSK Ltd., its consolidated subsidiaries.

1. Compliance with Competition Laws
2. Compliance with Import- and Export-Related Laws
3. Prohibition of Commercial Bribery (handling of entertainment, gifts, etc.)
4. Transactions with Public Institutions and Handling of Political Donations
5. Accurate Recording and Processing
6. Prohibition of Insider Trading
7. Handling of Intellectual Property Rights
8. Prohibition of Illegal and Criminal Conduct
9. Protection of Corporate Assets
10. Handling of Confidential and Personal Information
11. Relations with Customers
12. Relations with Suppliers
13. Prohibition of Acts Discrediting Competitors
14. Prohibition of Discrimination, Cultivation of a Sound Workplace
15. Respect of Fundamental Rights at Work
16. Global Environmental Protection



Reference data is available on NSK's website.

[www.nsk.com](http://www.nsk.com) > Company > Compliance

● NSK Code of Corporate Ethics

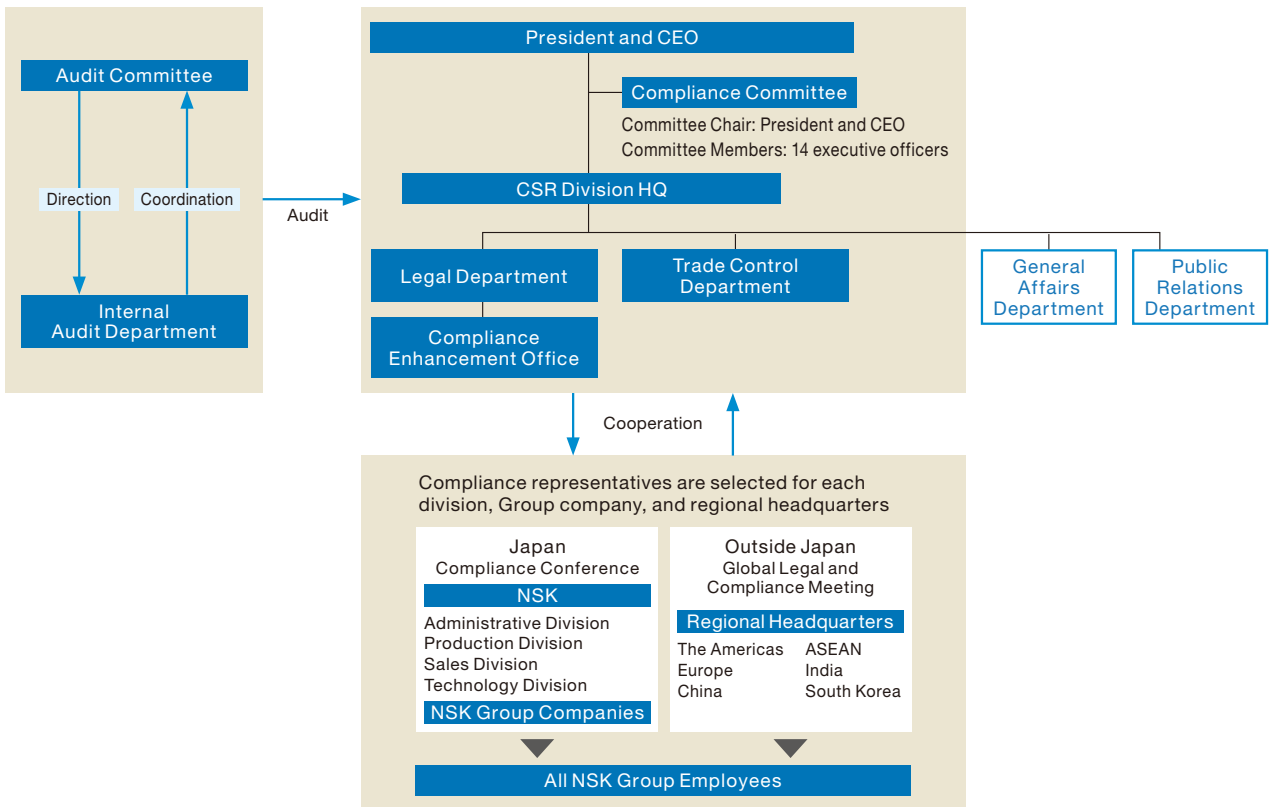
## Management

NSK has established a Compliance Committee to formulate and promote policies aimed at strengthening compliance. The committee also checks the level of policy implementation, and reports regularly to the Board of Directors.

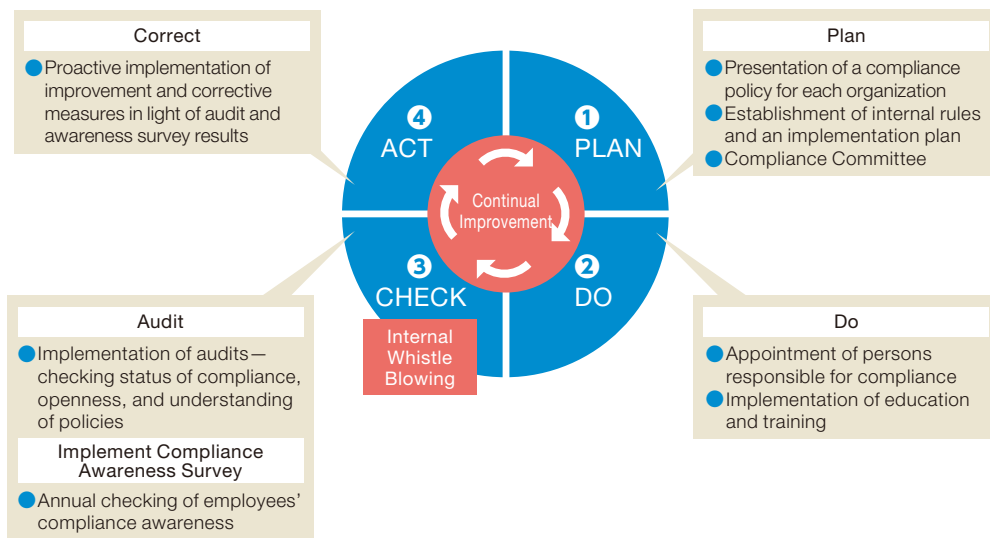
### ● Compliance Promotion System

NSK has also established a Compliance Enhancement Office under the CSR Division Headquarters and tasked it with overseeing the practical work related to compliance across the entire NSK Group based on the decisions of the Compliance Committee. The Group has appointed persons responsible for compliance in each department, site, and NSK Group company in Japan as well as each headquarters outside Japan to serve as key contact points for all information related to compliance and conduct risk management.

#### ● NSK Group Compliance System (As of July 2016)



#### ● PDCA Cycle for Continual Compliance Improvement



**Global Legal and Compliance Meetings**

In order to strengthen the global compliance system, global legal and compliance meetings were held in May and November 2015. At these meetings, members responsible for compliance from the Americas, Europe, China, ASEAN, India, and South Korea gathered at the head office in Japan and reported on activities in their respective regions and countries. They also shared information on laws that required special attention in each country, seeking ways to improve future efforts in each country. The meetings in 2015 especially focused on anti-bribery regulations and laws, how to handle a recall, and the standardization of contract examination procedures and criteria. In addition, at the Global Legal and Compliance Meeting held in May 2016, information was shared about the UK Modern Slavery Act, which came into force in October 2015.



Global Legal and Compliance Meeting

**Internal Reporting System (Internal Whistle Blowing System)**

The NSK Group operates a whistle blower “Hotline” system, available to all employees, to quickly identify and correct acts that may violate compliance-related rules. One hotline is in-house at the CSR Division Headquarters and another is staffed by an outside lawyer. The system allows users to remain anonymous and ensures they suffer no unreasonable loss from using the Hotline.

In fiscal 2015, the whistle blower hotline was contacted 26 times in Japan. After taking steps to ensure that the whistle blowers would not suffer repercussions, the incidents were quickly investigated and resolved, including implementation of corrective actions where needed.

**Compliance Audits**

NSK’s Compliance Enhancement Office visited sites in cooperation with the Internal Audit Department and conducted internal audits on the status of compliance with competition law (Japan’s Antimonopoly Act). In fiscal 2015, audits were conducted on 49 business sites and no major non-conformities were found.

Evaluations of internal controls related to compliance were also carried out. In fiscal 2015, audits were conducted on 169 business sites using a self-inspection technique and no major non-conformities were found.

**Initiatives to Strengthen Compliance**

NSK and its Group companies are making Group-wide efforts to ensure thorough legal compliance and striving to enhance business activities based on corporate social responsibility. The main compliance strengthening measures already implemented are outlined below.

Also, no major legal violations were found when checked in fiscal 2015.

**Main Compliance Strengthening Measures to Date**

\* See the NSK website for the latest information

Item	NSK Group Initiatives	Date	Item	NSK Group Initiatives	Date
Strengthening System	Established Compliance Committee (meetings held four times a year)	March 2012	Strengthening Education and Awareness Raising Activities	President issued a message to employees calling for thorough compliance efforts (followed by periodic reminders)	August 2011
	Established Compliance Enhancement Office	July 2012		Started implementing compliance e-learning for officers and employees (twice a year)	January 2012
	Started holding Global Legal and Compliance meetings (number of meetings increased from one to two per year)	August 2012		Implemented Antimonopoly Act (competition law) compliance training for sales departments, plants and Group companies	February 2012
	Started holding Compliance Conference (twice a year)	December 2012		Started monthly Compliance Newsletter	November 2012
Establishing Systems for Relevant Regulations	Began operation of a system to investigate whether or not to participate in meetings attended by competitors	August 2011	Officers and employees submitted written oaths on compliance to the president	March 2013	
	Revised the NSK Code of Corporate Ethics Established the Rules for Compliance with the Competition Law	April 2012	Implemented antitrust law compliance training for sales departments (once a year)	May 2013	
	Revised the Compliance Rules	May 2012	Established October as Compliance Month and held a slogan competition	October 2013	
	Revised Internal Regulation for Preventing Insider Trading	November 2012	Held Compliance Leadership Training for sales department leaders	March 2014	
	Distributed the NSK Compliance Guidebook to officers and employees	March 2013	Strengthening Monitoring	Initiated internal audits of sales departments relating to Antimonopoly Act (competition law) compliance	August 2013
	Revised internal rules for competition law compliance and hotline operation	June 2013		Conducted first compliance awareness survey for officers and employees including those of Group companies	August 2014
	Published and distributed the NSK Compliance Guidebook 2015	March 2015			

## Main FY2015 Initiatives

### ● Compliance Education

The NSK Group conducts a variety of mandatory compliance education and training sessions with the aim of further heightening officers' and employees' awareness of compliance issues.

In fiscal 2015, training on Japan's Antimonopoly Act was provided to 1,678 employees in 105 sessions (899 employees in 74 sessions in Japan and 779 employees in 31 sessions outside Japan). The NSK Group strives to realize fair and free business transactions by ensuring employees are aware of and comply with competition law and by prohibiting agreements with competitors regarding such matters as price, quantity, customers, and sales outlets as well as the exchange of information that could impact competition with competitors. In the future, the Group will continue this training on the Antimonopoly Act, incorporating discussion among participants.

In addition to training for sales departments, training sessions on compliance were also held for plants and engineering departments (provided to 1,475 employees in 38 sessions) and basic education on compliance was given to Group companies (provided to 143 employees in seven sessions). The Group also continued the e-learning that it conducts twice a year (taken by 7,613 employees with a 100% participation rate).

Additionally, in fiscal 2015 the Group published the NSK Compliance Guidebook and distributed it to all officers and employees throughout the NSK Group. The Guidebook is produced in multiple languages (Japanese, English, Chinese, Korean, Polish, Indonesian, Thai, etc.) so that employees can understand its content in their native language. After confirming the importance of compliance, all officers and employees submitted a written oath of compliance adherence.

Furthermore, through the NSK Supplier CSR Guidelines, the NSK Group shares its awareness with suppliers and asks them to understand and practice compliance, including compliance with competition law. (See p. 29 for details.)



NSK Compliance Guidebook

### ● Establishment of NSK Corporate Philosophy Day

Five years have passed since the day the Japan Fair Trade Commission raided NSK's offices in 2011. As of 2016, that day—July 26—has been designated as NSK Corporate Philosophy Day, in order to revisit the lessons learned from past incidents and commit to acting based on the Corporate Philosophy so no anti-competitive incident or any other corporate misconduct occurs again. On the first NSK Corporate Philosophy Day in 2016, the president gave a speech and outside instructors gave lectures.

### ● Compliance Month

In 2013, NSK began observing Compliance Month every October. The Company conducts a range of awareness raising activities during this month.

In fiscal 2015, employees were invited to submit compliance slogans. Of the 6,775 entries received, two were selected as outstanding slogans, along with three honorable mentions. Posters featuring the two outstanding slogans were designed and distributed to all NSK sites. Also, starting in fiscal 2016, NSK re-designated Compliance Month as the month beginning with the abovementioned NSK Corporate Philosophy Day. NSK will conduct a variety of compliance-related activities during this period every year.



Compliance slogan posters

### ● Surveying Employees on Compliance Awareness

NSK commissioned its second compliance awareness survey to an outside research company in August 2015 in order to confirm the compliance awareness of its officers and employees. This research company collected responses from 13,061 Japanese-speaking officers and employees working in and outside Japan. Several issues became apparent based on the survey results. In response, NSK implemented measures including strengthening compliance education for manufacturing divisions and ensuring all employees are aware of the whistleblowing system. Also, among the Group's locations outside Japan, a compliance awareness survey was given to local employees in the ASEAN region, China, South Korea, India, and Taiwan for the first time. These survey results were also analyzed and appropriate measures implemented in response. In fiscal 2016, the Group will continue conducting the survey, reaching even more employees.



Reference data is available  
on NSK's website.

[www.nsk.com](http://www.nsk.com) > Company > News > Press Releases

● Press Release

## ● Strengthening Anti-Bribery Measures

Given stronger anti-bribery regulations in many countries, the NSK Code of Corporate Ethics was revised in May 2014, in order to prevent any potential instances of bribery by NSK Group employees. In addition to tightening rules on providing entertainment or gifts to public officials, NSK also established Anti-Bribery Standards in May 2014. These standards have been rolled out globally. The Group established Anti-Bribery Rules for China and the ASEAN region in May 2015 and for South Korea in December 2015 and is striving to prevent bribery according to each country's specific laws and situation.

## Preventing Insider Trading

The Internal Regulation for Preventing Insider Trading applies to all officers and employees. It requires NSK and its Group companies' officers and employees to submit a form whenever they buy or sell NSK shares. Awareness of this regulation is being promoted in e-learning programs and the Compliance Newsletter.

Additionally, in September 2014 NSK adopted an approval application system.

## Security Export Control Initiatives

The NSK Group has strengthened its system of controls for preventing the export of products and leakage of technology related to the development, manufacture, and use of weapons, based on Japan's Foreign Exchange and Foreign Trade Acts.

In fiscal 2014, NSK in Japan started improving the technical information regime regarding plant machinery. In addition, NSK sought to reinforce the shipment regime, including inspecting the customs entry results of controlled products. In fiscal 2015, NSK developed and started using a technology provision inspection system associated with equipment maintenance and overhaul as well as a drawing inspection system associated with the procurement of equipment from outside Japan. In fiscal 2016, NSK plans to continue such initiatives and extend the scope of items subject to management.

## Complying with Regulations for Disclosure of Conflict Mineral Information

### ■ Basic Approach

NSK's procurement policy seeks to ensure that its entire supply chain is free from any payment to anti-social armed forces engaging in human rights violations.

Whenever the possibility of such payments is discovered, NSK takes measures to avoid the use of the parts, raw materials, or other supplies concerned.

### ■ Action Update

The Disclosure Rule under the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act in the United States requires an annual survey and disclosure of information on the status of use of four conflict minerals (tin, tantalum, tungsten, and gold) originating in the Democratic Republic of the Congo and surrounding countries. Its goal is to cut off the source of funding for armed groups and rebels involved in human rights violations. This rule took effect in January 2013. NSK is not listed on a U.S. stock exchange and so is not subject to these rules. Nevertheless, NSK has adopted a policy of avoiding the use of conflict minerals and is working with its suppliers on this issue.

In 2013, NSK added an article concerning conflict mineral initiatives to the NSK Supplier CSR Guidelines in order to communicate this policy to suppliers. In fiscal 2015, the Group's supplier survey found no evidence that NSK's suppliers used conflict minerals. The Group will continue to conduct surveys with suppliers in fiscal 2016.



Reference data is available  
on NSK's website.

[www.nsk.com](http://www.nsk.com) > Company > Compliance

● NSK Compliance Guidebook 2015

**Building a Robust Information Security Governance System**

In June 2003, the NSK Group issued the NSK Basic Policy on Information Security as well as Rules of NSK Information Management. Subsequently, it has provided education on security measures for IT devices to officers and employees and taken other steps to strengthen security from both hardware/software and human perspectives.

Meanwhile, there have been several recent scandals worldwide involving leakage of personal information and corporate secrets. This is sparking calls for more rigorous laws and regulations on information security. In response, the NSK Group is developing a global approach to strengthening its information security measures in order to make them more comprehensive and ensure that they cover all business operations. In April 2015, the Company established a new Information Security Enhancement Office under the Corporate Strategy Division Headquarters and started a number of projects to raise the level of information security throughout the Group. It also established security management committees in each region and strengthened global cooperation.

In fiscal 2016, NSK will further improve its infrastructure for increasing information security and continue to strengthen its cyberattack countermeasures.

**Information Security Governance System**



## Supply Chain Management

### Basic Approach

In order for a company to grow sustainably, it must be aware of and live up to its social responsibilities. NSK works hard to meet the expectations of society while reinforcing the base that supports its management. In the area of procurement, NSK understands that it is vital to build a shared awareness with suppliers and to pursue CSR initiatives with them, in tandem.

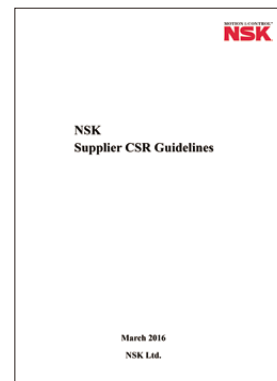
### Establishing Relationships of Trust with Suppliers

Recognizing that mutual development with suppliers is important, the NSK Group works at establishing solid relationships of trust—long-term cooperative relationships. The Group shares its procurement policy and emphasizes the importance of CSR with suppliers at briefings and using other means, pursuing greater understanding through mutual communication. Conversely, the Group takes requests from suppliers seriously and strives to ensure fair and impartial business transactions.

### CSR Procurement Initiatives

NSK publishes and distributes the NSK Supplier CSR Guidelines and asks its suppliers to provide safe products, comply with laws and regulations, and pay consideration to matters such as environmental protection, human rights, safety, and health. In response to the UK Modern Slavery Act, which came into force in October 2015, NSK partially revised the NSK Supplier CSR Guidelines and published the third edition in fiscal 2015 in an effort to do more to prevent human rights violations throughout the supply chain. In fiscal 2016, the Group will ensure that suppliers around the world are aware of the revised contents and will implement self-assessments based on the Guidelines.

See p. 74 for information about the NSK Group's green procurement initiatives.



NSK Supplier CSR Guidelines

### Business Transactions with Suppliers

The NSK Group obtains the understanding and acceptance of the NSK Supplier CSR Guidelines and the NSK Green Procurement Standards from all suppliers when establishing a new business relationship.

The Group also regularly gives a CSR questionnaire to existing suppliers to investigate compliance items and their status of the achievement. NSK feeds the questionnaire results back to suppliers and requests that they continually step up their CSR activities. Additionally, environment, society and governance (ESG) clauses are included in basic transaction agreements.

Related information

PP. 39-40 Initiatives Aimed at Enhancing Supplier Quality



Reference data is available on NSK's website.

[www.nsk.com](http://www.nsk.com) > Sustainability > Initiatives in the Procurement

● Basic Procurement Policy ● NSK Supplier CSR Guidelines

Chapter  
**2**

# Research and Development

## Setting the Future in Motion with R&D

Balancing prosperity with reduction of environmental impact is a challenge in establishing a sustainable society. That is why all manner of things that support society, such as motor vehicles and home appliances, must be made safer and cleaner. R&D is the core driver of this kind of progress. As the world continues to change dynamically, companies are expected to pursue growth in step with the evolution of society by developing more advanced technologies and products.

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- **R&D Infrastructure** .....P. 32
- **Mid-Term Targets (FY2016 – FY2018)** ...P. 32
- **Main FY2015 Initiatives** .....P. 32



## Basic Approach

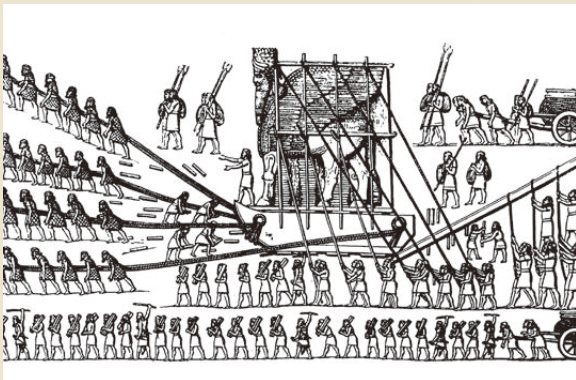
The NSK Group engages in R&D based on its core technologies of tribology (the science of friction and lubrication), materials, numerical simulation, and mechatronics. NSK incorporates cutting-edge expertise and technology into these unique core capacities in order to create further advancement. This process yields original solutions for customers and ensures the timely supply of much-needed new products to the market. This is exactly the type of social contribution called for by NSK's corporate philosophy.

### R&D at NSK: Applying 100 Years of Technology to Set the Future in Motion

For the 100 years since its establishment in 1916, NSK has constantly pursued innovation of technology and enhancement of quality. NSK has grown to become a leading company in bearings, automotive parts, and precision machinery and parts on the foundation of its four core technologies: tribology, materials, numerical simulation, and mechatronics.

#### Tribology

Improving Performance by Optimizing Friction



Tribology is the study of friction and wear of contact surfaces in relative motion, such as rotating parts that endure enormous forces with a thin oil film. Severe operating conditions are optimized through lubrication and surface treatments developed by NSK, resulting in superior performance for applications requiring low friction, high-speed rotation, quiet operation, or enhanced durability.

#### Numerical Simulation

Turning Blind Risk into Trusted Reliability



In the past, accuracy and reliability in product development were achieved with experience-based design and longer testing periods. NSK's simulation technology allows for virtual validation to accelerate design and production. Extreme conditions or innovative designs that defy previous expectations can also be evaluated and analyzed.

#### Materials

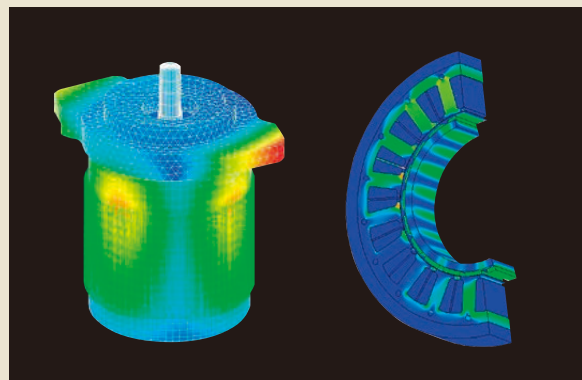
Superior Performance for Any Application



Materials research and development affects nearly every aspect of product performance. Through careful selection of material composition, heat treatment, and use of ceramic materials, NSK enables optimization of application performance. This may be through improvements in function, endurance, reliability, or even through improvements in cost effectiveness or production efficiency.

#### Mechatronics

Technology Supporting People for a Safe and Comfortable Future



Mechatronics refers to the combination of mechanics and control technologies. NSK has cultivated knowledge of mechanics through years of product development and production. This knowledge is used in conjunction with motors, sensors, and circuits to develop mechatronic systems that add new functions, improve reliability, and increase performance in various industries while also improving convenience and safety in our daily lives.

## R&D Infrastructure

To increase its technical capabilities on a global level, NSK created the Technology Development Division Headquarters as an organization under the direct control of the president. It engages in tasks such as the planning and implementation of technology strategy, the control and management of technology-related risks, and human resources development. The Core Technology R&D Center and the New Field Products Development Center, which were set up under the Technology Development Division Headquarters, carry out R&D to meet society's needs and customer requests while collaborating with outside research institutions.

### ●Global Technology Development Structure

NSK operates technology centers in Japan, Europe, the Americas, and Asia to flexibly and swiftly respond to customers' wide-ranging needs in each region. At these technology centers, experts in various fields engage in the development of new technologies and next-generation products. Meanwhile, they also strive to enhance technical services while sharing information globally.

## Mid-Term Targets (FY2016 – FY2018)

To meet the needs of customers and society, the NSK Group will create new value by developing new fields and investing in new technology while assessing market trends, such as those in the evolution of automotive technology, IoT,\* social infrastructure, healthcare, and robotics. In terms of production, the Group is advancing the creation of smart factories, pursuing the practice of next-generation manufacturing.

\* IoT: Internet of Things. A paradigm for creating new value by gathering and analyzing data through the Internet from all kinds of things, including motor vehicles, home appliances, and industrial equipment.

## Main FY2015 Initiatives

In fiscal 2015, the final year of the Fourth Mid-Term Management Plan, the NSK Group worked at the development of new technology and new products for growth with a focus on profitability. The Group also focused on the development of a global technology system as a concrete means of strengthening its corporate fundamentals. NSK spent around 11.2 billion yen on R&D in fiscal 2015.

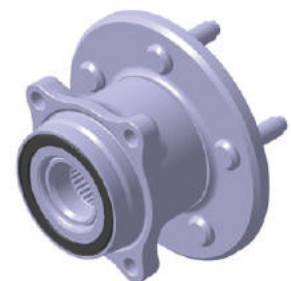
### ●Development and Deployment of a Global Bearing Design System

Customers' technological requirements, including products that are more sophisticated, lighter, and have lower friction, are becoming more and more exacting. Meanwhile, requests for product safety and reliability are also becoming more demanding.

NSK conducts its own customer satisfaction survey, in which "global technical support" and "shorter estimated delivery times" have surfaced as issues. To meet these requests and improve its customer service, NSK has developed a system that automates the checking of analysis and design value at the design phase and deployed it to its technology centers worldwide to serve as a single global bearing design system.

When product specifications requested by a customer are input based on design standards, this system automatically performs technical calculations and produces a 3D product model. Using this 3D model, the system automatically produces drawings after conducting strength verification and interference checking based on analysis using FEM.\* This enables the reliable prevention of human error in the design phase and enhancement of design quality. By deploying the system to its technology centers around the world, NSK has been able to standardize and streamline design, leading to drastic reductions in design lead times.

\* FEM: Finite element method. A method for analyzing factors such as the strength of a product based on approximate calculation.



A 3D model produced automatically by the bearing design system

### ●Innovation of Production Technology

The NSK Group's pursuit of technological innovation includes areas such as production facility design and product processing technology. The Group works hard to achieve maximum production with minimum labor and energy resources.

Development departments and production departments are cooperating in efforts to develop the most compact production equipment possible and to replace things like hydraulic machinery and motors used in existing equipment with the latest high-efficiency models.

## ●Development of Technical Human Resources

The NSK Group takes a global approach to technology dissemination and human resources development. NSK established the NSK Institute of Technology (NIT) in 2007 to develop its global technical human resources. At NIT, curricula and expected achievement levels are set separately for each faculty and academic year, and systematic education is provided using an exam-based credit system. (See p. 47 for details.)

## ●Collaboration with Outside Research Institutions

Apart from pursuing independent R&D, NSK also engages in joint projects with a variety of outside research institutions. By incorporating outside technology and perspectives into its own areas of expertise, the NSK Group aims to expand the scope and reach of its R&D.

One such example is NSK's participation in an R&D project aimed at increasing the commercial viability of wind power generation. NSK's partner is the New Energy and Industrial Technology Development Organization (NEDO), a national R&D organization in Japan. With renewable energy gathering more attention, NSK is conducting tests using wind turbines already in operation, studying ways to improve capacity utilization by making maintenance more efficient. Another goal of the project is to develop a monitoring system that can ascertain equipment problems and monitor life span of parts.

## NSK Products

### (1) Bearings for Railcars

In addition to delivering safety and reliability, railcars are also expected to get smaller and lighter in order to enable higher speeds and greater energy savings, while also ensuring ease of maintenance. NSK has contributed to the progress of railcars through the technical capabilities it has cultivated over its 100 years in business. NSK bearings are used in the cars of the Hokkaido Shinkansen line in Japan, which went into service in March 2016.

<http://www.jp.nsk.com/company/presslounge/news/2016/press0316a.html> (in Japanese only)



Axel bearings

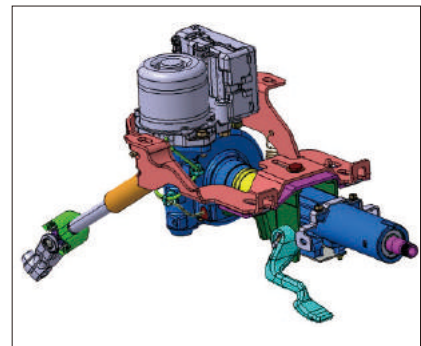


Bearings for gear boxes

### (2) Electric Power Steering

In the fight against climate change, there is strong demand for greater automotive fuel economy performance. Electric power steering (EPS) is said to improve fuel economy by 3% compared to hydraulic power steering. Additionally, electronic control-based drive assist helps improve the automotive environment, safety, and comfort. In January 2016, NSK developed an EPS system equipped with ACTIVE ON CENTERING™ control that changes the assisting force so that drivers can turn the steering wheel without feeling stress.

<http://www.nsk.com/company/presslounge/news/2016/press0203a.html>



### (3) Guidance Robot

Since 2004, NSK has been leveraging its mechatronics technology to pursue R&D into human-assisting guidance robots that help people in their day-to-day lives, seeking to help build a society where all people can live freely in safety and comfort. In fiscal 2016, it further refined the LIGHBOT™, a guidance robot for avoiding obstacles that is also equipped with a navigation function that helps people such as the elderly or those with visual challenges move around inside hospitals and other facilities. At the Special Zone for Robotics Industry, located in the Sagami area of Kanagawa Prefecture, NSK conducted tests with assistance from the prefectural government and in cooperation with hospitals, identifying issues and amassing knowledge for practical application.

<http://www.jp.nsk.com/company/presslounge/news/2016/press0223a.html> (in Japanese only)

<http://www.nsk.com/company/presslounge/news/2015/press1202d.html>



Chapter  
**3**

# Quality Assurance

## Creating Quality to Earn the Confidence of Society

Industrial products that support today's affluent lifestyles must perform their prescribed functions safely and reliably. As the advance of technology and globalization continues to accelerate, companies are expected to contribute to the growth of the broader society by providing high-quality products and advanced technologies that meet the specific needs of consumers across a range of countries and regions. With a constant focus on the customer's point of view, and an eye on trends in society, NSK will seek to deliver this contribution by practicing "quality-first manufacturing," which is the foundation of safety and reliability.

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- **Overview of Activities and Main Initiatives in FY2015** .....P. 36

# Creating Quality to Earn the Confidence of Society

## NSK's Approach

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

### Quality Assurance Vision 2026

NSK put in place the Quality Assurance Vision 2026 as a part of efforts to identify specific targets through 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 safety and peace of mind 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

Contribute to Customer Safety, Security, and Confidence

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

- Contribute to society by delivering total quality
- Maintain an approach to quality that customers will evaluate highly
- Ensure all employees think and act based on the quality-first principle according to high-quality ethics

#### Action Guidelines

- Put the customer first
- Be honest
- Provide 100% good products and services

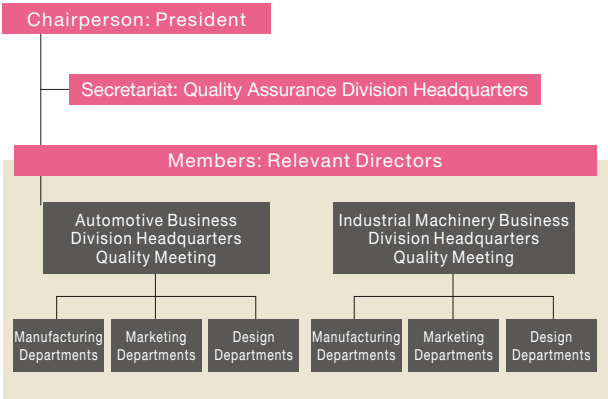
## Management

### Quality Assurance Organization

To strengthen Group-wide initiatives, NSK Group management checks the status of quality control and directs the needed initiatives in a top-down manner at the Quality Board Meeting, which is chaired by the president and composed of directors in charge of each business division headquarters. NSK has also established quality committees in each business division headquarters and is working to strengthen quality improvement efforts through cooperation among the manufacturing, sales, and design departments.

Moreover, the Group has established quality assurance departments in Europe, the Americas, China, and ASEAN as well as in other areas. This has reinforced the Group’s global quality assurance organization by providing support tailored to the needs of customers in each country and region. Regular annual global meetings and biannual regional meetings are held in an effort to strengthen monitoring, audits, and the support structure in each region while sharing information globally. In the event of a problem with a product or service, information can be provided quickly to customers. The relevant departments are brought together, and they take swift and appropriate countermeasures to prevent the problem from spreading. The causes are promptly investigated and measures are taken to prevent reoccurrence.

#### Quality Board Meeting



#### Global Quality Assurance Organization



## ● Quality Management Systems

The NSK Group is obtaining ISO 9001 and ISO/TS 16949\* certifications for quality management systems and produces high-quality products that meet customer demands at business sites conducting development, design, and manufacturing (see pp. 38, 82-83 for details). Additionally, the effectiveness of the quality management systems is verified through regularly conducted third-party audits and internal audits. When problems are discovered, appropriate corrective actions are taken, and the level of quality initiatives is continuously improved.

\* ISO/TS 16949 is aligned with ISO 9001, the criteria for quality management systems set by the ISO (International Organization for Standardization), with the addition of quality system requirements for automotive-related products.

## Mid-Term Targets:

### ● Safety, Security, and Reliability in Terms of Market Quality and the Customer's Appraisal of Quality

NSK is committed to enabling employees to work with enthusiasm while staying abreast of social trends, to making products that customers enjoy using, and to ensuring that the Company grows sustainably. While continually reinforcing its global quality assurance system, the NSK Group will carry out the initiatives shown below, in accordance with its mid-term plan.

#### ● 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\*<sup>1</sup> responsibility system
4. Reasserting strict adherence to quality control basic matters
5. Enhancing site control ability based on the 5 GEN-Principle\*<sup>2</sup>

\*<sup>1</sup> Field quality refers to the quality products display during actual use by end users.

\*<sup>2</sup> A set of Japanese principles that focus on "GEN-ba," the ACTUAL frontline; "GEN-butsum," 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.

## Overview of Activities and Main Initiatives in FY2015

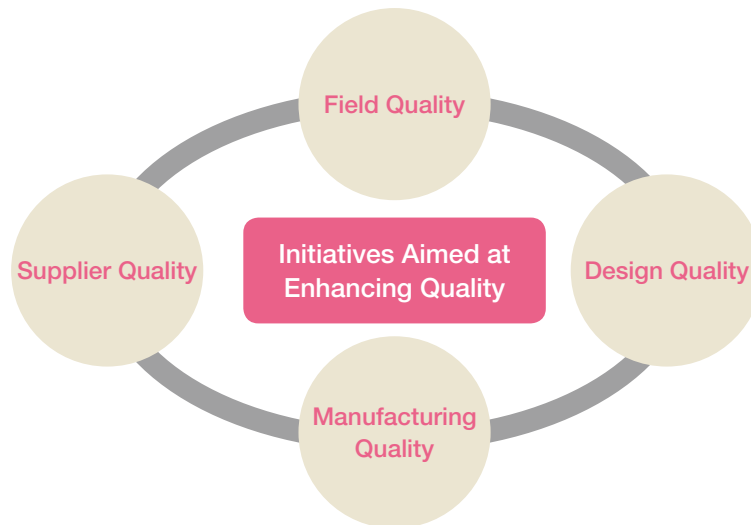
In fiscal 2015, the NSK Group conducted activities based on the Three Pillars of NSK Quality Assurance (shown below). The Group is working toward "establishment of corporate fundamentals appropriate for a company with net sales of 1 trillion," which is a goal set out in the Fourth Mid-Term Management Plan, and increasing the level of its quality management is a key part of this effort.

#### ● Three Pillars of NSK Quality Assurance

1. **NSK Product Development System (NPDS)**  
In order to quickly transform new orders into reliable, stable production, the NSK Group is promoting initiatives that build quality into each process.
2. **NSK Quality No. 1 (NQ1) Program**  
The NSK Group is promoting initiatives to realize stable production and ensure zero defects.
3. **Human Resources Development**  
The Group is promoting human resources development in order to build a stronger foundation for quality creation.

## Initiatives to Achieve Higher Quality

The NSK Group recognizes that quality can be classified into the field, design, manufacturing and supplier components. On this basis, the Group makes every effort to enhance quality in order to garner the high acclaim of customers.



### ● Initiatives Aimed at Enhancing Field Quality

As a company that services the manufacturing sector, the NSK Group works diligently to achieve a level of quality that meets the expectations of the market and end users. Looking beyond the level of quality that satisfies its direct customers in the manufacturing industry, the Group strives to accurately grasp the needs of end users while putting in place a structure that is capable of advancing manufacturing proposals.

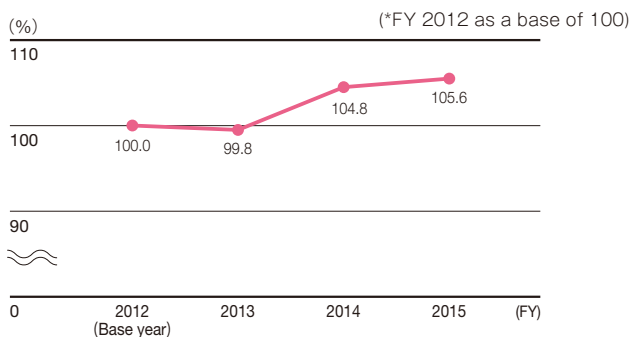
#### ▣ Gathering and Analyzing Information on Market Trends and Feedback Initiatives

To accurately understand market trends, the NSK Group gathers and analyzes information, such as that on quality defects, in an effort to monitor field quality. This information is managed and fed back to all relevant departments, including development and design, manufacturing, and sales. This effort increases customer satisfaction by leading to a higher level of product and service quality, preventing quality problems, and facilitating rapid responses if any defect does happen to occur.

#### ▣ Customer Satisfaction Survey

The NSK Group has been conducting a periodic customer satisfaction survey since fiscal 2012, with the aim of increasing customer satisfaction with NSK's products and services, as an indicator for managing field quality. Relevant departments, such as sales, engineering, and manufacturing, strengthen their initiatives based on the survey results.

### ● Degree of Customer Satisfaction



**Highlight** Commendations of Quality from Customers

The NSK Group has received letters of appreciation and commendations from customers, including manufacturers, in recognition of its efforts over many years to increase quality.

- Jul. 2015: "Award for Excellence in Quality" from Aichi Machine Industry Co., Ltd.
- Sep. 2015: "Zero Award" for level of quality provided to the Honsha Plant of Toyota Motor Corporation

● **Establishment and Use of a Customer Management Database**

The NSK Group provides technical support related to design and expertise in the use of products, in order to accurately meet customer requests. The Group has also established a database for accumulating information such as records of how customer requests were met. The database is used to improve products and services by bringing together information from around the world.

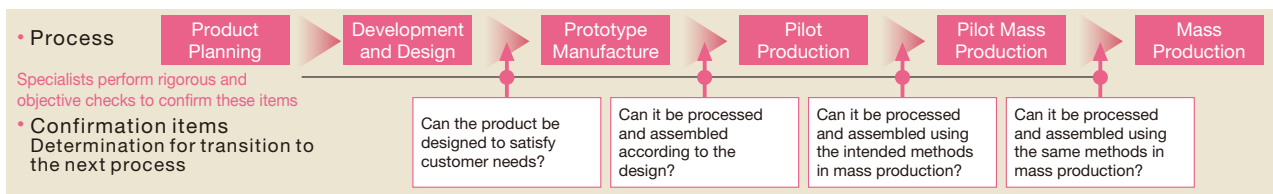
● **Initiatives Aimed at Enhancing Design Quality**

The NSK Group is endeavoring to enhance the quality of its design capabilities by incorporating feedback from customers in the marketplace. The Group makes every effort to design products with a superior level of quality by meeting its own unique level of quality targets over and above the basic quality that customers have come to expect.

■ **NPDS: Building Quality into Each Process**

The NSK Group has deployed its unique NSK Product Development System (NPDS) globally. The 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. In fiscal 2015, the Group fully rolled out its Quick DRs—efficient design reviews focused on the parts of the design that have been revised—making them a part of daily practice.

● **Outline of the NPDS**



■ **Training of Reviewers**

To improve design quality, NSK has established its own qualifications and is training experts around the world to perform design reviews (DR). These experts, who are divided into ranks such as DR Pilot and DR Crew depending on their proficiency level, identify issues related to product quality from the design phase, which leads to prevention of problems down the road.

● **Initiatives Aimed at Enhancing Manufacturing Quality**

The NSK Group works diligently to deliver a consistently high level of product quality that meets customers' requirements.

In addition to building manufacturing processes that focus on the 4Ms (manpower, machinery, materials and methods), the Group is looking to enhance the quality of its products.



### ▣ NQ1 Program for Stable Production with Zero Defects

As part of its NQ1 program, NSK is engaged in improvement activities aiming for the very best quality, with zero defects, called “*Dantotsu* activities.” Each plant in Japan decides initiative themes and carries out various improvements targeting zero defects on a test line. In fiscal 2015, study sessions bringing personnel from all the plants together have been held regularly to deepen understanding of case studies from other plants and further enhance initiatives. Initiatives that were effective on the test lines are quickly rolled out to other lines to reduce defects efficiently. The accumulated know-how in Japan is also deployed horizontally to the main manufacturing sites around the world, enabling the Group to standardize quality at a high level.



NQ1 program

### ▣ Self-Audit System for Heat Treatment Processes Rolled Out Worldwide

The NSK Group has created a self-audit system to prevent product defects. With the globalization of production, in fiscal 2015 the Group focused on the worldwide rollout of its self-audit system for heat treatment processes. Under the system, the persons in charge visited production sites and suppliers several times to conduct onsite audits. Only personnel that have achieved a high level of expertise are designated as in-house auditors.



Education on self-audit system for heat treatment processes

### Highlight Smart Factory Concept and the “Quality Cockpit”

The NSK Group is taking initiatives aimed at the creation of smart factories that will analyze a variety of information from production processes to prevent the production of defective products and establish a flexible manufacturing system.

As part of those initiatives, the Group is adopting the Quality Cockpit, an effort to improve productivity by preventing the production of defective products instead of responding after they are produced, by analyzing large amounts of data measured during equipment operation and parts processing and visualizing it to monitor signs of trouble.

### ● Initiatives Aimed at Enhancing Supplier Quality

High-quality materials and parts, as well as other key inputs including various types of oils and greases, are essential in the manufacture of high-quality products. The NSK Group engages in a wide range of activities aimed at enhancing quality based on strong ties of mutual trust with suppliers.

#### ▣ Quality-Focused Procurement

The NSK Group conducts receiving inspections on parts and raw materials delivered to its business sites in each country and region. It also visits suppliers to verify their quality management. When starting business with new suppliers, it not only verifies the quality of procured items but also the systems and actual state of quality management at the design and production stages. By taking all of these steps, the Group ensures that its procurement is focused on quality.

#### ▣ Sharing Issues with Suppliers

The NSK Group provides education on continuous improvement activities while sharing issues and engaging in initiatives to increase quality with suppliers through regularly held technical meetings and quality meetings.

### ▣ Visiting Suppliers

The NSK Group strives to increase the level of quality while deepening mutual understanding with suppliers by sending personnel from the NSK headquarters, regional headquarters, and plants around the world to visit suppliers and audit their processes and exchange information.

In fiscal 2015, NSK sent a questionnaire to suppliers of parts and raw materials in Japan that would be difficult to substitute from the standpoint of quality assurance, asking them to conduct self-assessments to confirm the progress of initiatives on matters such as response system in the event of an earthquake and envisioned damage and countermeasures (see “Initiatives to Build a Disaster-Resistant Supply Chain” on p. 23 for details). NSK also conducted audits on and provided guidance to suppliers requiring improvement in their level of quality.

## Developing Human Resources Critical to Superior Quality

The NSK Group provides a range of education and training programs to develop the human resources needed to ensure manufacturing of superior quality. All divisions work together to create products and services that deliver ever higher levels of quality and customer satisfaction.

### ● Overview of Quality Education

NSK provides appropriate quality education according to each employee's rank and department.

#### ● Rank-Based and Department-Based Quality Education System

Rank	Plant	Technology Division	Sales Departments	Management Division
Senior Managers/ Managers	Quality Knowledge Education			
Assistant Managers	Quality Management Education	Quick DR (DRBFM) <sup>*2</sup>	Sales Quality Education	
Staff Skilled Operators	NSK Manufacturing Education and Training Centers <sup>*1</sup> (beginner / intermediate)	NSK Institute of Technology <sup>*3</sup> (2nd/3rd years)		
Group Leaders (Plants only)	Quality Education Why Analysis	—	—	—
New Employees	New Employee Education / 7 Tools of QC / FMEA & FTA <sup>*4</sup>			

\*1 NSK Manufacturing Education and Training Centers: See p. 48 for details.

\*2 DRBFM: Design Review Based on Failure Mode. A technique for preventing quality trouble by focusing on design changes to investigate failure mode effects.

\*3 NSK Institute of Technology: See p. 47 for details.

\*4 Failure Mode and Effects Analysis, and Fault Tree Analysis

### ● Quality Education in Sales Departments

The NSK Group has been conducting Sales Quality Education since fiscal 2010 with the aim of increasing customer satisfaction by raising the awareness of quality among employees in sales departments, which are the point of contact for customers. Using lectures and e-learning, the Group attempts to instill such knowledge as techniques for practical quality management and problem solving, which can be immediately used in sales activities, in different languages.

In fiscal 2015, the Group provided education in new countries and regions that it could not provide in fiscal 2014. In regions where the education was provided in fiscal 2014, it provided education to new employees and, where necessary, had employees retake the training, under the keyword of “continuity.”



Sales Quality Education

### ●Quality Month

In order to create products that customers can select with confidence, NSK recognizes that it is essential for every employee to maintain a high level of quality awareness.

The NSK Group holds Quality Month, which promotes awareness of product quality, to realize a range of quality improvements in November every year. During Quality Month, employees are encouraged to submit ideas for an NSK quality slogan that captures their concept of quality, and the best slogans are selected for display on posters at all sites. Priority initiatives are set by each plant according to a Group-wide theme determined by the Quality Assurance Division Headquarters, and employees work hard to further improve quality.



Quality slogan posters

Chapter  
**4**

# Good Labor Practices

## Creating a Dynamic Work Environment

As globalization advances, there are more and more opportunities for exchange among different peoples and nationalities. It has never been more important to work together to achieve harmony and mutual benefit for all countries and regions, and the basis of this must be deeper mutual understanding. Companies, for their part, must create workplaces where employees respect the diverse cultures and practices of different countries and regions, embrace diversity in the workforce, and can work safely, with vitality, and with sensitivity to the unique characteristics of the local area.

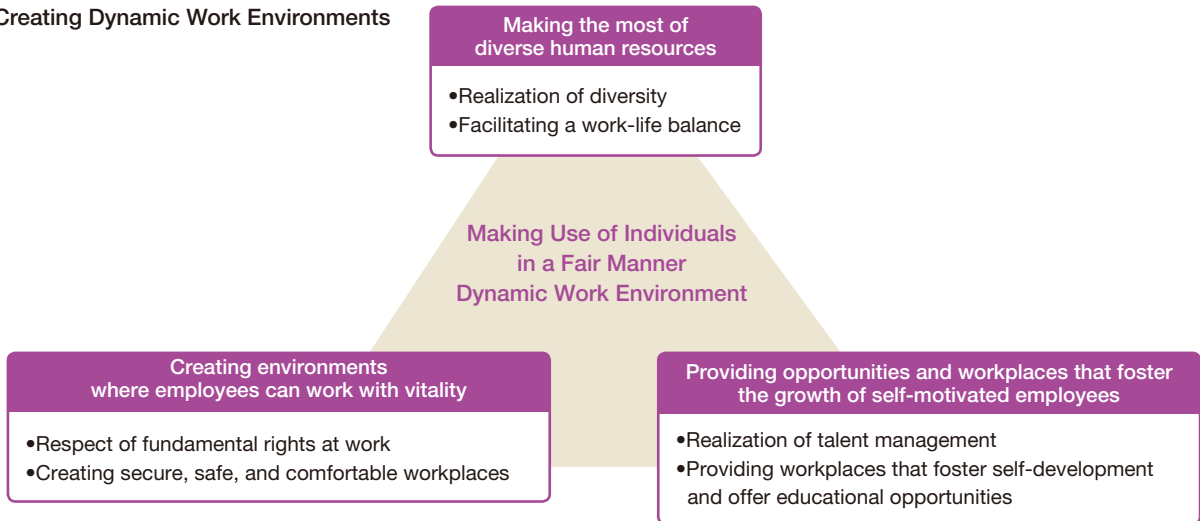
- **Creating a Dynamic Work Environment** ..... P. 43
- **Creating Safe and Healthy Workplaces** ..... P. 51

# Creating a Dynamic Work Environment

## NSK's Approach

In its Management Principles, the NSK Group clearly states its aim “to provide challenges and opportunities to our employees, channeling their skills and fostering their creativity and individuality.” The Group sees each and every employee as a corporate asset who should be given opportunities that bring out his or her individual best, and it does so by creating work environments that foster enthusiasm and job satisfaction, aiming to develop the human resources who will lead the NSK Group in the future.

### ● Creating Dynamic Work Environments

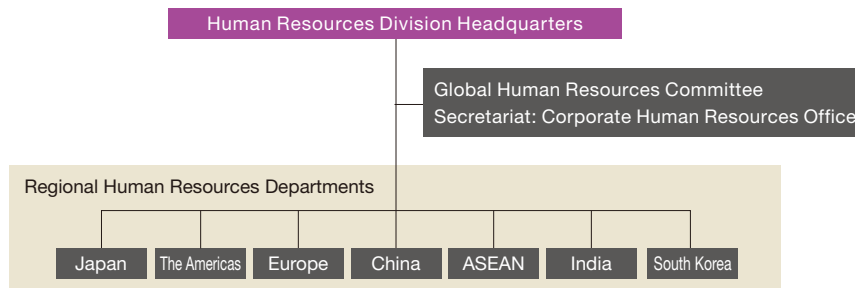


## Goal and Performance

### ● Developing the Work Environment and Human Resources Needed to Leverage a Global Management Structure

Enhancing a global business means developing human resources who make the most of NSK's global management system and developing workplaces where employees with diverse values can all play a vital role. The NSK Group works hard to create safe workplaces, promote diversity, and develop human resources with a global mindset.

### ● Organization of the Human Resources Division Headquarters



### ● FY2015 Activities

In fiscal 2015, the Global Human Resources Committee focused its HR management efforts on enhancing programs for developing successor candidates to fill key executive positions outside Japan and began to develop these candidates' competencies in leadership, a fundamental skill required in people who will take executive roles. In addition, the committee formulated an action plan designed to promote reliable performance and continuous improvement by sharing progress on steps taken to address issues in each region. Meanwhile, the Global Management College—in its fifth year at fiscal 2015—continued to train young managers selected from around the world with the aim of developing the next generation of leaders. The College carries out systematic and continual global human resources development for the NSK Group.

## Respect of Fundamental Rights at Work

### ● Basic Approach

Respecting the fundamental rights of workers is one of the most important ways for the NSK Group to fulfill its social responsibility as a corporate citizen and employer operating a global business. As such, the Group is committed to conducting business in a way that respects every individual.

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

Respecting the Universal Declaration of Human Rights, the NSK Group promotes activities based on the declaration's ideas. 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, the Group 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 Group creates workplaces where diverse human resources can work enthusiastically while working hard to provide equal opportunity in recruitment, job assignment, evaluations and other employment issues.

In addition to making the concepts with regard to NSK's approach to human rights better known among its employees, the NSK Group identifies acts to the contrary through internal audits and its internal reporting system and, when necessary, implements initiatives such as the taking of rapid appropriate action.

#### ■ Employment That Preserves the Stability of Both Society and NSK

As a corporate group that is committed to *monozukuri* (quality manufacturing), the NSK Group pursues sustainable growth. This is why the Group approaches employment from a long-term perspective and also why it believes that it is essential to continually recruit and develop outstanding human resources who will be able to carry the business forward. The Group has also established a policy to prevent big layoffs and engages in appropriate employment practices in accordance with the laws and ordinances of each country and region where a business site is located.

#### ■ Labor-Management Relations Based on Dialogue

The NSK Group regards sound labor-management relations as critical to its sustainable growth. One way in which the Group 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 are becoming better partners as they build trust by working to communicate more deeply, share views on the workplace environment and business conditions, and discuss and implement improvement measures. The NSK Group is committed to creating workplaces where employees can work vigorously.

As of March 31, 2016, 81% of the NSK Group's employees in Japan belong to the labor union. Employee representatives and senior management discuss a wide range of topics such as reasonable working hours and safety and health in an effort to enhance working environments.

## Developing Human Resources with a Global Mindset

### ● Basic Approach

The NSK Group believes that as the globalization of business advances, it is vital that employees can show their abilities in a workplace environment where they can recognize and solve common challenges, spanning national borders and cultural barriers.

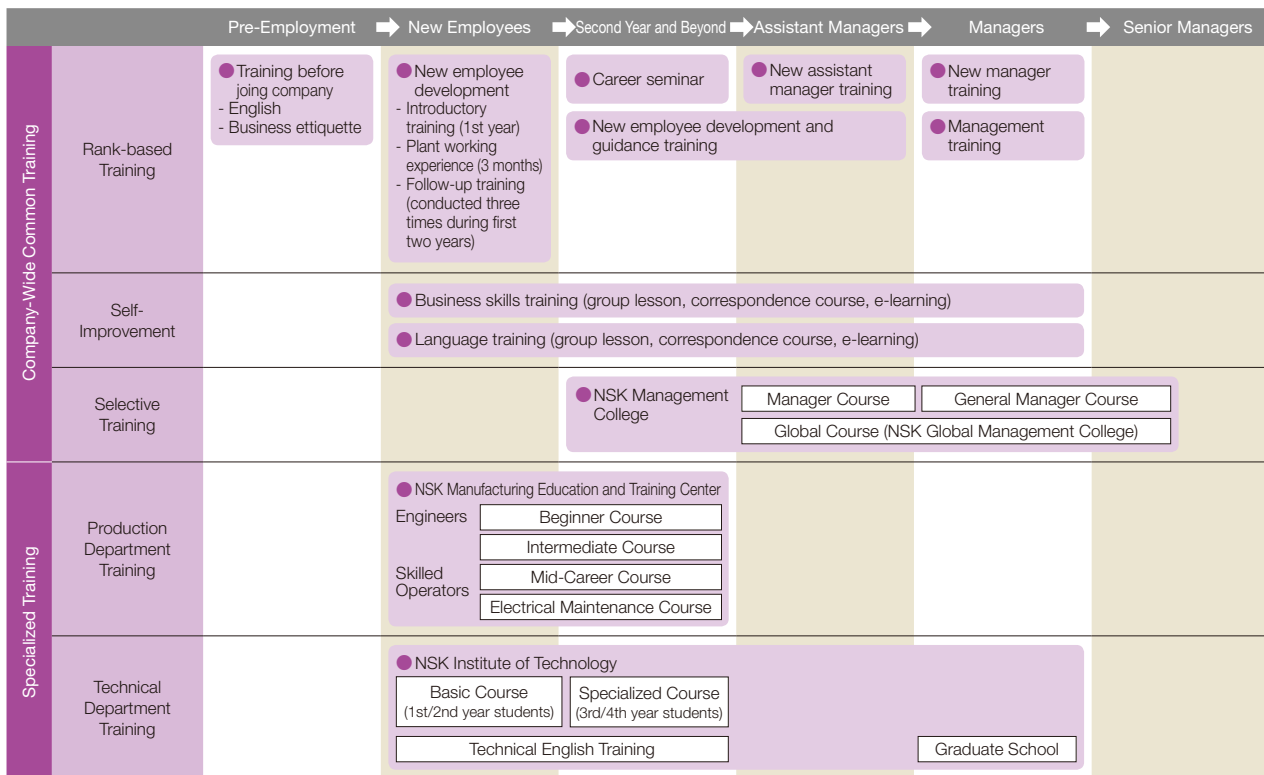
## Systems and Programs

### Program for Human Resource Development

The NSK Group sets up educational training programs in each region and provides employees with opportunities and forums that will contribute to their personal and professional development. While globally expanding its specialized training—including training for candidates selected to become the next generation of executives, the NSK Manufacturing Education and Training Center that teaches and passes on technical skills, and the NSK Institute of Technology (NIT) that provides comprehensive technical training for engineers—the NSK Group undertakes the human resource development that will underpin its business.

The Group also makes efforts to increase learning opportunities for employees by establishing education and training categories and publishing them on its intranet, while clearly describing to employees the content of various training programs, career seminar information, and educational support offerings. In fiscal 2015, the average number of training hours per-employee was 9.89 hours, and the per-employee human resources budget was 49,071 yen.

### NSK Group's Human Resources Development System



### Number of Participants in Education and Training Programs in Fiscal 2015 (in Japan)

Programs	Participants
Headquarters' Training •New employee training •Language training, etc.	1,027
Technology Divisions' Training •NIT	192
Specialized Training (Headquarters) •NSK Manufacturing Education and Training Center •Sales quality training, etc.	147
Plant Training (Conducted by Plants) •Quality education •Safety education •ISO-related education, etc.	4,823
Other •Retirement plan seminar, etc.	807
<b>Total:</b>	<b>6,996</b>

\* The total number of participants who took training programs conducted by NSK Group companies in Japan.

### Goal Management and Performance Agreement System

The NSK Group has adopted a performance agreement system as a means of aligning the trajectories of company/department goals and individuals' goals. The system is designed to allow employees to demonstrate their individuality and reach their full potential, facilitating personal growth simultaneously with company/department development.

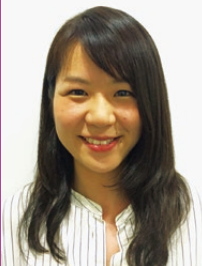
Under this system, employees meet regularly with their supervisors to set goals at the beginning of the fiscal year, verify interim progress, and conduct a results follow-up at the end of the year. The Group uses a questionnaire to determine how satisfied employees are with evaluation feedback from their supervisors, thereby checking to make sure that truly interactive communication is being achieved. In fiscal 2015, 55% of all Group employees were evaluated under this system.

## Language Education

The NSK Group uses English as its common language in order to conduct operations smoothly through active communication between employees around the world.

At the headquarters divisions in Japan and at some plants, the Group offers English-language training with external instructors. This provides employees with the opportunity to learn practical English relevant to their work. In fiscal 2015, training course participants who had shown considerable improvement in their language skills were sent to English-speaking countries and introduced to foreign-language training to learn English in more practical scenarios.

At business sites outside Japan, the NSK Group is also conducting Japanese and English courses for local employees.



### Overseas Language Training Taught Me More Than English Skills

#### Sayo Tanaka

Automotive Business Planning and Controller Department, Automotive Business Division Headquarters, NSK Ltd.

I participated in an English training program in London. The people I met at the school were wonderful and getting to know them was invigorating, since they were of many different nationalities. At first, it was difficult for me to be assertive even though people told me to not be embarrassed and go ahead and state my opinion. The thing I learned was that, even if you can speak English, you cannot have a conversation unless you have something to talk about. What you say shows who you are. Overawed by my fellow students, who talked about their dreams, gave opinions on politics, and imagined futures for themselves and their countries, I felt frustrated and embarrassed at first. The training gave me a determination to gain knowledge and be a person with her own opinions. I want to work hard to grasp market trends in and outside Japan and to express my ideas to those involved, so that I can perform my administrative work properly. I also want to make use of the English skills I have learned to conduct operations smoothly with NSK employees around the world. Furthermore, I never want to be content with where I am, but rather to keep growing by taking the present moment as a steppingstone to the future.

### Working Efficiently, Using Japanese

#### Xu Yayun

Automotive Bearing Technology Center, NSK (China) Research and Development Co., Ltd.



Japanese language classes are offered to employees of NSK's business sites in China. At the time I joined NSK I knew hardly any Japanese. Through the training I received in China, I became able to hold simple conversations in Japanese.

When I came to Japan, however, I found that the actual expressions and pronunciation used by Japanese people were quite different from the Japanese I studied in China. So, I tried to increase my vocabulary by reading Japanese books and watching Japanese dramas. I also took a Japanese language class for adults and strove to improve my Japanese abilities. Thanks to this hard work, I passed level 2 of the Japanese Language Proficiency Test.

Once I could communicate in Japanese, I could better understand the Japanese way of thinking and Japanese culture and customs. It has been a wonderful experience. Since returning to China, I have been working efficiently while cooperating smoothly with Japan through email and telephone conferences.

## Global Management College

The NSK Group offers a Global Management College program for executive candidates being developed for leadership roles around the world. In fiscal 2015, the College's fifth year, 13 employees were selected, from Canada, China, Germany, India, Japan, the Netherlands, Singapore, South Korea, Thailand, and the U.S. Sessions were held at NSK Group sites in the following order: Japan, China, India, the U.S. and Mexico. The participants gained necessary knowledge and skills in leadership through the interactive curriculum, which included lectures on business strategy and visits to customers' business sites. In just its first five years, the College has already graduated 59 people from 17 countries. These leaders are now driving NSK's business in their respective regions.



Training at a plant in Mexico



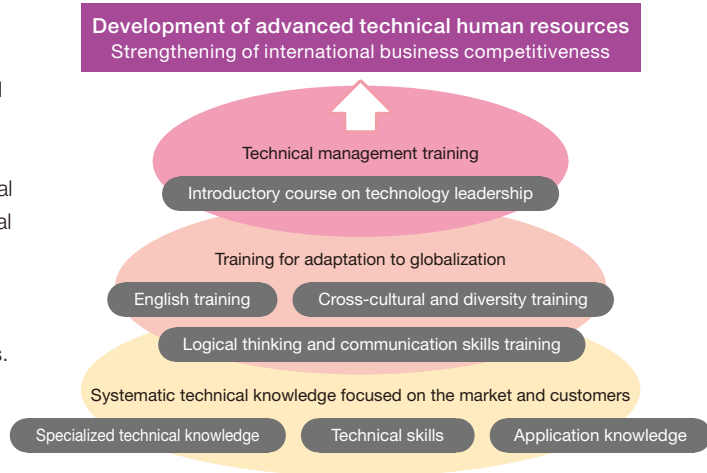
**Enhancing Training for Manufacturing Personnel**

Development of human resources with highly specialized knowledge is essential in order to continue creating competitive products. It is also important to accurately meet the specific needs of customers worldwide in order to achieve global business expansion. NSK is engaged in passing on technology and developing human resources on a global scale.

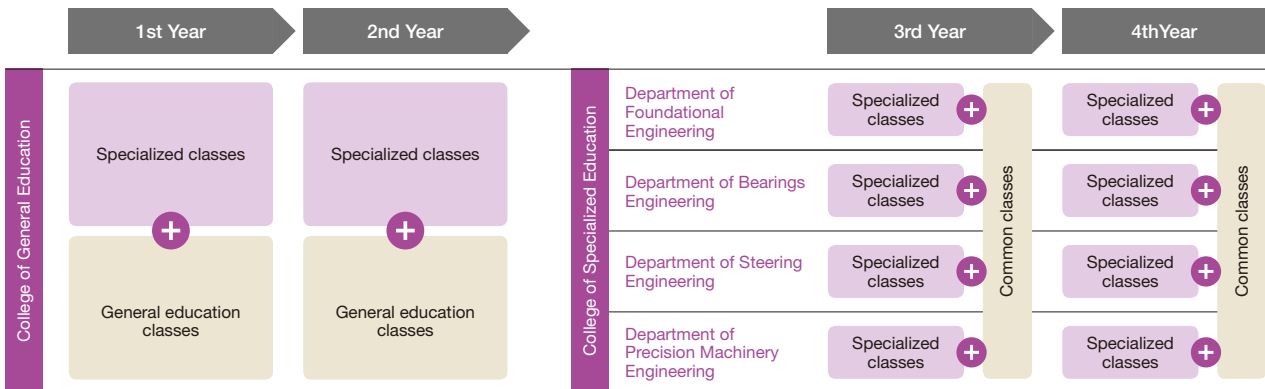
**NSK Institute of Technology**

NSK established the NSK Institute of Technology (NIT) in 2007 to develop its global technical human resources. At NIT, curricula and expected achievement levels are set separately for each faculty and academic year, and the institute provides systematic education with an exam-based credit system. NIT provides a wide range of educational opportunities, including general technical education covering topics such as specialized technical knowledge, technical skills, product knowledge, and quality control, as well as courses in logical thinking and communication skills. In fiscal 2015, 414 students enrolled in programs offered at 12 sites in 10 countries.

**Human Resources Development at NIT**



**NIT's Educational System**



**NIT's Training for Adaptation to Globalization: English Training**

Facility in English is a prerequisite for human resources with a global mindset. NIT offers a rich curriculum for mastering practical English skills in addition to support for the Test of English for International Communication (TOEIC) and e-learning.

For example, it seeks to raise speaking and listening abilities while increasing opportunities for exposure to English in practical situations such as giving presentations in English, guiding foreign visitors in English, and engaging in discussions with engineers at technology centers outside Japan via video-conferences. It also runs small-group club activities for learning English and is striving to turn English learning into an everyday affair.

### NSK Manufacturing Education and Training Centers

NSK established the NSK Manufacturing Education and Training Center at the Ishibe Plant in Shiga Prefecture in 2005 and at the Fujisawa Plant in Kanagawa Prefecture in 2006, aiming to develop frontline manufacturing experts with the ability to pass on technology and skills to others. The education of technicians, conducted in three courses on grinding/assembly, maintenance, and electrical maintenance, provides training suited to the ability and experience of each individual employee. Going forward, the centers will continue conducting the education needed to ensure that manufacturing skills are passed down and on-site capabilities are enhanced.

#### ● NSK Manufacturing Education and Training Center—Training Courses and Contents

	Course	Participants	Period	Course Content
Skilled Operators	Skilled operators (grinding/assembly)	Skilled operators	3 months	•Skills knowledge focused on the basic fundamentals of shop floor management
	Skilled operators (maintenance)	Skilled operators	3 months	•Special skills for repair/maintenance as well as shop floor management
	Electrical maintenance	Candidates for advanced maintenance staff	6 weeks + 2 months (at plant)	•Fundamentals of electrical maintenance (basic theory, programming, troubleshooting) •2 months of hands-on training at plant
Engineers	Beginner-level engineers	Engineer with 2-3 years (or equivalent) experience	6 weeks	•Fundamentals of being a plant engineer (basic engineering, basic management knowledge)
	Intermediate-level engineers	Engineer with 5-7 years (or equivalent) experience	2 weeks (2x per week)	•Knowledge for shop floor management skills for intermediate-level engineers • <i>Monozukuri</i> knowledge from the Toyota Production System

## Respecting Diversity Creating Organizations That Embrace Diversity

### ● Basic Approach




The NSK Group believes that local communities and the NSK Group can grow together if the Group develops businesses worldwide and creates stable employment. The Group is creating a corporate culture and working environments where each and every one of its diverse human resources can make the most of his or her abilities and character traits and experience job satisfaction, without limitations based on nationality, age, or gender.

### ● Initiatives in Fiscal 2015

In fiscal 2015, the Diversity Development Team (now the Diversity Development Office) redefined its mission as “to support the development of a rewarding corporate culture and working environments where each and every employee can make the most of his or her abilities and character traits,” and stepped up its activities.

### ■ Making the Most of Diverse Human Resources

Diverse human resources play active roles in many areas of operations within the NSK Group, not only in Japan. The NSK Group aims to realize optimal human resource deployment, without regard to country of origin, at manufacturing and technical sites around the world.

Related information	P. 26 Compliance Education; P. 40 Developing Human Resources Critical to Superior Quality; P. 60 Environmental Education	
 Reference data is available on NSK's website.	<a href="http://www.nsk.com">www.nsk.com</a> > Sustainability > CSR Reports  Personnel System to Support Career Advancement	<a href="http://www.nsk.com">www.nsk.com</a> > Sustainability > Creating Dynamic Work Environment  Human Resources Development Programs Underpin Growth



**NSK's Global Operations, as Seen from India**

**Yoon Yu-tae**  
NSK-ABC Bearings Ltd.

NSK Korea sends personnel to NSK Group subsidiaries outside Japan to play a part in NSK's global business operations and to help develop human resources with a global mindset. NSK Korea sent me from its Changwon Plant to NSK-ABC Bearings Ltd. (NABI) in India, where I work as a quality control manager. It has been about four years since I came to India. When I first arrived I established my own goals and objectives, and I have been working hard every day to help NABI achieve stable quality and to contribute to its development.

NSK Korea and many other NSK subsidiaries outside Japan have programs for training in or temporary transfer to Japan. But, it is very rare for a subsidiary outside Japan to send personnel to another subsidiary outside Japan, and so I think this is a really good experience for me. As I work together with Indian staff members and Japanese representatives, I am exposed to two foreign cultures (Indian and Japanese). At first it was a little bewildering, but since we have the same commitment to manufacturing bearings and share NSK's Corporate Philosophy and values, we have been able to cooperate and work together well.

During the remainder of my term here I will continue doing my best to contribute to the development of NABI. After returning to Korea, I want to make use of the valuable experiences I have had in India in order to become an indispensable person at NSK Korea.

**Participating in a Diversity Training**

**Ayako Tabuchi**  
Technology Development  
Department 1, New Field Products  
Development Center, Technology  
Development Division Headquarters,  
NSK Ltd.



In this training session I learned about the importance of diversity as well as the current status and issues in promoting the advancement of women. For one, we focused on gender differences, and female employees and their supervisors discussed what diversity is and the issues that women face based on their average trends. It was a very good opportunity to learn what supervisors think and feel about female employees, who are usually a minority in the company, and to listen to one another's opinions.

For me personally, I have spent my time in environments with a lot of men since my student days and thought that to be on an equal footing with men in the company I would have to work the same as men. By taking part in this training, I came to realize that diversity means men and women making the most of their respective strengths to increase the power of the organization overall and that women can get on an equal footing with men in a different way from men without losing their uniqueness as women.

Also, I hope that more progress will be made in creating an environment where men and women can work as equals and in enabling women who have families to envision a future for themselves as members of the company. For example, I hope that the company will solve problems such as the gaps that occur when taking maternity leave or childcare leave.

Through this training, I came to understand that NSK has the intention to be a global company that understands race, character, culture, and other aspects of diversity, not just gender, and respects and makes the most of people's unique individuality. I also felt that it is vital for each of us as employees to have this same awareness.

**Supporting Women's Careers (Japan)**

In the NSK Group, there are currently many workplaces where there are significantly fewer women than men, and the ratio of women in management positions is also low, at 1.3% (fiscal 2015, NSK non-consolidated). The Group has thus commenced efforts, such as training and exchanges of opinions, with the aim of conducting a review to expand the work options for women and improving the ratio of women in employment. Moreover, the Group is gradually proceeding with trainings on diversity, aiming to foster workplaces and a culture where employees with all kinds of attributes can feel comfortable working, regardless of gender.

**Helping to Support an Aging Society (Japan)**

Japan's population is aging rapidly. In light of changes in the public pension system, it has become a social challenge to enable workers to have access to employment opportunities even after mandatory retirement. NSK recognizes that the knowledge and skills of experienced senior employees are beneficial in growing its business. The Company's basic policy is to provide work opportunities to healthy persons willing to work after retirement. The Company has had a reemployment program since April 2001.

The Company recently revised its reemployment program, including working conditions, to ensure stability in life, augmenting the basic policy in light of Japan's Revised Law Concerning Stabilization of Employment of Older Persons, which came into effect in April 2013.

**Number of Re-employed Persons (over 60 years of age)\***

	FY2011	FY2012	FY2013	FY2014	FY2015
Seniors	325	383	441	470	505
Others (part-time employees, etc.)	34	29	29	28	25
Total	359	412	470	498	530

\* NSK and main group companies in Japan.

## ▣ Providing Work Opportunities to Persons with Disabilities (Japan)

NSK believes that one role it should perform is providing suitable work opportunities to persons with disabilities who are willing to work. An NSK special subsidiary called NSK Friendly Services Co., Ltd., in particular, provides employment opportunities where persons with intellectual disabilities can work with enthusiasm. In fiscal 2015, NSK, its main group companies, and NSK Friendly Services together employed a total of 124 persons with disabilities, for a rate of employment of persons with disabilities of 2.17%.

### ● Rate of Employment of Persons with Disabilities\*

	FY2011	FY2012	FY2013	FY2014	FY2015
Rate of Employment of Persons with Disabilities	1.97%	1.99%	2.04%	2.09%	2.17%
Legally Mandated Rate of Employment	1.8%	1.8%	2.0%	2.0%	2.0%

\* NSK and main group companies in Japan.

## Facilitating Work-Life Balance

### ● Basic Approach

The NSK Group believes that ensuring that employees sincerely enjoy both their work and their private lives, and can be enthusiastic and active, is the key to making its business even more successful. That is why the Group's basic policy is to develop an ideal working environment for all employees, regardless of gender or age. The Group always strives to be sensitive to employee needs and social changes.

In Japan, NSK recognizes that it is important to work harder than ever to accelerate support for work-life balance in order to cope with the social challenges presented by a rapidly aging society with a low birth rate. Such efforts include enhancing programs to support employees' childcare and nursing care obligations and healthy time management.

### ● Systems and Programs

#### ▣ Supporting Systems for Childcare and Nursing (Japan)

In order to reduce the number of employees resigning for childbirth or childcare reasons, the NSK Group in Japan has been improving its programs to support employees with childcare responsibilities. This includes longer childcare leave and a longer eligibility period for shorter working hours due to childcare reasons.

Additionally, the Group offers opportunities for re-employment for employees forced to resign when their spouse is transferred to another location through a re-employment registration system.

### ● Childcare and Nursing Care Support System\*<sup>1</sup>

	NSK	Japan Law
Childcare Leave	Through the end of April when child is 3 years old (the first five days paid)	Up to 18 months (non-paid)
Shorter Working Hours for Childcare	Through the end of March in the third year of elementary school	Up to 3 years old
Nursing Care Leave	Up to 1 year	Up to 93 days
Shorter Working Hours for Nursing Care	Up to 1 year	Up to 93 days

Elimination of Half-day Holiday Restriction	Usually, 12 times per year; but when providing nursing care, unlimited
Re-Employment Registration System* <sup>2</sup>	System for employees that resign when their spouse is temporarily transferred to another city, but who want to eventually return to work at NSK

\*<sup>1</sup> NSK and main group companies in Japan.

\*<sup>2</sup> Launched in fiscal 2014

### Next Generation Certification Mark “Kurumin”

In recognition of its efforts to promote work-life balance among employees, NSK has been certified as a child-rearing support company by the Tokyo Labour Bureau of the Ministry of Health, Labour and Welfare since 2014. The next generation certification mark, “Kurumin,” is based on the Japanese law called the “Act for Measures to Support the Development of the Next Generation.”



#### ● Related Employee Data\*1

	FY2011	FY2012	FY2013	FY2014	FY2015
Average years of employment	18	18	18	18	19
Average age	41	41	41	41	42
Proportion of female employees	6.7%	6.5%	6.6%	6.9%	7.0% (8.2%*2)
Number of women who took childcare leave	18	25	17	17	26
Number of men who took childcare leave	2	11	6	13	25

\*1 NSK and main group companies in Japan.

\*2 NSK Group (including some estimates)

### Recommending the Childcare Leave Program

#### Koichi Kato

No.1 Production Section, Saitama Plant, NSK Ltd.

When I found out that I was going to have a second child, I thought that I would need to take time off work in order to take my older child to and from kindergarten for my wife. I vaguely thought that if it were one to two weeks, I would somehow be able to adjust within the scope of paid vacation. When I went to the General Affairs and Personnel Department to ask about taking paid vacation, I learned for the first time about the childcare leave program for men. With my supervisor’s understanding, I was able to take one month of childcare leave.

I prepared meals, and it was difficult taking care of a baby who wakes up right away after going to sleep. But, I could also clean places that we can’t usually get to and do other housework, see what my older kid does at kindergarten, and go for walks with him. It



was a fun time. I also felt how hectic it can be to balance housework and childcare. I appreciate having been able to spend this meaningful time with my family thanks to the cooperation of many people, including my understanding supervisor and colleagues and the people in the General Affairs and Personnel Department who courteously explained the program to me many times. I recommend anyone who has the opportunity to make use of the wonderful childcare leave program and give child rearing a try.

### ■ Lifelong Learning Program (Japan)

This program provides opportunities to think about purpose in life, health maintenance, family finances, and other aspects of life planning, in order to achieve a rich, full life after retirement. It holds training sessions and seminars attended by many employees to learn about pensions, unemployment insurance, and lifelong learning.

## Creating Safe and Healthy Workplaces

### Basic Approach

In order 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. The Company should establish safe, secure, and comfortable workplaces, no matter the level of output demand.”

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 develop a culture in which workers openly caution each other through mutual education.



Reference data is available on NSK’s website.

[www.nsk.com](http://www.nsk.com) > Sustainability > Creating Dynamic Work Environment

● Facilitating Work-Life Balance

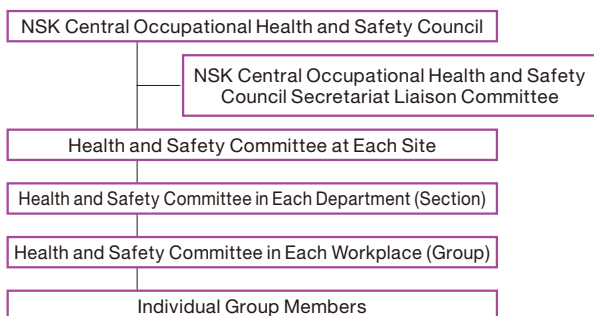
## Occupational Safety and Health Management

### Occupational Safety and Health Management System

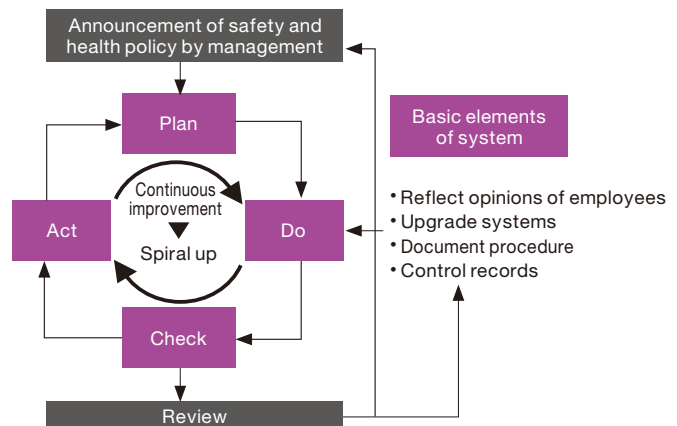
The NSK Group realizes how important it is to be proactive about safety and health in the workplace, which forms the heart of manufacturing. This is the key to providing an environment in which employees can reach their full potential. Based on this conviction, NSK regularly convenes an occupational health and safety meeting which involves both labor and management, to set the course for labor issues for the entire the Group. Following the course determined by the council, the NSK Group is building an 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.

The Group is globally sharing information about occupational accidents that have occurred within the Group and making every effort to prevent similar accidents from occurring again. The Group analyzes the information globally and implements effective prevention measures.

#### Occupational Safety Structure



#### Occupational Safety and Health Management System



#### Lost-Worktime Injury Rate\*1

	FY2014	FY2015**2
Japan	0.44	0.32
Outside Japan	1.00	0.91
Global	0.80	0.70

\*1 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.

\*2 The data for fiscal 2015 has been independently verified by a third party. See Appendix (p. 92) for details.

### Highlight Initiatives for Essential Safety: Development of Safety Assessors and Safety Sub-Assessors

In order to prevent occupational accidents caused by human error and machine failure, NSK incorporates safety measures starting with the equipment design phase. It also develops safety assessors, who are human resources in equipment development departments with a high level of knowledge and competence in machinery and equipment safety. In 2015, it began training safety sub-assessors to conduct risk assessments of existing equipment installed in plants and implement safety measures. Engineers who participated in the training described their newfound safety awareness with feedback such as, “My way of thinking about risk changed,” and “I learned that we have to think about safety from a different approach than in the past, in order to ensure essential safety.”

The appropriate number of safety sub-assessors was calculated for each plant in Japan (including Group companies), and training of the necessary number of personnel is expected to be completed in fiscal 2016. Additionally, safety sub-assessor training will be held outside Japan as well in fiscal 2016 in an effort to move equipment safety measures forward globally.



Safety sub-assessor development workshop

## ● Mental Health Initiatives (Japan)

Recognizing that companies must provide healthy work environments for their employees, NSK has implemented the following mental health measures.

### ■ Mental Health Education

Mental health is part of the required education program for employees: self-checking for new employees, department-based care for team leaders and assistant managers, and mental health for newly appointed managers. The program includes lectures by outside specialists, and practical training such as role-plays of specific situations. As part of efforts to keep employees' minds healthy, managers study specific cases involving awareness of subordinate behavior and mental health response measures.

NSK strives to prevent poor mental health through in-person education and e-learning so that employees can learn how to notice stress and coping techniques.

### ■ Individual Consultations with Doctors

Along with regular medical checkups, all employees are given a stress check. When deemed necessary by the physician, follow-up is provided through individual consultations with a doctor.

### ■ Utilizing Outside Employee Assistance Programs\* for Mental Health Support

In order to prevent mental health issues from occurring or reoccurring, employees receive mental health advice from outside experts, and those who take administrative leave for mental health reasons are given support upon their return to work.

\* Employee Assistance Program: A program that supports employees' mental health

### ■ Mental Health Consultation

Recognizing the importance of creating an environment where employees can freely seek consultation without worry, the Company has established a mental health consultation office using an outside expert. To ensure that employees who seek counseling can feel relaxed, the consultation office is bright, cheerful, and also soundproof.

NSK strives to provide workplaces where all employees can work in a supportive atmosphere.

## ● Activities to Promote Mental Health

Target	Purpose	Primary Prevention (Prevention and Health Promotion)	Secondary Prevention (Early Detection and Response)	Tertiary Prevention (Treatment, Return to Work, and Relapse Prevention)
Individual Employee (Self-Care)		Stress awareness and management		
		Improvement of lifestyle habits	Voluntary counseling	Treatment
Managers and Supervisors (Department-Based Care)		Consultation and care for workers		
		Assess/improve work environment	Ascertaining the case type and response	Support for return to work
Care by Organizations within the Workplace		Policy creation/announcement and planning		
		Personnel policies review	Stress checking and guidance	Support for return to work
		Training and information provision	Consultation system establishment	
Care Using Resources Outside the Workplace		Providing specialized knowledge along with the necessary information, advice and tools		

Chapter 5

# Working with Local Communities

## Social Contributions Targeting Community Development

The world is facing a variety of challenges today. While the circumstances and specific problems faced differ by country and region, in order to create sustainable societies, it is crucial for companies to actively address these challenges and to conduct their business activities with an awareness of local community development.

- Policy on Social Contribution Initiatives .....P. 55
- Establishment of Social Contribution Action Period.....P. 55
- Highlights .....P. 55



## Policy on Social Contribution Initiatives

The NSK Group's business sites focus their social contribution efforts in the following three priority areas based on the needs of their respective countries and regions.

### Priority Areas for NSK's Social Contribution Initiatives

1  
Promoting science and technology that supports the prosperity of society

#### Promotion of science and technology

The NSK Group contributes to the development of industry, not only through its technology and products, but also through a broad range of unique initiatives that support the promotion of science and technology.



2  
Fostering the development of the next generation

#### Development of the next generation

The NSK Group is committed to supporting the education of children and young adults long into the future.



3  
Engaging in activities designed to build mutual harmony and benefit with communities

#### Mutual harmony and benefit with communities

The NSK Group values communication with local communities in the countries and regions where it does business, and aims to ensure mutual prosperity as an upstanding corporate citizen.



Examples of initiatives in the three priority areas are: (1) providing aid to research institutions, under promotion of science and technology; (2) providing scholarships, offering students work experience opportunities, and holding classes about bearings, under development of the next generation; and (3) cooperating in community events and welfare programs, under mutual harmony and benefit with communities. The Group also values communication with community members and strives to build better relationships so that it can accurately assess and respond to community needs.

Additionally, by compiling social contribution activities undertaken at each site and sharing them group-wide, NSK aims to foster a corporate culture in which each and every employee is aware of and can engage in community development.

## Establishment of Social Contribution Action Period

Taking the opportunity of NSK's 100th anniversary to further enhance social contribution initiatives, the NSK Group has designated the months of, before, and after its founding (October through December) as the Social Contribution Action Period, starting in fiscal 2016. During this period, NSK will work at strengthening its social contribution initiatives throughout the Group, making use of the unique features of each region.

## Highlights

### NSK Ltd.



Cooperated fully in the production of the educational comic book *Gakken: The Secret of Bearings* to clearly convey the facts that bearings reduce friction in machines and are essential in people's lives, as well as the history, technology, and roles of bearings. *Gakken: The Secret of Bearings* was donated to around 23,000 elementary schools and about 3,200 public libraries across Japan in July 2016.

### NSK Micro Precision Co., Ltd.



Held a plant tour for the family members of NSK Group employees with the hope of sparking children's interest in science.

### NSK Europe Ltd.



Taking the opportunity of NSK's 100th anniversary of November 8, 2016, donated 20,000 euros to Médecins Sans Frontières (MSF), a private non-profit organization that conducts medical and humanitarian assistance from a neutral, independent, and impartial standpoint. The donation will go to benefit relief for victims of conflict and natural disasters as well as people who cannot access healthcare services for various reasons such as poverty.

### NSK (China) Investment Co., Ltd.



As a part of NSK's 100th anniversary activities, donated 150 cherry trees, which were planted jointly by NSK representatives in China and government officials in April 2016.

### NSK Bearings (Thailand) Co., Ltd.



Went on a company-wide "CSR Trip," with all participants taking part in a tree planting activity.

### NSK France S.A.S.



Participated in a charity marathon. The collected donations will go to benefit promotion of science and technology and medical research.

### NSK Bearings Manufacturing (Thailand) Co., Ltd.



Conducted a beach cleanup in cooperation with a local university.

### NSK International (Singapore) Pte. Ltd. / NSK Singapore (Private) Ltd.



Employees and their family members participated in a charity walk to help the development of future generations.

### NSK Australia Pty. Ltd.



Participated in Relay for Life, an event to overcome cancer by supporting cancer patients and their family members and facing cancer as a whole community.

Chapter 6

# Environment

## Activities for Global Environment Protection

Concern is mounting over global environmental problems caused by human activity conducted in pursuit of affluence. The depletion of resources, the advance of global warming and climate change, pollution of air and water by chemical contamination, and declining biodiversity are all very serious issues. All of humanity shares the challenge of building sustainable societies that can be prosperous without harming the environment. Today, people expect companies to be proactive about meeting this challenge, for instance, by providing ecofriendly products and services and reducing the environmental impact of their operations.

- Environmental Management .....P. 58
- Creating Environmentally Friendly Products .....P. 62
- Global Warming Countermeasures ....P. 65
- Measures for Resource Conservation and Recycling .....P. 69
- Reducing Use of Environmentally Harmful Substances .....P. 73
- Biodiversity Conservation .....P. 76

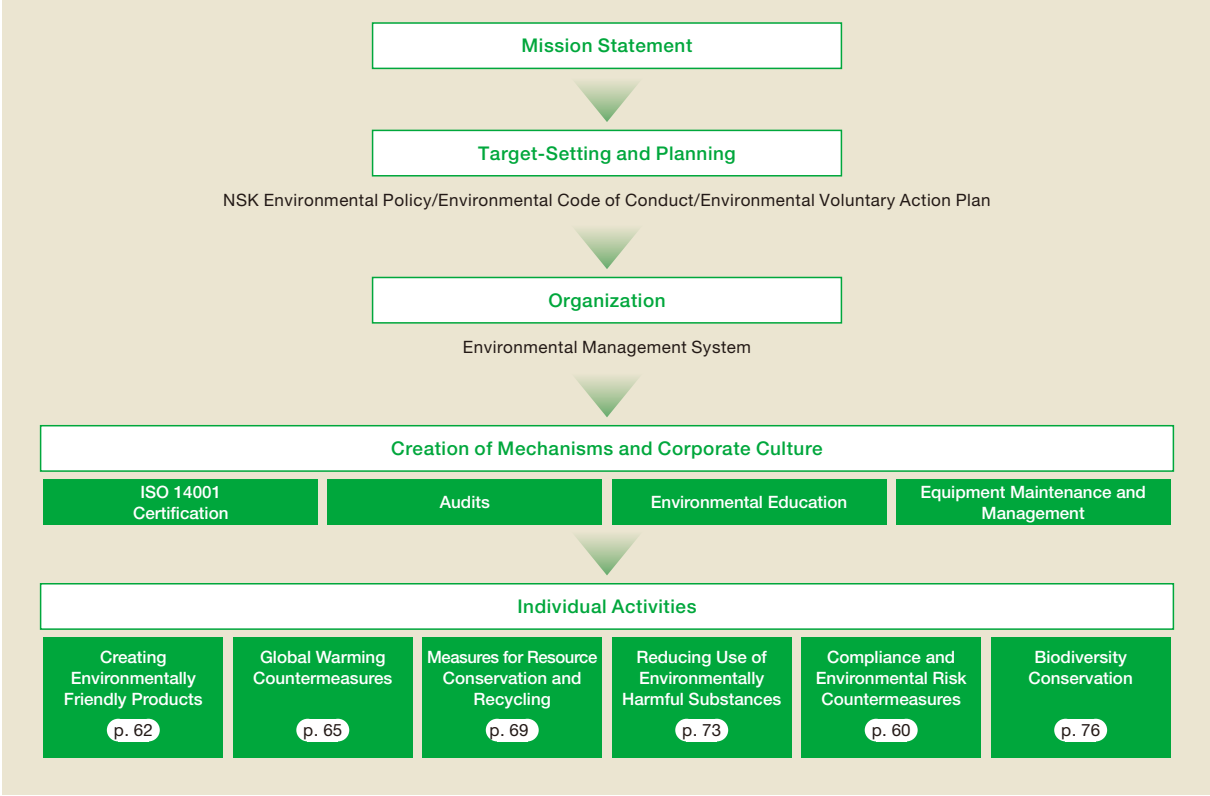
# Environmental Management

Global environmental agreements as well as national and regional environmental regulations have been established with the aim of building more sustainable societies. People expect companies to continuously implement PDCA cycles in environmental management, in order to integrate environmental protection with economic advancement.

## Overview of Environmental Management System

NSK adheres to the principle that global environmental protection, as outlined in the Group’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 implement global warming countermeasures, enact measures to promote resource conservation and recycling, create environmentally friendly products, reduce use of environmentally harmful substances, and ensure compliance and take countermeasures for environmental risks.

● **NSK Group’s Environmental Management**



## Environmental Policy

### NSK Environmental Policy

Our commitment to environmental management forms the basis of our existence and our pursuits. We are determined to take independent and assertive actions, aiming to establish recycling-oriented societies.

- 1. Prevention of Global Warming**  
To actively support efforts to prevent global warming by developing environmentally friendly manufacturing processes and technologies.
- 2. Reduction of Negative Environmental Impact**  
To establish and continually improve environmental management systems and systems for the management of chemical substances in products; to comply with regulations, to prevent pollution, and to reduce environmental impact.
- 3. Contribution to Societies**  
To be actively involved in the social development of local communities where we operate by promoting our global corporate activities, to create affluent societies that are in harmony with the environment, and to promote the preservation of biodiversity.

## ● Environmental Code of Conduct

1. To promote the development of manufacturing technologies through the use of our Tribology (friction control and lubrication technologies) in order to create environmentally-oriented products.
2. To ensure energy and resource conservation within all spheres of our business operations.
3. To reform environmental management organizations by improving operational systems and clarifying chains of responsibility.
4. To more aggressively tackle environmental protection by setting and adhering to high internal standards, in addition to complying with laws, ordinances, and agreements.
5. To reduce environmental impact by promoting the switch from chemical substances that adversely affect the environment to environmentally friendly alternative substances, waste reduction, and recycling.
6. To encourage employees to understand our environmental policies and to ensure an environmental mindset in the company through education and internal communications.
7. To contribute to societies by conducting social environmental activities and addressing issues related to the preservation of ecosystems and human health.
8. To actively communicate with environmental authorities and local communities in order to receive insightful and constructive opinions, and to disclose the ongoing status of our environmental management activities to the public.

Established: December 12, 1997, Revised June 25, 2015

## NSK Group Environmental Management System / Structure

NSK's Global Environment Protection Committee, which is chaired by a senior vice president and made up of 10 relevant officers, is the top decision-making body for environmental management.

Special subcommittees that deal with specific issues, such as energy conservation, resource conservation, and environmental products, along with the Global Environment Department, play a central role in operating the everyday environmental management system at all its sites based on decisions made by the global committee.

Under the leadership of the Group's regional headquarters in Japan, Europe, the Americas, and China, the plant managers at each site and the executives at affiliates are responsible for environmental management and the administration of chemical substances. In this way, PDCA cycles for improving environmental management are being implemented throughout the Group.

Efforts are made to achieve targets on a global scale under an environmental action plan through a cycle of progress checking and follow-ups, for instance including the holding of periodic environmental meetings focusing on specific issues or regions.

## ● Acquiring Environmental Management Certification

The NSK Group implements PDCA cycles for environmental management at all its sites. It gives special attention to environmental initiatives at development, design, manufacturing, and distribution sites, because these processes have a large environmental impact. The Group requires these sites to obtain external ISO 14001 certification—the international standard for environmental management systems—within three years of full-scale operation, typically represented by the start of mass production. The Group believes that the effectiveness of its management system will increase by obtaining certification for each site and undergoing regular reviews by third-party organizations.

In fiscal 2015, one site newly obtained certification. As of June 2016, 67 sites in 13 countries have obtained certification, and around 95% of the CO<sub>2</sub> emitted from development, design, manufacturing, and distribution process throughout the Group is managed under the scope of ISO 14001 certification. Offices and other sites use environmentally responsible practices based on NSK's own policies.

## Mid-Term Targets (FY2016-2018)

In the new Environmental Voluntary Action Plan (see Mid-Term Targets on pp. 63, 65, 69, 73 and 77), which spans from fiscal 2016 through 2018, NSK will work to contribute even more to the environment through its products. NSK seeks to globally enhance its environmental management across the entire Group in order to cut the environmental impact of its business activities and help to build a society that has a low carbon footprint, is committed to recycling, and has a deep respect for the natural world.

## Main FY2015 Initiatives

### ● Audits and Education

#### ■ Environmental Audits

In addition to internal audits, third-party audits are regularly conducted in accordance with ISO 14001. Moreover, the NSK Group's Global Environment Department and regional headquarters conduct audits designed to prevent oil leakage accidents, ensure compliance with environmental laws, and properly manage waste. In fiscal 2015, audits of 41 sites were conducted. In addition, 15 sites were audited to strengthen management of environmentally harmful substances.

All audits conducted in fiscal 2015 found no serious problems, and minor findings were corrected.

## Environmental Education

In order to further strengthen environmental protection initiatives and increase their effectiveness, the most important tasks are raising the awareness of every single employee and implementing measures based on sound knowledge.

In fiscal 2015, a total of 17,035 employees attended 276 training sessions in Japan. In addition, approximately 9,200 employees worldwide participated in the annual e-learning program, learning about global warming countermeasures through issues such as the risks associated with climate change caused by global warming, the responses of the international community, and the NSK Group's efforts to address global warming.

### Fiscal 2015 Number of Environmental Education Courses and Participants (in Japan)

Training course type	Number of participants	Number of sessions
(1) Compliance with environmental laws and regulations	1,765	75
(2) Raising environmental awareness	14,898	159
(3) Acquisition of environmental qualifications	163	31
(4) Environmentally friendly design, green purchasing and procurement	209	11
Total	17,035	276

## Compliance and Environmental Risk Countermeasures

### Basic Approach

The NSK Group complies with relevant environment-related laws and carries out initiatives in line with policies for preventing environmental pollution and reducing environmental impact, including on air and water, by establishing independent standards that are more rigorous than laws. Additionally, in the event of an environmental accident or legal violation, the Group reports the matter to administrative bodies, investigates the cause, and promptly implements countermeasures.

### Remediating Soil and Groundwater Pollution

The NSK Group completely eliminated the use of chlorinated organic solvents around the world in fiscal 2003. However, the remediation of groundwater is continuing at five sites where soil and groundwater pollution remains from past use. The Group regularly monitors groundwater and reports remediation progress to the authorities.

### Dispensing with and Updating Underground Tanks

The condition of tanks and piping buried underground cannot be directly viewed, which means that, were an oil leak to occur, its discovery could be delayed. To prevent contamination of soil and groundwater caused by the leakage of oil used in the manufacture of products, each site in the NSK Group is dispensing with processes that use oil, moving underground tanks above ground and making them double-walled.

### Preventing a Recurrence of Emissions Standards Being Exceeded

In fiscal 2015, there were no serious legal violations or environmental pollution accidents. However, there was one incident each of drainage standards being exceeded at a site in Japan and a site in China, as well as one incident of air emissions standards being exceeded at a site in the ASEAN region. The causes were checked and countermeasures were implemented, remedying the situation at all three sites.

## Appendix P. 84 Acquiring ISO 14001 Certification; P. 86 Scope of Environmental Management



Reference data is available on NSK's website.

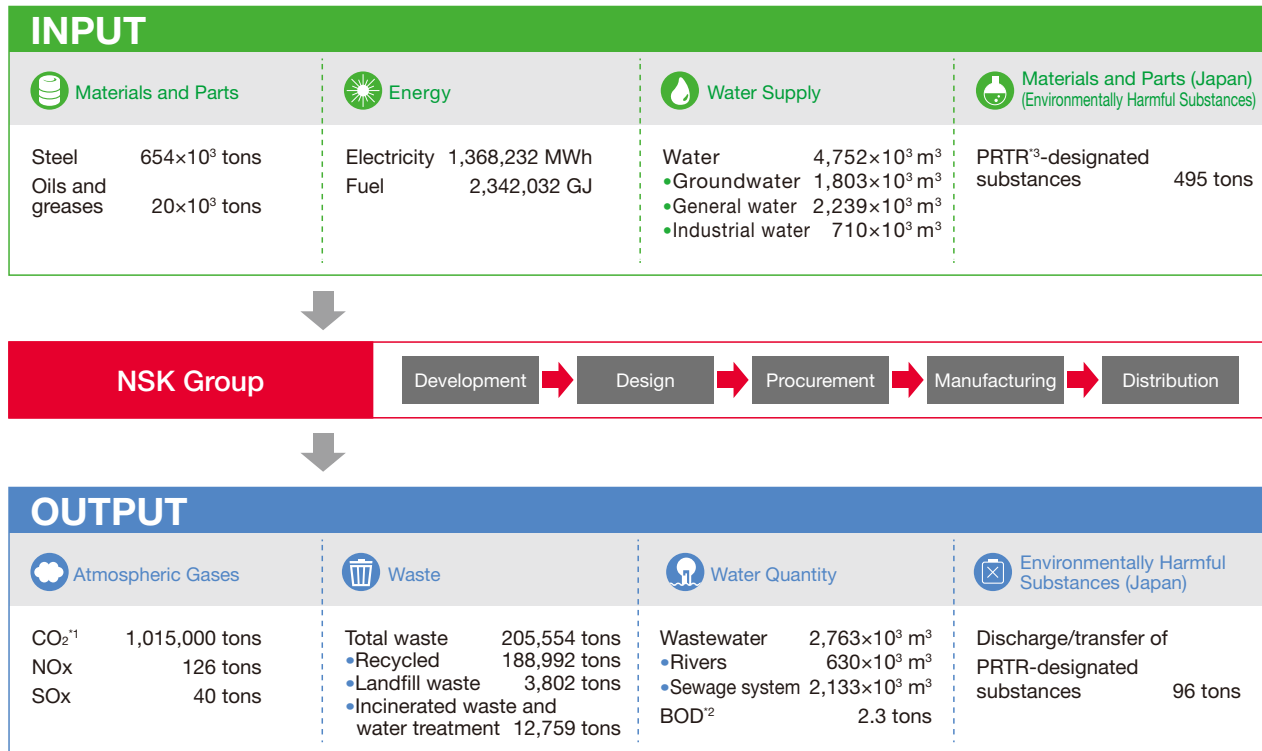
[www.nsk.com](http://www.nsk.com) > Sustainability > Environmental Activity > Environmental Management

- NSK Group Environmental Structure
- Scope of Environmental Management
- Acquiring ISO 14001 Certification
- Environmental Education

## Material and Energy Balance

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

### Input and Output of Global Business Activities



\*1 CO<sub>2</sub> emissions for Japan are calculated in conformity with data from Japan's Ministry of the Environment. Also, different regional CO<sub>2</sub> emission coefficients are used for regions outside Japan.

\*2 River discharge.

\*3 Act on Confirmation, etc. of Related 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.

## Environmental Accounting (Japan)

The NSK Group discloses the results of environmental accounting, a tool for quantitatively ascertaining and evaluating the costs and results of environmental protection activities. The Group also has introduced environmental accounting as an information tool to broaden people's understanding of the Group's activities.

Environmental conservation costs in fiscal 2015 consisted of about 2.6 billion yen in investments, including the improvement of underground tanks, and around 10.9 billion yen in expenses. The economic benefits of these investments amounted to roughly 0.8 billion yen. The NSK Group is striving to create products that help to reduce environmental impact. Approximately 68% of its environmental conservation costs were for R&D in environmentally friendly products and technologies. Please see the "Appendix" section of this report (p. 88) for more information.

## Creating Environmentally Friendly Products

Transforming the structure of society to reduce risks from events such as increasingly large-scale natural disasters related to climate change and to prevent the depletion of natural resources is a common challenge for humanity. Toward that end, companies are expected to make positive contributions through their products and services. This includes the development of new technologies, making those newly developed technologies even more sophisticated to aid in environmental protection, and increasing utilization of renewable energy.

### Policy

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

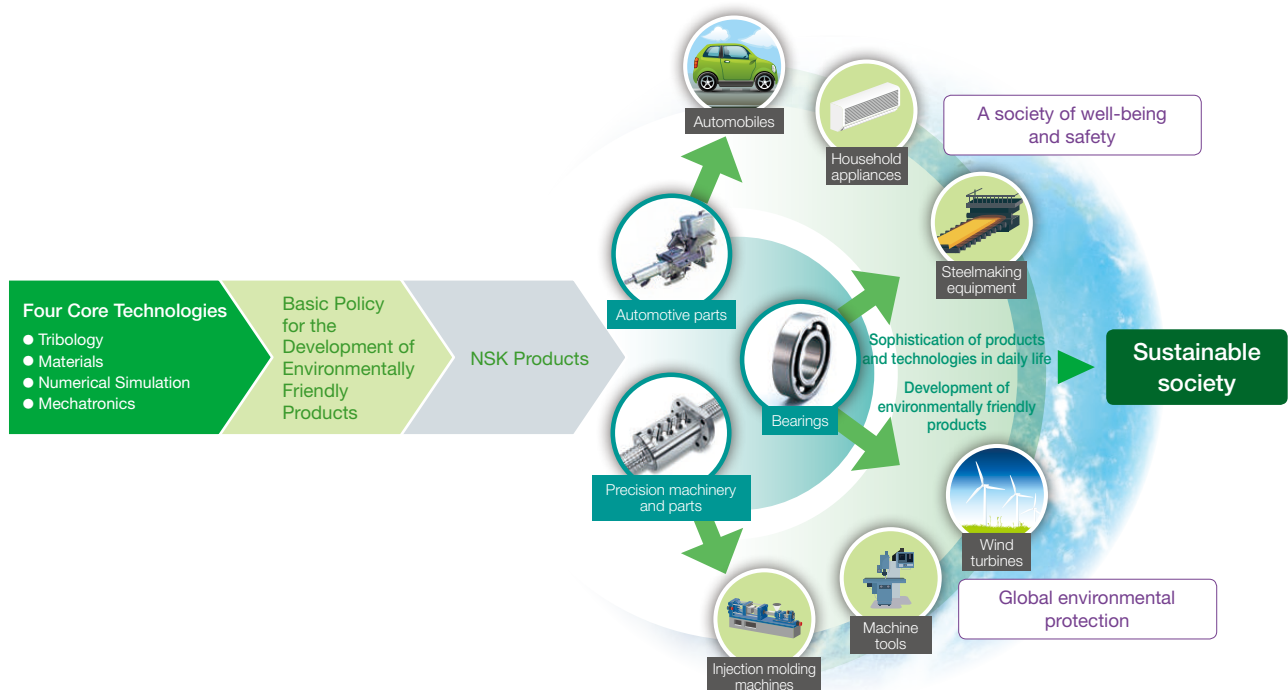
The products of the future must perform better than today's in order to help reduce the impact human societies have on the natural environment. In an effort to contribute to the well-being and safety of society and to protect the global environment, as spelled out by its corporate philosophy, NSK is working hard to accurately determine the needs of its customers and the broader society, as well as to develop environmentally friendly products and technologies which, in keeping with its basic policy, 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 environmental impact throughout society.

#### Basic Policy for the Development of Environmentally Friendly Products

The NSK Group 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.

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





## Mid-Term Targets (FY2016-2018)

The NSK Group is creating even more environmentally friendly products and technologies based on the NSK Environmental Policy and the Basic Policy for the Development of Environmentally Friendly Products. It also calculates how much its products help to reduce CO<sub>2</sub> emissions during use.

## FY2015 Activities

In fiscal 2015, the NSK Group developed nine new environmentally friendly products that help customers conserve energy and resources. The total number of environmentally friendly products developed since 2002 comes to 211.

### ● NSK Eco-Efficiency Indicators

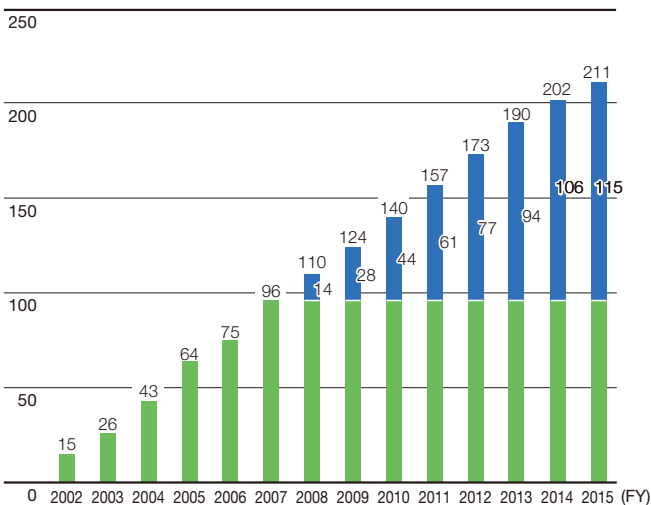
In fiscal 2008, NSK introduced the NSK eco-efficiency indicators (Neco) as a yardstick for quantitatively assessing the degree of environmental friendliness possessed by the products it develops. Since that time, the Company has utilized Neco to conduct assessments of products under development.

The Neco score is represented by a numerical value obtained by dividing product value V and environmental impact E. The 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 with an existing product, the denominator E represents assessment parameters, such as product weight, power consumption and friction loss, that must be reduced to decrease the environmental impact.

To use bearings as an example, the longer a product's service life is when compared with an existing product, the better able that product is at withstanding high-speed rotation, the lighter and more compact it is, and the less friction loss there is, the higher its Neco value will be. The NSK Group is working to develop new products with a Neco score of 1.2 or higher.

### ● Number of Environmentally Friendly Products Developed (Total)




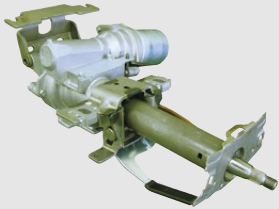

Products (total)



$$\text{Neco} = \frac{\text{Product value V (product life, functions)}}{\text{Environmental impact E (product weight and power consumption)}}$$

- Newly developed products with a Neco score\* of 1.2 or higher  
\* Established in fiscal 2008
- Newly developed products consistent with the Basic Policy for Development of Environmentally Friendly Products established in fiscal 2001

● **Environmentally Friendly Products Developed in Fiscal 2015**

NSK Products	Technology Developed by NSK	Environmental Benefits for NSK's Customers	Neco
<p><b>Spherical Roller Bearings Featuring High Reliability and Excellent Sealing Performance for Conveyor Pulleys in Mines</b></p> 	<ul style="list-style-type: none"> <li>● <b>Smaller bearings</b> Using original material developed by NSK for the inner and outer rings and applying special heat treatment has increased the load capacity and enabled the inside of the bearings to be more compact</li> <li>● <b>Higher sealing performance</b> High sealing performance has been achieved by using a seal with a long track record of preventing foreign substance intrusion</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Longer life of conveyor pulleys</b> Service life four times longer than the conventional product has been achieved for mine conveyor pulleys used in harsh environments</li> </ul>	2.9
<p><b>Ball Bearings for Fan Clutches with an Excellent Sealing Performance</b></p> 	<ul style="list-style-type: none"> <li>● <b>High sealing performance</b> Guards against dust, dirt and muddy water with an slinger* and more seal lips</li> </ul> <p>* A circular metal part pressure-fitted on the inner ring of the bearing to prevent the intrusion of dirt, etc.</p>	<ul style="list-style-type: none"> <li>● <b>Longer life of fan clutches</b> Achieved a longer life in harsh environments by substantially improving the sealing performance</li> </ul>	1.7
<p><b>Super Large Ball Screws with World-Top-Class Load Capacity</b></p> 	<ul style="list-style-type: none"> <li>● <b>Development of grinding technology</b> Developed technology that can grind long nuts up to 800 mm, 1.4 times longer than before</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Improved working environment</b> The working environment has been improved by eliminating the use of oil through electrification of large injection molding machines and presses</li> </ul>	1.2
<p><b>World's Lightest Electric Power Steering (EPS) Systems</b></p> 	<ul style="list-style-type: none"> <li>● <b>More compact</b> Made more compact through optimal design of torque sensor, reduction gear, and gear box</li> <li>● <b>Continuity of EPS operation</b> Improved continuity of EPS operation and safety during an idle reduction</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Improved automobile operability</b> Continuous EPS operation is possible even when the power supply from the battery is reduced during an idle reduction (an idle reduction can be maintained even when operating the steering)</li> <li>● <b>Improved automobile safety</b> Addition of an initial test of the torque sensor's monitoring function on start-up improves safety</li> </ul>	1.3
<p><b>Sprag One-Way Clutches with Block Bearings</b></p>  <p>Block bearing</p>	<ul style="list-style-type: none"> <li>● <b>Reduced drag torque</b> Drag torque has been reduced during idling by around 70% by changing the bearing structure of one-way clutches from end bearings to block bearings</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Improved automotive fuel economy</b> Helps improve fuel economy by reducing drag torque</li> </ul>	1.4

 Reference data is available on NSK's website.
 [www.nsk.com](http://www.nsk.com) > Company > News > Press Releases

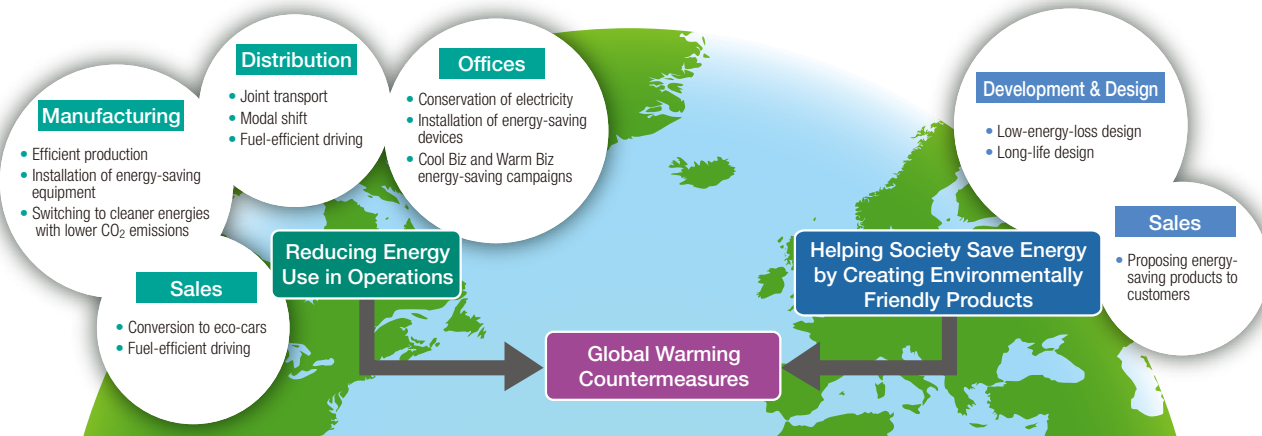
## Global Warming Countermeasures

Concerns are mounting that today's increasingly serious climate change problems have the potential to cause tremendous damage including rising sea levels, droughts, localized torrential rain, and the spread of infectious diseases, as well as having harmful effects on ecosystems. At present, the world is debating how to achieve substantial reductions in emissions of CO<sub>2</sub> and other greenhouse gases. To help build a low-carbon society, companies are expected to make aggressive efforts to develop new and more advanced technologies that will lead to energy savings. They are also required to help popularize energy-saving products and reduce the CO<sub>2</sub> emissions generated by their business operations.

### NSK's Approach

NSK is committed to developing and broadly disseminating environmentally friendly products, with the aim of reducing CO<sub>2</sub> emissions throughout society as a whole. The Group is also making efforts to reduce CO<sub>2</sub> emissions in its business operations through improvement in the efficiency of energy use and the adoption of clean energies.

- **Contributing to the Fight Against Global Warming by Creating Environmentally Friendly Products and Reducing Energy Use in Operations**



### Mid-Term Targets (FY2016-2018)

The NSK Group is striving to reduce CO<sub>2</sub> emissions at its production sites through improvement of production efficiency, installation of energy-saving equipment, and conversion to clean energy. In addition, the Group is aiming to make effective use of energy and reduce CO<sub>2</sub> emissions by promoting the optimization of operations through the establishment of an information network for production equipment.

Under its Environmental Logistics Policy, the distribution departments strive to reduce the environmental impact of transport through improved loading efficiency, achieved by combining product distribution and procured part distribution and by shifting to modes of transport with lower environmental impact.

The head office and sales divisions have also made efforts to save energy, including controlling air-conditioning temperatures, turning off lights when not in use, and switching to LED lighting.

Fiscal 2018 Targets for Global Warming Countermeasures
<p><b>Manufacturing</b></p> <p>In Japan: CO<sub>2</sub> emissions per value-added production unit: 11.1% reduction from FY2011 level</p> <p>Total CO<sub>2</sub> emissions: Reduce CO<sub>2</sub> emissions for FY2018 to below FY2011 level</p> <p>Outside Japan: CO<sub>2</sub> emissions per value-added production unit: 29.2% reduction from FY2011 level</p>
<p><b>Distribution</b></p> <p>In Japan: CO<sub>2</sub> emissions per ton-kilometer: 12.2% reduction from FY2011 level</p>
<p><b>Offices</b></p> <p>In Japan: CO<sub>2</sub> emissions per unit of floor space: 24.5% reduction from FY2011 level</p> <p>Outside Japan: CO<sub>2</sub> emissions per unit of floor space: 6.9% reduction from FY2011 level</p>

CO<sub>2</sub> emissions intensity:

- Manufacturing: CO<sub>2</sub> emissions/Value-added production
- Distribution: CO<sub>2</sub> emissions/Transportation amount\*
- Offices: CO<sub>2</sub> emissions/Floor space

CO<sub>2</sub> emissions: The total of the amount emitted directly from the NSK Group's business operations (scope 1) and the amount emitted indirectly by power companies, etc., that supply the electricity used by the NSK Group (scope 2)

\* The NSK Group changed the unit for transportation volume of logistics from ton-kilometers to tons in fiscal 2016 to better reflect the effects of measures such as reduction of transport distance and improvement of loading efficiency.

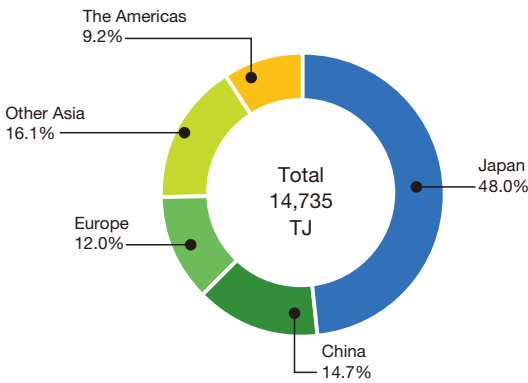
## FY2015 Activities

Manufacturing departments in Japan surpassed the fiscal 2015 target of a 4% reduction in CO<sub>2</sub> emissions intensity from the fiscal 2011 level by recording an 8.4% reduction. This result slipped below the 10.2% reduction achieved the previous year due to lower production volume caused by economic slowdown. Total CO<sub>2</sub> emissions were down 4.6% from the fiscal 2011 level, achieving the reduction target of the fiscal 2011 level or below.

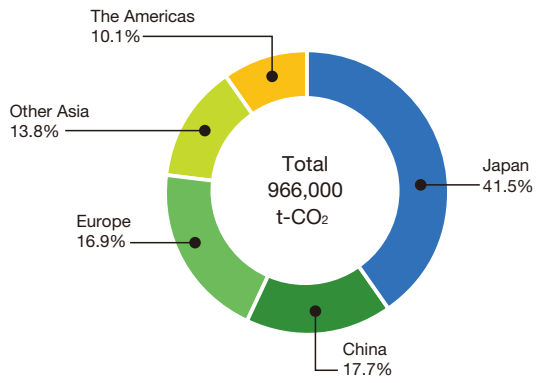
Partially due to a slowdown in production growth in some regions, plants outside Japan achieved a 27.0% reduction in CO<sub>2</sub> emissions intensity from the fiscal 2011 level, exceeding the target of a 4% reduction. The main drivers of these reductions, however, were improvements in productivity and the increase in operations that emit comparatively lower amounts of CO<sub>2</sub>.

Headquarters and office sites also achieved their target, but distribution departments did not, due to a decrease in car ferry shipments.

### ● Energy Consumption from Manufacturing, by Region

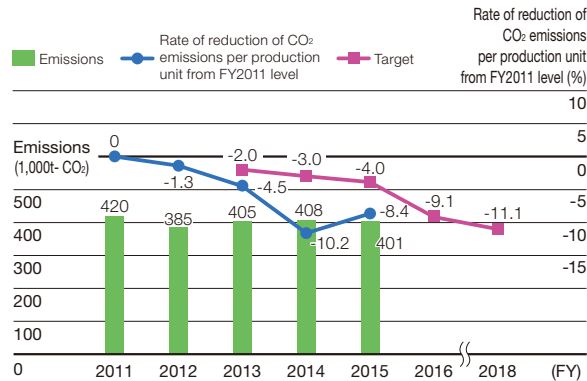


### ● Total CO<sub>2</sub> Emissions from Manufacturing by Region



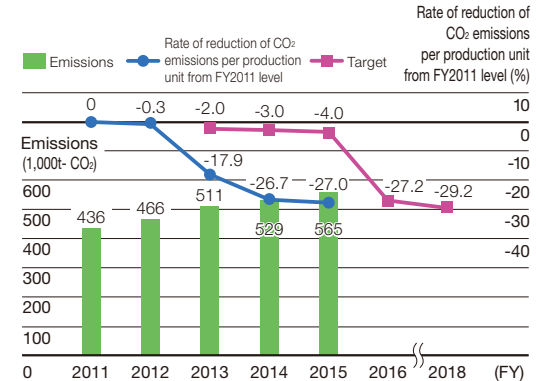
\* Includes approximately 1,100 tons of greenhouse gases other than CO<sub>2</sub> (i.e., CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub>) converted to a CO<sub>2</sub> basis

### ● CO<sub>2</sub> Emissions from Manufacturing in Japan: Total Volume and per Production Unit



\* Due to a change in calculation criteria, the data was recalculated.

### ● CO<sub>2</sub> Emissions from Manufacturing Outside Japan: Total Volume and per Production Unit



\* Due to a change in calculation criteria, the data was recalculated.

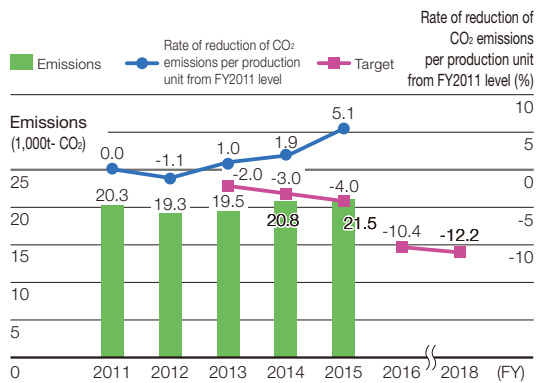
## ● Greenhouse Gas Emissions Verification Report (Japan)

The Japan Quality Assurance Organization conducted independent verification of NSK's fiscal 2015 performance, in order to increase reliability related to the group's CO<sub>2</sub> and other greenhouse gas emissions data. The verification covered all NSK Group sites in Japan, including manufacturing departments, technology departments, and head office and administrative divisions.



Greenhouse Gas Emissions Verification Report (Japan)

### ● Energy Consumed per Ton-Kilometer and CO<sub>2</sub> Emissions from Distribution in Japan



#### Manufacturing 1 Effective Use of Energy and CO<sub>2</sub> Emissions Reduction from Development of a Next-Generation Production Line

NSK's Fukushima Plant and Manufacturing Engineering Center developed a next-generation production line through fresh ideas. In addition to saving energy with each piece of equipment that makes up the line, it became possible to manufacture more products efficiently with less energy by reducing the down time when changing production items and increasing the yield per hour. In the future, this line will be established at a plant in Indonesia to expand low-CO<sub>2</sub> emissions manufacturing throughout the NSK Group.

#### Manufacturing 2 Improving Energy Efficiency in Heat Treatment Processes

The NSK Group uses a great deal of energy in heat treatment processes for parts, accounting for 25% of energy use for all manufacturing processes. The Heat Treatment Working Group, which is made up of personnel from technology departments and each plant, is expanding the conversion from the conventional method of heat treatment in metal furnaces using kerosene and gas, to induction heat treatment using electricity. Metal furnaces require much energy to maintain a high temperature throughout the inside of the furnace. With induction heat treatment, on the other hand, only the parts being treated are heated, and since energy is needed only when heating, energy efficiency can be increased. At present, the list of applicable parts is being expanded through a series of tests.

#### Manufacturing 3 Deploying Energy Saving Efforts with Spindles to Each Company

The NSK Group uses a great deal of compressed air for the spindles used in grinding processes. The compressors that make that compressed air account for 15% of the energy use in manufacturing processes. The Spindle Working Group, made up of personnel from technology development departments and plants, meets regularly to share information and implement initiatives across plants to reduce the amount of compressed air used.

In fiscal 2015, the Spindle Working Group's efforts included switching from oil-air lubrication to energy-efficient spindles that use grease lubrication, which require less compressed air.

#### Manufacturing 4 Adoption of Clean Energy at Production Sites in Japan

Aiming to reduce CO<sub>2</sub> emissions intensity, the NSK Group is installing energy-saving equipment and converting to clean energy at production sites in Japan.

Shinwa Seikou Co., Ltd., used to use kerosene in its facility heating system. It updated to a type of air conditioning that uses LPG, thereby reducing its CO<sub>2</sub> emissions by 195 tons per year. The Akagi Plant of NSK Steering Systems Co., Ltd., also switched the power source for heating from kerosene to electricity, reducing its CO<sub>2</sub> emissions by 405 tons per year.

NSK Kyushu Co., Ltd., also switched the power source for heating from kerosene to electricity, reducing its CO<sub>2</sub> emissions by 218 tons per year. It is also planning to completely phase out the use of kerosene in four years through the conversion to electricity. In the future, it will enhance the access to electricity in the plant, in order to expand the installation of highly energy-efficient electric heat pumps with the aim of reducing CO<sub>2</sub> emissions.

### Manufacturing 5 Efforts to Introduce Renewable Energy

In fiscal 2015, NSK installed a 40-kW solar power generation system on the roof of its sales site in Hiroshima and began generating power. The Munderkingen Plant of Neuweg Fertigung GmbH in Germany produced 21,450 kWh of electricity through year-round operation of a solar power generation system it started running in fiscal 2014.

### Manufacturing 6 Reducing Energy for Lighting

Since LED lighting used to be usable only in places that are not too hot, fluorescent lighting in NSK's plants could only be changed to LED in areas with a good environment. Recently, however, it has become possible to obtain types that can withstand high temperatures, types that can replace mercury lamps, and types for emergency exit lights. Accordingly, the NSK Group has accelerated the adoption of LED lighting.

In addition to being more efficient, the switch to long-life LED lighting has reduced the workload, leading to greater productivity, as the changing of bulbs was an everyday maintenance task at plants that use several thousand to tens of thousands of fluorescent lights.

### Manufacturing 7 Initiatives at Production Sites Outside Japan

NSK Micro Precision (M) Sdn. Bhd. in Malaysia reduced its CO<sub>2</sub> emissions by 314 tons per year by switching to high-efficiency air compressors, repairing air leaks in equipment throughout the plant, and adopting LED lighting.

Kunshan NSK Co., Ltd., in China reduced its CO<sub>2</sub> emissions by 1,632 tons per year by replacing motors with high-efficiency models and switching to LED lighting.

The Chennai Plant of Rane NSK Steering Systems Ltd. reduced its CO<sub>2</sub> emissions by 18 tons per year per press machine by connecting power generators to the flywheel of press machines and recovering energy when the machines are stopping.



Press machine improvement  
Chennai Plant, Rane NSK Steering Systems

### Distribution Initiatives to Improve Transport Efficiency

Under its Environmental Logistics Policy, the NSK Group strives to reduce the environmental impact of transport (reduction of CO<sub>2</sub> emissions). It takes three approaches: improving loading efficiency by combining product distribution and procured part distribution; shortening distances by improving transportation routes; and shifting to modes of transport with lower impact.

In fiscal 2015, however, a decrease in transport by car ferry resulted in a 5.1% increase in CO<sub>2</sub> emissions per ton-kilometer from the fiscal 2011 level, and did not attain the target of a 4% reduction.

In fiscal 2016, the Group will expand initiatives to improve its transport efficiency rate by continuing to combine product and procured parts distribution throughout the NSK Group. Moreover, the Group is looking into rail transport in addition to marine transport to increase the effect of the modal shift.

### Offices Energy-Saving Efforts at the Head Office and Sales Divisions

The head office and sales divisions have been making efforts to save energy, including controlling air-conditioning temperatures, turning off lights when not in use, and switching to LED lighting. The head office building is continuing to thoroughly control air-conditioning temperatures, but power consumption increased by 2% compared to the fiscal 2014 level due to an increase in overtime. However, with the integration of three sales offices, the reconstruction of the Hiroshima Nissei Building, and energy-saving activities, offices other than the head office achieved a 9% reduction, resulting in a reduction of around 5% overall. Moreover, NSK encourages offices to switch to the latest environmentally friendly vehicles when updating their fleets, and in fiscal 2015 around 60% of the Company's fleet was hybrid and vehicles with small-displacement engines.

#### Appendix P. 89 Change in Energy Consumption and CO<sub>2</sub> Emissions (by Region and Country, Production Sites)



Reference data is available on NSK's website.

[www.nsk.com](http://www.nsk.com) > Sustainability > CSR Reports

● Energy Consumption Data (by Site)

# Measures for Resource Conservation and Recycling

There is growing concern around the world that an economic system based on mass production, mass consumption, and mass disposal will end up depleting a wide range of resources in the future. Against this backdrop, companies are required to help build recycling-oriented societies by ensuring the efficient use of resources throughout the entire product lifecycle—from the extraction of resources, to product use, to disposal. Additionally, there is concern that the increase in worldwide demand for water will lead to the depletion of water resources in the future. Companies must therefore make efficient use of water resources.

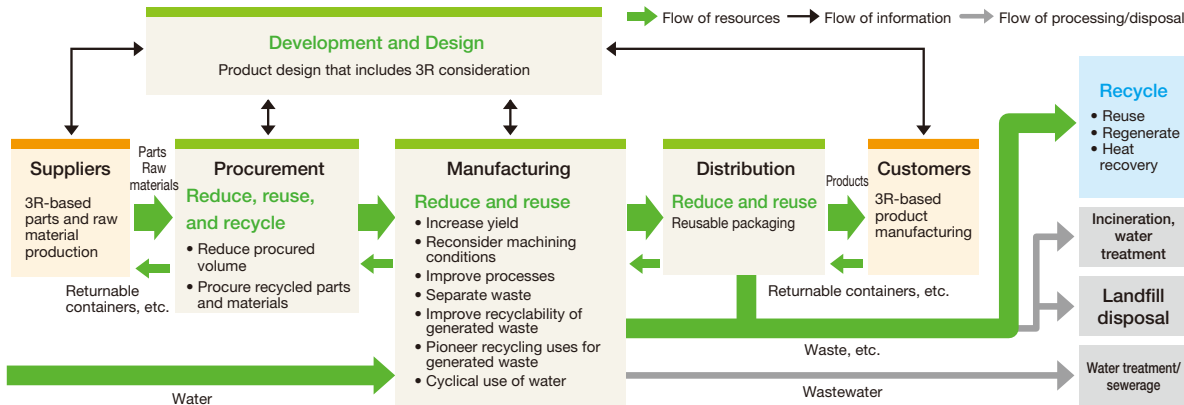
## NSK's Approach

The NSK Group aims to make efficient use of the resources it requires for raw materials and is working on reducing, reusing, and recycling (the 3Rs), striving to do its part in building recycling-oriented societies around the world. The Group's development and design divisions strive to develop products that can be produced with the minimum amount of raw materials and that can be easily recycled when disposed after use. In order to reduce environmental impact, the Group's manufacturing and distribution divisions attempt to reduce the generation of waste and also work to reuse and recycle waste that is generated, aiming to eliminate landfill waste disposal.

To ensure the proper disposal of waste, the Group conducts regular audits of contract industrial waste processors and strives to enhance management using information systems.

As for water, the NSK Group has judged that there is a low possibility—under existing conditions—of it being impacted by water shortages, based on the volume of water it uses and where its business sites are located. Still, the Group remains committed to the efficient use of water, realizing that the future may bring a serious global shortage of water resources.

### ● 3Rs to Help Build Recycling-Oriented Societies



## Mid-Term Targets (FY2016-2018)

The NSK Group is strengthening its initiatives to achieve the rigorous goals it set for the effective utilization of resources, recycling rate, and landfill disposal rate. The Group constantly pursues higher performance on the 3Rs.

Manufacturing sites in Japan have achieved “zero landfill disposal” with a 100% recycling rate at the end of fiscal 2015. Going forward, NSK will keep working to make effective use of resources, for example by improving productivity to reduce waste emissions. Manufacturing sites outside Japan have set recycling rate targets by plant, in light of the characteristics of each region and plant. The overall target for fiscal 2018 is 97.5%. Furthermore, these sites will make even greater efforts to promote recycling.

Fiscal 2018 Targets	
<b>Development and design, manufacturing</b>	
Reduce waste of steel and auxiliary materials by changing processing methods	
<b>Manufacturing</b>	
In Japan: Achieve a recycling rate*1 of at least 100% for waste and maintain zero emissions*2	
Reduce industrial waste per production unit*3 by 29.5% compared to fiscal 2011	
Reduce water withdrawal per production unit*4 by 30.5% compared to fiscal 2011	
Outside Japan: Achieve a waste recycling rate of at least 97.5%	
Reduce water withdrawal per production unit by 23.6% compared to fiscal 2011	
<b>Distribution</b>	
In Japan: Reduce packaging material waste per production unit*5 by 27.9% compared to fiscal 2007	

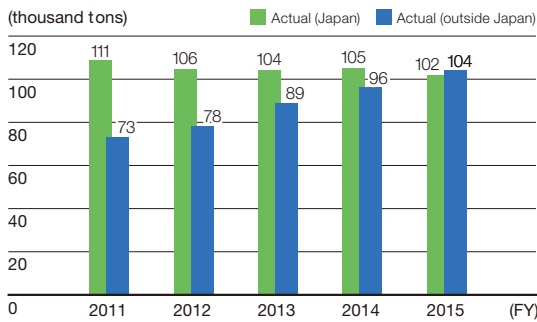
\*1 Recycling rate = Recycled amount / (Total waste - reduction amount) × 100  
 \*2 The NSK Group has defined zero emissions as “zero landfill disposal.”  
 \*3 Industrial waste per production unit = Industrial waste / Value-added production  
 \*4 Water withdrawal per production unit = Water withdrawal / Value-added production  
 \*5 Packaging material waste per production unit = Packaging material waste / Production output

## FY2015 Activities

NSK has steadily reduced steel material waste by changing the forging shape for parts. The NSK Group's plants in Japan achieved a waste recycling rate of 99.9999% and a landfill disposal rate of 0.0001% by thoroughly sorting waste and expanding the channels for use of recycled waste. This performance met fiscal 2015 targets, and "zero landfill disposal" was achieved by the end of the fiscal year. On the other hand, although plants outside Japan did manage to increase their recycling rate to 96.1%, they did not attain their target of at least 99.0%. Globally, the recycling rate was 98.0%.

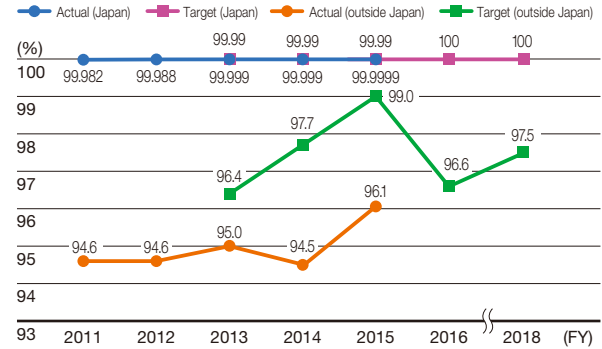
Plants in Japan reduced industrial waste per production unit by 27.4%, achieving the initial target of a 4% reduction from fiscal 2011 levels but not achieving the stretch goal of a 32% reduction. They also reduced packaging material waste per production unit by 24.9% compared to a target of an 8% reduction from the fiscal 2007 level.

### Total Waste (Manufacturing)

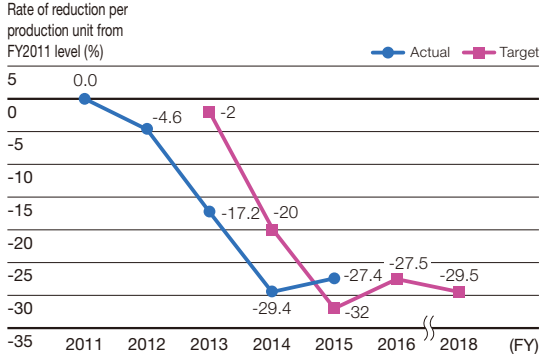


\* Due to a change in calculation criteria, the data was recalculated back to 2011.

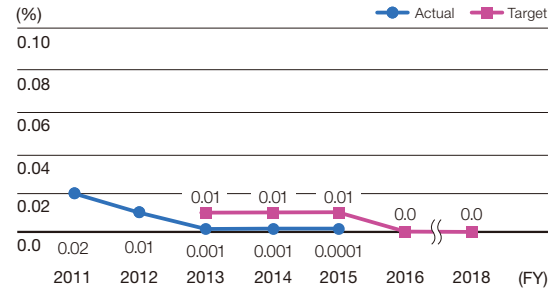
### Recycling Rate (Manufacturing)



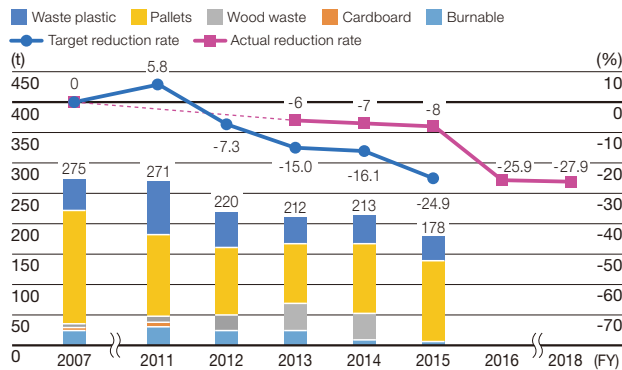
### Industrial Waste per Production Unit (Plants in Japan)



### Landfill Disposal Rate (Plants in Japan)



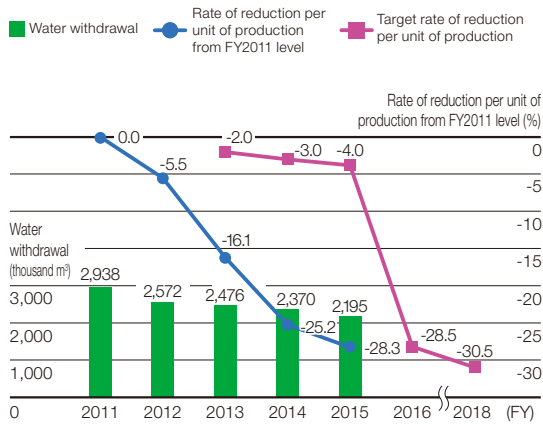
### Amount of Packaging Material Waste per Production Unit (Distribution in Japan)



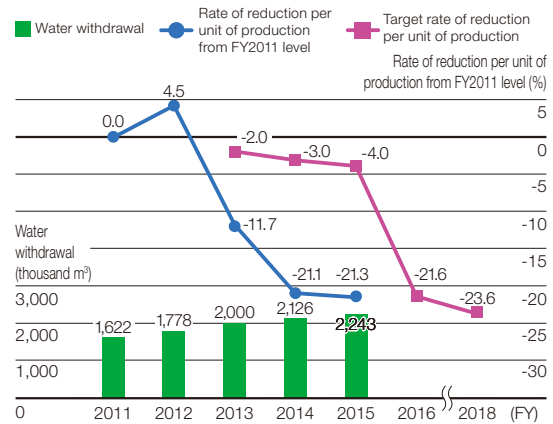


With respect to water withdrawal per production unit, plants in Japan achieved a 28.3% reduction and plants outside Japan achieved a 21.3% reduction compared to a target of a 4% reduction from fiscal 2011 levels.

● **Water Withdrawal per Unit of Production (Plants in Japan)**



● **Water Withdrawal per Unit of Production (Plants outside Japan)**



**Manufacturing 1 Reducing Use of Steel Material by Increasing the Productivity of Automobile Engine Bearings**

Tappet roller bearings are used in the rocker arm that operates the valves in automobile engines. Conventionally, the outer ring of these bearings was machined by turning. Technological development pursued by NSK with the aim of saving resources and achieving highly efficient production resulted in the elimination of turning with the adoption of cold forging. This reduced the use of steel material.

**Manufacturing 2 Initiatives to Reduce Waste in Japan**

NSK's Saitama Plant washes oil and other grime off containers for transporting parts after anti-rust oil has been applied, and then reuses the containers. The washing fluid used to be changed every day, but the installation of a centrifuge for removing oil and sludge has greatly reduced the frequency of washing fluid changes. This in turn has reduced waste by about 20 tons per month.



Centrifuge that separates oil and sludge from waste liquid

**Manufacturing 3 Initiatives to Reduce Waste Liquid in China**

In China, the unit cost to process waste liquid is increasing due to the effect of the tightening of regulations to protect the environment. Meanwhile, the amount of waste liquid produced at Zhangjiagang NSK Precision Machinery Co., Ltd., has been increasing with expansion of production scale. The company responded by installing a vacuum concentrator to make effective use of resources and control waste liquid processing costs, reducing the amount of waste liquid sent to a contract processor to 8%. The other 92% is recovered and reused or discharged to drainage after detoxification. This reduced the waste liquid processing cost by 74%.



Vacuum concentrator for waste liquid

**Distribution Increasing Reuse and Recycling of Used Packing Materials**

The NSK Group is working to use fewer packaging materials by meticulously sorting used packaging.

Conventionally, recycling of wood pallets was considered difficult due to the nails, etc. In fiscal 2015, however, NSK implemented thermal recycling of wood pallets, enabling a reduction of around 25 tons of waste pallets compared to the previous fiscal year.

#### **Manufacturing 4** Cyclical use and Reduction of Grinding Fluid and Cooling Water

The NSK Group uses grinding fluid to reduce the heat generated during the grinding of bearings and other parts and to increase lubricity. It also uses water to cool production equipment as well as ancillary equipment such as air conditioners and compressors that make compressed air. The NSK Group's business sites monitor water withdrawal and have implemented measures aimed at reducing it. All grinding fluid is cyclically used and efforts are being made to move to air cooling using air conditioners and to circulate cooling water.

Some plants in Japan used to discharge cooling water for quenching oil in the heat treatment process after one use. However, in conjunction with changes made to production lines, cyclical use of this water has been introduced in phases since fiscal 2012.

Water withdrawal and withdrawal per unit of production have been steadily decreasing in Japan. Outside Japan, withdrawal per unit of production was flat. Going forward, the Group will continue to pursue efficient use of water and reduction of use.



Reference data is available on NSK's website.

[www.nsk.com](http://www.nsk.com) > Sustainability > CSR Reports > CSR Reports & Reference Data

● Water Withdrawal, Wastewater Amounts and Waste Emissions

# Reducing Use of Environmentally Harmful Substances

Chemical substances have made modern life much more convenient. However, some chemicals can have adverse effects on human health and the environment. At the World Summit on Sustainable Development in 2002, the nations of the world reaffirmed their commitment to “aim by 2020 to use and produce chemicals in ways that do not lead to significant adverse effects on human health and the environment.” Since then the international community has been working cooperatively to regulate chemical substances more strictly.

## NSK’s Approach

The NSK Group is striving to create products that use no environmentally harmful substances, ahead of laws and regulations around the world and voluntary standards from its customers. Responding to stricter regulations, the Group tightly controls environmentally harmful substances through each stage of development and design, procurement, manufacturing, and distribution to ensure that safe products are delivered to customers.

## Mid-Term Targets (FY2016-2018)

To ensure the products it delivers are safe, the NSK Group is reinforcing its systems for global management of environmentally harmful substances and systems for ensuring that products contain no environmentally harmful substances.

The NSK Group is also enhancing its management systems for the development and design processes and rolling out green procurement to its global production sites. The Group additionally aims to further reduce environmentally harmful substances handled during production processes. The Group is focused on establishing a global management framework by surveying the inclusion of environmentally harmful substances in parts and raw materials, based on the latest NSK List of Environmentally Harmful Substances.

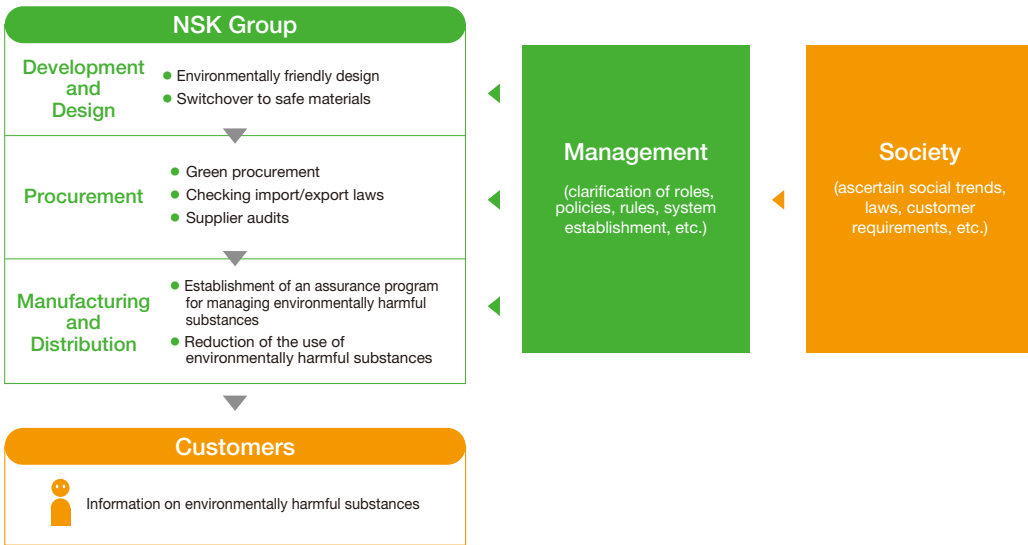
**Fiscal 2018 Targets for Reducing Use of Environmentally Harmful Substances**

**Development and design**  
Establish a development and design management system that ensures environmentally harmful substances are not contained in products

**Procurement**  
Complete the extension of NSK green procurement to key suppliers worldwide

**Manufacturing**  
Complete a global chemical substance quality assurance system for products  
In Japan: Reduce the handling of PRTR-designated substances per production unit by 26.6% compared to fiscal 2011

### ● Management of Environmentally Harmful Substances



## FY2015 Activities

In fiscal 2015, the NSK Group again revised the NSK List of Environmentally Harmful Substances in response to legislative amendments in Europe in order to enhance management of environmentally harmful substances. It conducted a survey not only in Japan but also at production sites worldwide of environmentally harmful substances inclusion in parts and raw materials and strengthened its management so that environmentally harmful substances are not used in products. Moreover, the Group completed the total elimination of use of machining fluids containing chlorine additives in manufacturing processes.

### Management System

The NSK Group is striving to strengthen its management by implementing initiatives not only in Japan but also at plants worldwide to reliably ensure that environmentally harmful substances are not included in products and then auditing the status of implementation.

In fiscal 2015, the Group conducted on-site audits at nine plants in Japan, two plants in Europe, three plants in the U.S., and one plant in India. These audits identified problems and specified points requiring further attention, and needed changes were made, reinforcing the management system. Furthermore, the Group trained 18 new environmentally harmful substance auditors in Japan and 20 outside Japan, bringing the total up to 343, so that plants around the world can autonomously conduct self-audits and supplier audits.

### Design Taking Action Based on the NSK List of Environmentally Harmful Substances

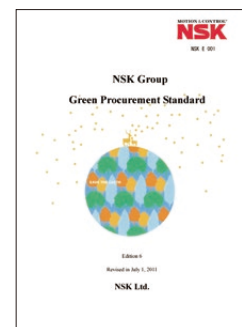
NSK has registered nearly 3,700 chemical substances in its NSK List of Environmentally Harmful Substances as Prohibited Substances, Reduced Substances, and Observation Substances. The Group is aiming for zero use of environmentally harmful substances in the manufacture of its products.

As in the previous fiscal year, the NSK Group conducted a survey in fiscal 2015 of parts and materials suppliers based on the list to make sure that substances prohibited by NSK are not included in its products. The survey was conducted on 307 suppliers in Japan and 200 suppliers outside Japan. Based on the results, NSK listed all parts that have been confirmed not to contain substances prohibited by NSK. It also used the results to build a system that ensures design departments check that products under development contain no harmful substances and production departments accept no parts that contain harmful substances.

### Procurement 1 Worldwide Efforts to Increase Awareness of NSK Green Procurement Standards

The NSK Group cooperates with suppliers in an effort to strengthen the management of environmentally harmful substances and procure environmentally friendly parts and raw materials. To make the NSK Green Procurement Standards well known outside Japan, the Group holds briefing sessions for suppliers around the world and obtains agreement forms pledging adherence to the standards. The forms were obtained from 99% of all suppliers in Japan and 78% of suppliers outside Japan.

The NSK Group's production sites worldwide will continue to work with suppliers to manufacture dependably safe products.



### Highlight Complying with Japan's Amended Law Concerning the Discharge and Control of Fluorocarbons\*

Controlling atmospheric emissions of fluorocarbons, which are powerful greenhouse gases, is a challenge in the fight against global warming. Accordingly, Japan amended its Law Concerning the Discharge and Control of Fluorocarbons, and the amendments went into effect in April 2015.

To prevent the leakage of fluorocarbons from industrial air conditioners and other equipment, the law requires regular inspection of equipment and, where leaks are discovered, no replenishment of fluorocarbons until the leaks are completely repaired, as well as other appropriate management. It also requires records to be kept on the amount of leakage and, where leakage is confirmed to be at or above 1,000 t-CO<sub>2</sub> per year, a report must be submitted to the national government.

NSK conducted simple inspections of around 5,000 pieces of equipment in fiscal 2015 as well as regular inspections on around 200 pieces of equipment. The results showed that the leakage of fluorocarbons was below 1,000 t-CO<sub>2</sub> per year.

\* Law Concerning the Discharge and Control of Fluorocarbons: Act for Rationalized Use and Proper Management of Fluorocarbons  
Japan's law establishing comprehensive measures covering the entire lifecycle of fluorocarbons, from their manufacture to disposal, in order to reduce their effect on ozone layer destruction and global warming.



Reference data is available on NSK's website.

[www.nsk.com](http://www.nsk.com) > Sustainability > Initiatives in the Procurement

● NSK Group Green Procurement Standard

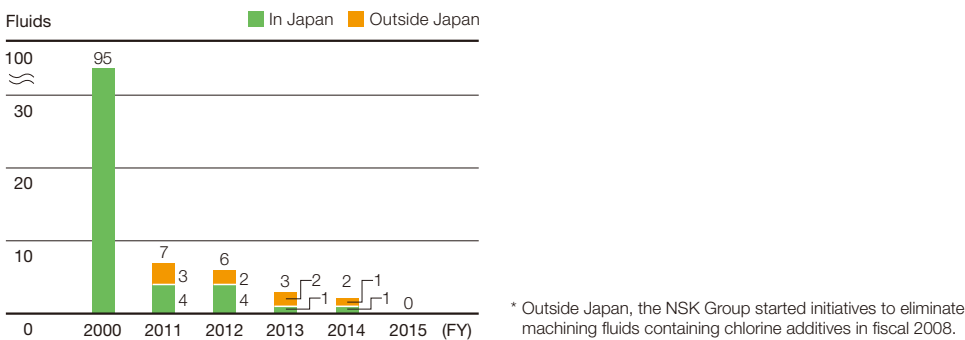
**Procurement 2** Improving On-site Audits of Suppliers

The NSK Group conducts periodic audits of suppliers of parts and raw materials with a high possibility of containing or carrying environmentally harmful substances. Group employees who hold qualifications as environmentally harmful substance auditors visit suppliers and conduct the audits using an NSK audit check sheet. This has strengthened environmental initiatives throughout the supply chain. In fiscal 2015, on-site audits were conducted at 38 suppliers in Japan and 29 suppliers outside Japan. The Group is working with suppliers to follow up on improvements to issues identified through the audits. Going forward, the NSK Group will step up its audits of suppliers outside Japan, aiming to further strengthen its management system for environmentally harmful substances.

**Manufacturing 1** Totally Eliminated Machining Fluids Containing Chlorine Additives

Machining fluids containing chlorine additives may generate harmful dioxins when incinerated at disposal. The NSK Group has taken initiatives to totally eliminate use of these substances. In fiscal 2015, after repeated tests to confirm effects on the machinability and quality of parts, the Group was able to eliminate the final two fluids used in machining under some of the harshest conditions for broaching and replace them with alternatives.

● Number of Machining Fluids Containing Chlorine Additives



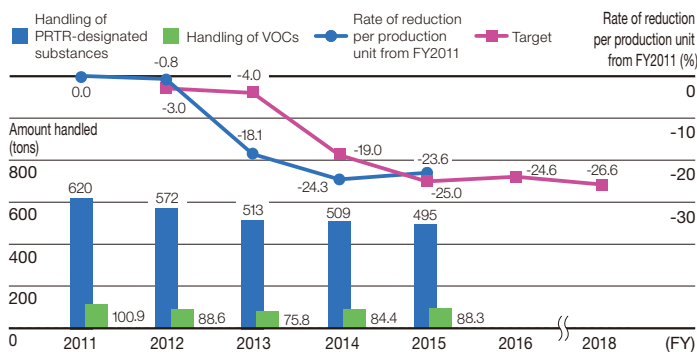
**Manufacturing 2** Handling of PRTR\*-Designated Substances Reduced by 23.6%

In Japan, the NSK Group set the goal of a 25% reduction in PRTR-designated substances contained in fluids and fuels used in manufacturing processes in fiscal 2015, compared to fiscal 2011. By switching the fuel used in air conditioning, the Group's handling of PRTR-designated substances per production unit in fiscal 2015 was decreased by 23.6% from fiscal 2011. In fiscal 2016, the Group set the goal of a 1% reduction.

In addition, the NSK Group promotes steady initiatives in the manufacturing process using solvents and adhesives that contain volatile organic compounds (VOC). By implementing these initiatives during those processes, emissions to the atmosphere in fiscal 2015 were reduced by 12.5% from fiscal 2011 to 88.3 tons.

\* Law concerning Pollutant Release and Transfer Register (PRTR): Act on Confirmation, etc., of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof  
Japan's law intended to facilitate improvement of chemical substance management by ensuring that amounts released into the environment are ascertained and reported to authorities.

● Handling of PRTR-Designated Substances (Plants in Japan)



Reference data is available on NSK's website. [www.nsk.com](http://www.nsk.com) > Sustainability > CSR Reports > CSR Reports & Reference Data

● Air Pollutant Measurement Results (Japan) ● Water Contaminant Measurement Results (Japan) ● Volume of PRTR-Designated Substances Handled (Japan)

## Biodiversity Conservation

There are believed to be some 30 million species of organisms on Earth today, which have been adapting to their specific environments for as long as several millennia. These organisms live in connection with one another, supporting one another through the food chain and the oxygen-carbon dioxide cycle based on photosynthesis. The food, clothing and shelter which people need to live totally depend on the bounty of biodiversity. Aiming to conserve biodiversity, the Convention on Biological Diversity was concluded at the Earth Summit in 1992. In 2008, a new law in Japan, the Basic Act on Biodiversity, came into effect.

### NSK's Approach

Although NSK's business operations have a comparatively minor direct impact on biodiversity, its strong efforts in areas such as energy conservation and air and water quality management play a role in preserving biodiversity. The materials that the Group procures, however, have an indirect impact on biodiversity when traced back through the supply chain. NSK is committed to contributing to biodiversity conservation by identifying the direct and indirect impacts that its business has on biodiversity and using its findings to improve its business operations and enhance its social contributions.

#### ■ NSK Biodiversity Guidelines

##### Basic Policy

The NSK Group recognizes the importance of biodiversity, and understands the relationship between our business activities and the ecosystem. We aim to reduce our impact on the environment by creating systems and initiatives that ensure biodiversity is conserved.

#### ● Action Agenda

##### 1. Research and Development

We will contribute to the conservation of biodiversity by developing products that save energy and resources.

##### 2. Procurement and Purchasing

We will contribute to the conservation of biodiversity throughout the supply chain when procuring main materials, sub-materials, and packaging/packaging materials.

We will promote the purchase of the environmentally-friendly products, and consider the conservation of biodiversity in product selection criteria.

##### 3. Manufacturing and Logistics

We will minimize the impact of our production on biodiversity by reducing consumption of energy and resources, and emission of environmentally harmful substances.

##### 4. Plant and Office Grounds

We will consider the impact on the ecosystem when acquiring land for our places of business and during greening initiatives.

##### 5. Social Contribution Activities

We will perform social contribution initiatives as a member of international society, and value our collaboration with public and private institutions.

##### 6. Communications

We will actively disclose information on biodiversity-related initiatives to persons both inside and outside the company.

We will heighten employee awareness of biodiversity-related issues, and constantly work to improve the quality and efficiency of initiatives.

Established October 5, 2010 NSK Ltd.



Reference data is available  
on NSK's website.

[www.nsk.com](http://www.nsk.com) > Sustainability > Environmental Activity > Environmental Management

● NSK Biodiversity Guidelines

## Mid-Term Targets (FY2016-2018)

In the Mid-Term Plan, the NSK Group will implement education in Europe and the ASEAN region and carry out further initiatives to reduce impact on biodiversity.

## FY2015 Activities

The NSK Group identifies the factors behind the impact of its business operations on biodiversity and provides education to raise the awareness of its employees. In fiscal 2015, it started education on biodiversity in China, the US, and India. Additionally, it conducted hands-on forest maintenance experiences to raise the awareness of employees at three plants in Japan.

### ● Survey of Biodiversity on Plant Premises

Wild grey-headed lapwings\*<sup>1</sup> live at NSK's Fukushima Plant while plants such as the Golden Orchid\*<sup>2</sup> grow at the Kirihara Branch. NSK will continue to protect these wild animals and plants.

\*1 Class I endangered species on the Fukushima Red List

\*2 Class II endangered species on the Ministry of Environment Red List and Class II endangered species on the Kanagawa Prefecture Red List

### ● Tournament for Catching and Removing Invasive Fish

As part of its biodiversity conservation activities, NSK's Ohtsu Plant has held a fishing tournament to catch and remove invasive fish species from Lake Biwa since 2014. Many endemic species live in Lake Biwa, but invasive species such as bluegill and black bass are threatening the survival of rare species. Twenty-eight people, including employees and their families, participated in the tournament held in July 2015, and removed 74 fish.



### ● Maintenance Activities in the NSK Gunma Future Forest

Around 40 people, including employees and their families, of NSK Steering Systems Co., Ltd., NSK Needle Bearing Ltd., and NSK participated in forest maintenance, including cutting grass and thinning trees in a prefectural forest in Gunma Prefecture in October 2015. In January 2016, an agreement was signed with Gunma Prefecture regarding a Gunma Prefecture forest maintenance partner project aimed at continued cultivation of healthy prefectural forests.



### ● Nature Walks

NSK's Fujisawa Plant, Fujisawa R&D Center, Kirihara Branch, and AKS East Japan Co., Ltd., together with Fujisawa City and the NPO Fujisawa Green Staff Society, held a nature walk in a green conservation area in the city of Fujisawa. Participants collected acorns and set up nest boxes for wild birds. Starting in fiscal 2016, this will become an ongoing activity, with an agreement having been signed with Fujisawa City to that end.



# Appendix

- GRI Guidelines Index .....P. 79
- Certification for Quality Management Systems .....P. 82
- Acquiring ISO 14001 Certification ...P. 84
- Scope of Environmental Management ...P. 86
- Estimating Indirect CO<sub>2</sub> Emissions ...P. 87 (Scope 3)
- Environmental Accounting .....P. 88
- Environmental Data by Country ...P. 89
- Greenhouse Gas Emissions Verification Report .....P. 91
- Independent Assurance Statement ...P. 92



## GRI Guidelines Index

### GENERAL STANDARD DISCLOSURES

Report Pages

Strategy and Analysis		
G4-1	Provide a statement from the most senior decision-maker of the organization (such as CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and the organization's strategy for addressing sustainability.	pp. 12-13
G4-2	Provide a description of key impacts, risks, and opportunities.	pp. 12-13 NSK Report 2016 (p. 53)
Organizational Profile		
G4-3	Report the name of the organization.	p. 3
G4-4	Report the primary brands, products, and services.	pp. 3-4
G4-5	Report the location of the organization's headquarters.	p. 3
G4-6	Report the number of countries where the organization operates, and names of countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report.	p. 5
G4-7	Report the nature of ownership and legal form.	p. 3
G4-8	Report the markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries).	pp. 3-5
G4-9	Report the scale of the organization, including: • Total number of employees • Total number of operations • Net sales (for private sector organizations) or net revenues (for public sector organizations) • Total capitalization broken down in terms of debt and equity (for private sector organizations) • Quantity of products or services provided	pp. 3, 5
G4-10	a. Report the total number of employees by employment contract and gender. b. Report the total number of permanent employees by employment type and gender. c. Report the total workforce by employees and supervised workers and by gender. d. Report the total workforce by region and gender. e. Report whether a substantial portion of the organization's work is performed by workers who are legally recognized as self-employed, or by individuals other than employees or supervised workers, including employees and supervised employees of contractors. f. Report any significant variations in employment numbers (such as seasonal variations in employment in the tourism or agricultural industries).	pp. 3, 5, 51
G4-11	Report the percentage of total employees covered by collective bargaining agreements.	p. 44, web: Labor and Management Cooperate to Develop Better Working Environment
G4-12	Describe the organization's supply chain.	pp. 7-8, 29
G4-13	Report any significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain, including: • Changes in the location of, or changes in, operations, including facility openings, closings, and expansions • Changes in the share capital structure and other capital formation, maintenance, and alteration operations (for private sector organizations) • Changes in the location of suppliers, the structure of the supply chain, or in relationships with suppliers, including selection and termination	N/A
G4-15	List externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses.	p. 44
Identified Material Aspects and Boundaries		
G4-17	a. List all entities included in the organization's consolidated financial statements or equivalent documents. b. Report whether any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report.	Securities Report (pp. 8-12)
G4-18	a. Explain the process for defining the report content and the Aspect Boundaries. b. Explain how the organization has implemented the Reporting Principles for Defining Report Content.	p. 1
G4-19	List all the material Aspects identified in the process for defining report content.	p. 7
G4-22	Report the effect of any restatements of information provided in previous reports, and the reasons for such restatements.	pp. 66, 70
G4-23	Report significant changes from previous reporting periods in the Scope and Aspect Boundaries.	N/A
Stakeholder Engagement		
G4-24	Provide a list of stakeholder groups engaged by the organization.	p. 8
G4-25	Report the basis for identification and selection of stakeholders with whom to engage.	p. 8
G4-26	Report the organization's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process.	pp. 8-11
G4-27	Report key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting. Report the stakeholder groups that raised each of the key topics and concerns.	pp. 8-11
Report Profile		
G4-28	Reporting period (such as fiscal or calendar year) for information provided.	p. 1
G4-29	Date of most recent previous report (if any).	Back Cover
G4-30	Reporting cycle (such as annual, biennial).	Back Cover
G4-31	Provide the contact point for questions regarding the report or its contents.	Back Cover
G4-32	a. Report the 'in accordance' option the organization has chosen. b. Report the GRI Content Index for the chosen option. c. Report the reference to the External Assurance Report, if the report has been externally assured.	pp. 91, 92
G4-33	a. Report the organization's policy and current practice with regard to seeking external assurance for the report. b. If not included in the assurance report accompanying the sustainability report, report the scope and basis of any external assurance provided. c. Report the relationship between the organization and the assurance providers. d. Report whether the highest governance body or senior executives are involved in seeking assurance for the organization's sustainability report.	pp. 91, 92
Governance		
G4-34	Report the governance structure of the organization, including committees of the highest governance body. Identify any committees responsible for decision-making on economic, environmental and social impacts.	pp. 17, 59
G4-35	Report the process for delegating authority for economic, environmental and social topics from the highest governance body to senior executives and other employees.	pp. 17, 59
G4-36	Report whether the organization has appointed an executive-level position or positions with responsibility for economic, environmental and social topics, and whether post holders report directly to the highest governance body.	pp. 17, 59
G4-37	Report processes for consultation between stakeholders and the highest governance body on economic, environmental and social topics. If consultation is delegated, describe to whom and any feedback processes to the highest governance body.	pp. 17, 59

**GENERAL STANDARD DISCLOSURES**

Report Pages

Governance		Report Pages
G4-38	Report the composition of the highest governance body and its committees by: •Executive or non-executive •Independence •Tenure on the governance body •Number of each individual's other significant positions and commitments, and the nature of the commitments •Gender •Membership of under-represented social groups •Competences relating to economic, environmental and social impacts •Stakeholder representation	pp. 17-20
G4-39	Report whether the Chair of the highest governance body is also an executive officer (and, if so, his or her function within the organization's management and the reasons for this arrangement).	pp. 17, 18, 20
G4-40	Report the nomination and selection processes for the highest governance body and its committees, and the criteria used for nominating and selecting highest governance body members, including: •Whether and how diversity is considered •Whether and how independence is considered •Whether and how expertise and experience relating to economic, environmental and social topics are considered •Whether and how stakeholders (including shareholders) are involved	pp. 18-19
G4-42	Report the highest governance body's and senior executives' roles in the development, approval, and updating of the organization's purpose, value or mission statements, strategies, policies, and goals related to economic, environmental and social impacts.	pp. 17-20
G4-43	Report the measures taken to develop and enhance the highest governance body's collective knowledge of economic, environmental and social topics.	p. 19
G4-44	a. Report the processes for evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics. Report whether such evaluation is independent or not, and its frequency. Report whether such evaluation is a self-assessment. b. Report actions taken in response to evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics, including, as a minimum, changes in membership and organizational practice.	p. 18
G4-45	a. Report the highest governance body's role in the identification and management of economic, environmental and social impacts, risks, and opportunities. Include the highest governance body's role in the implementation of due diligence processes. b. Report whether stakeholder consultation is used to support the highest governance body's identification and management of economic, environmental and social impacts, risks, and opportunities.	pp. 17-20
G4-46	Report the highest governance body's role in reviewing the effectiveness of the organization's risk management processes for economic, environmental and social topics.	pp. 17, 21-22
G4-47	Report the frequency of the highest governance body's review of economic, environmental and social impacts, risks, and opportunities.	p. 21
G4-49	Report the process for communicating critical concerns to the highest governance body.	pp. 21-22, 24-25
G4-51	a. Report the remuneration policies for the highest governance body and senior executives for the below types of remuneration: •Fixed pay and variable pay: -Performance-based pay -Equity-based pay -Bonuses -Deferred or vested shares •Sign-on bonuses or recruitment incentive payments •Termination payments •Clawbacks •Retirement benefits, including the difference between benefit schemes and contribution rates for the highest governance body, senior executives, and all other employees b. Report how performance criteria in the remuneration policy relate to the highest governance body's and senior executives' economic, environmental and social objectives	pp. 19-20
G4-52	Report the process for determining remuneration. Report whether remuneration consultants are involved in determining remuneration and whether they are independent of management. Report any other relationships which the remuneration consultants have with the organization.	p. 19
Ethics and Integrity		Report Pages
G4-56	Describe the organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics.	p. 6
G4-57	Report the internal and external mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity, such as helplines or advice lines.	p. 25
G4-58	Report the internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity, such as escalation through line management, whistleblowing mechanisms or hotlines.	p. 25

**SPECIFIC STANDARD DISCLOSURES**

Report Pages

Disclosures on Management Approach		Report Pages	
G4-DMA	a. Report why the Aspect is material. Report the impacts that make this Aspect material. b. Report how the organization manages the material Aspect or its impacts. c. Report the evaluation of the management approach, including: •The mechanisms for evaluating the effectiveness of the management approach •The results of the evaluation of the management approach •Any related adjustments to the management approach	p. 7	
Economic		Report Pages	
G4-EC1	Direct economic value generated and distributed.	NSK Report 2016 (p. 9)	
G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change.	NSK Report 2016 (p. 53)	
G4-EC3	Coverage of the organization's defined benefit plan obligations.	Securities Report (pp. 28, 100)	
Environmental		Report Pages	
G4-EN1	Materials	Materials used by weight or volume.	p. 61
G4-EN3	Energy	Energy consumption within the organization.	pp. 61, 66, 89
G4-EN6		Reduction of energy consumption.	p. 89
G4-EN8	Water	Total water withdrawal by source.	pp. 61, 71, 90
G4-EN10		Percentage and total volume of water recycled and reused.	p. 61
G4-EN11	Biodiversity	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	p. 77
G4-EN13		Habitats protected or restored.	p. 77
G4-EN15	Emissions	Direct greenhouse gas (GHG) emissions (Scope 1).	pp. 61, 66, 89
G4-EN16		Energy indirect greenhouse gas (GHG) emissions (Scope 2).	pp. 61, 66, 89
G4-EN17		Other indirect greenhouse gas (GHG) emissions (Scope 3).	p. 87
G4-EN18		Greenhouse gas (GHG) emissions intensity.	pp. 66-67
G4-EN19		Reduction of greenhouse gas (GHG) emissions.	pp. 66-67, 89
G4-EN21		NOx, SOx, and other significant air emissions.	p. 61

**SPECIFIC STANDARD DISCLOSURES**

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Environmental			
G4-EN22		Total water discharge by quality and destination.	pp. 61, 90
G4-EN23	Effluents and Waste	Total weight of waste by type and disposal method.	pp. 61, 70, 89
G4-EN24		Total number and volume of significant spills.	p. 60
G4-EN27	Products and Services	Extent of impact mitigation of environmental impacts of products and services.	pp. 63-64
G4-EN28		Percentage of products sold and their packaging materials that are reclaimed by category.	p. 70
G4-EN30	Transport	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce.	p. 67
G4-EN31	Overall	Total environmental protection expenditures and investments by type.	p. 88
G4-EN32	Supplier	Percentage of new suppliers that were screened using environmental criteria.	p. 29
G4-EN33	Environmental Assessment	Significant actual and potential negative environmental impacts in the supply chain and actions taken.	pp. 74-75
G4-EN34	Environmental Grievance Mechanisms	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms.	None
Social			
Labor Practices and Decent Work			
G4-LA1		Total number and rates of new employee hires and employee turnover by age group, gender and region	NSK Report 2016 (p. 17)
G4-LA2	Employment	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation.	p. 50
G4-LA3		Return to work and retention rates after parental leave, by gender.	p. 51
G4-LA5	Occupational Health and Safety	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs	p. 44, web: Labor and Management Cooperate to Develop Better Working Environment
G4-LA6		Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender.	p. 52
G4-LA9		Average hours of training per year per employee by gender, and by employee category.	p. 45
G4-LA10	Training and Education	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	pp. 45, 51
G4-LA11		Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	p. 45
G4-LA12	Diversity and Equal Opportunity	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.	pp. 49, 51
G4-LA14	Supplier Assessment for Labor Practices	Percentage of new suppliers that were screened using labor practices criteria	p. 29
Human Rights			
G4-HR10	Supplier Human Rights Assessment	Percentage of new suppliers that were screened using human rights criteria	p. 29
Society			
G4-SO1	Local Communities	Percentage of operations with implemented local community engagement, impact assessments, and development programs.	pp. 54-56
G4-SO4	Anti-corruption	Communication and training on anti-corruption policies and procedures.	pp. 26-27
G4-SO7	Anti-competitive Behavior	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.	None
G4-SO8	Compliance	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	None
G4-SO9	Supplier Assessment for Impacts on Society	Percentage of new suppliers that were screened using criteria for impacts on society.	p. 29
Product Responsibility			
G4-PR5	Product and Service Labeling	Results of surveys measuring customer satisfaction.	p. 37

## Certification for Quality Management Systems

(As of October 2016)

Region	Country	Site name	Certification
Japan	Japan	NSK Ltd., Fujisawa Plant	ISO 9001, EN/JISQ/AS 9100
		NSK Ltd., Ohtsu Plant	ISO 9001, ISO/TS 16949
		NSK Ltd., Ishibe Plant	ISO 9001, ISO/TS 16949
		NSK Ltd., Saitama Plant	ISO/TS 16949
		NSK Ltd., Fukushima Plant	ISO 9001
		NSK Ltd., Takasaki Plant	ISO 9001, ISO/TS 16949
		NSK Ltd., Haruna Plant	ISO/TS 16949
		NSK Ltd., Maebashi Precision Machinery Plant	ISO 9001
		NSK Ltd., Saitama Precision Machinery Plant	ISO 9001
		NSK Ltd., Kirihara Branch	ISO 9001
		NSK Steering Systems Co., Ltd., Soja Plant (Soja and Akagi)/	ISO/TS 16949
		NSK Ltd., Steering Technology Center	
		NSK Kyushu Co., Ltd.	ISO 9001
		NSK Micro Precision Co., Ltd., Fujisawa Plant	ISO 9001
		NSK Micro Precision Co., Ltd., Matsukawa Plant	ISO 9001
		Amatsuji Steel Ball Mfg. Co., Ltd., Main Works	ISO/TS 16949
		Amatsuji Steel Ball Mfg. Co., Ltd., Shiga Works	ISO/TS 16949
		AKS East Japan Co., Ltd.	ISO/TS 16949
		NSK Logistics Co., Ltd.	ISO 9001
		NSK-Warner K.K.	ISO 9001, ISO/TS 16949
Inoue Jikuuke Kogyo Co., Ltd.	ISO 9001, ISO/TS 16949		
The Americas	U.S.A.	NSK Corporation, Clarinda Plant	ISO 9001, ISO/TS 16949
		NSK Corporation, Franklin Plant	ISO 9001, ISO/TS 16949
		NSK Corporation, Liberty Plant	ISO 9001
		NSK Precision America, Inc.	ISO 9001
		NSK-AKS Precision Ball Company	ISO 9001, ISO/TS 16949
		NSK Steering Systems America, Inc., Bennington Plant	ISO 9001, ISO/TS 16949
		NSK Steering Systems America, Inc., Dyersburg Plant	ISO/TS 16949
	Mexico	NSK Bearings Manufacturing, Mexico, S.A. DE C.V.	ISO/TS16949
	Brazil	NSK Brasil LTDA., Suzano Plant	ISO 9001, ISO/TS 16949
	Europe	U.K.	NSK Bearings Europe Ltd., Peterlee Plant
NSK Bearings Europe Ltd., Newark Plant			ISO 9001
AKS Precision Ball Europe Ltd.			ISO 9001
NSK Precision UK Ltd.			ISO 9001
Germany		Neuweg Fertigung GmbH , Munderkingen Plant	ISO/TS 16949
Poland		NSK Bearings Polska S.A., Kielce Plant	ISO 9001, ISO/TS 16949
		AKS Precision Ball Polska Sp. Z O.O.	ISO 9001
		NSK Steering Systems Europe (Polska) Sp. Z O.O.	ISO/TS 16949
	NSK Needle Bearing Poland Sp. Z O.O.	ISO/TS 16949	

Region	Country	Site name	Certification
Asia	Indonesia	PT. NSK Bearings Mfg. Indonesia	ISO/TS 16949
		PT. AKS Precision Ball Indonesia	ISO 9001, ISO/TS 16969
	Thailand	Siam NSK Steering Systems Co., Ltd.	ISO/TS 16949
		NSK Bearings Mfg. (Thailand) Co., Ltd.	ISO 9001, ISO/TS 16949
	Malaysia	NSK Micro Precision (M) Sdn. Bhd.	ISO 9001
		ISC Micro Precision Sdn. Bhd.	ISO 9001
	China	Kunshan NSK Co., Ltd.	ISO/TS 16949
		Changshu NSK Needle Bearings Co., Ltd.	ISO/TS 16949
		Dongguan NSK Steering Systems Co., Ltd.	ISO/TS 16949
		Zhangjiagang NSK Precision Machinery Co., Ltd.	ISO9001
		Suzhou NSK Needle Bearings Co., Ltd.	ISO/TS 16949
		NSK-Warner (Shanghai) Co., Ltd.	ISO/TS 16949
		NSK-WANDA Electric Power Assisted Steering Systems Co., Ltd.	ISO/TS 16949
		Shenyang NSK Precision Co., Ltd.	ISO 9001
		Shenyang NSK Co., Ltd.	ISO 9001
		Hefei NSK Co., Ltd.	ISO/TS 16949
		AKS Precision Ball (Hangzhou) Co., Ltd.	ISO/TS 16949
		Korea	NSK Korea Co., Ltd., Changwon Plant
	India	Rane NSK Steering Systems, Ltd., Chennai Plant	ISO 9001, ISO/TS 16949
		Rane NSK Steering Systems, Ltd., Bawal Plant	ISO 9001, ISO/TS 16949
NSK-ABC Bearings Ltd.		ISO/TS 16949	



Reference data is available  
on NSK's website.

[www.nsk.com](http://www.nsk.com) > Sustainability > Creating Quality to Earn the Confidence of Society

● Certification for Quality Management Systems

## Acquiring ISO 14001 Certification

The NSK Group strives to regularly review its environmental management activities and to make continuous improvements based on the ISO 14001 international standard for environmental management. It is the Group's policy to obtain certification for Group companies manufacturing NSK-brand products as well as Group companies (manufacturing and distribution) in which NSK has at least a 50% equity stake, within three years of the start of commercial production.

### ● ISO 14001 Achievement

(As of August 2016)

Region	Country	Site name	Date acquired
Japan	Japan	NSK Ltd. Fujisawa Plant (including Fujisawa Technology Center)/ Fujisawa Plant Kiri-hara branch	Sep. 1999 / Oct. 2009
		NSK Ltd. Ohtsu Plant	Nov. 1999
		NSK Ltd. Ishibe Plant	Oct. 1998
		NSK Ltd. Saitama Plant / Saitama Precision Machinery Plant	Sep. 1998
		NSK Ltd. Kiri-hara Branch	Nov. 1999
		NSK Ltd. Fukushima Plant	Jul. 1998
		NSK Ltd. Takasaki Plant / Haruna Plant	Jul. 2004 / Jan. 2001
		NSK Steering Systems Co., Ltd., Soja Plant (Soja and Akagi) / NSK Ltd., Steering Technology Center / Maebashi Precision Machinery Plant	Dec. 1999
		NSK Micro Precision Co., Ltd., Fujisawa Plant	Jun. 2001
		NSK Micro Precision Co., Ltd., Matsukawa Plant	Apr. 2004
		NSK Kyushu Co., Ltd.	Oct. 2000
		Asahi Seiki Co., Ltd.	Dec. 2003
		Amatsuji Steel Ball Mfg. Co., Ltd., Main Works / Shiga Works	Mar. 2001
		AKS East Japan Co., Ltd.	Sep. 2001
		NSK Toyama Co., Ltd., Head Office & Factory / Yatsuo Factory	Nov. 2010
		Shinwa Seiko Co., Ltd. Shin-asahi Plant / Kutsuki Plant	Dec. 2002
		Kuribayashi Seisakusho Co., Ltd.	Mar. 2006
		NSK Machinery Co., Ltd.	Mar. 2003
		NSK Logistics Co., Ltd. (headquarters; logistics centers in Kanto, Chubu, and Kansai regions)	Oct. 2003
		Inoue Jikuu-ke Kogyo Co., Ltd.	Feb. 2001
NSK-Warner K.K.	Mar. 2001		
Chitose Sangyo Co., Ltd.	Nov. 2003		



Reference data is available on NSK's website.

[www.nsk.com](http://www.nsk.com) > Sustainability > Environmental Management

● ISO 14001 Achievement

Region	Country	Site name	Date acquired	
The Americas	U.S.A.	NSK Corporation (administration, technology)	Apr. 2015	
		NSK Corporation, Clarinda Plant	Jul. 2002	
		NSK Corporation, Franklin Plant	Nov. 2002	
		NSK Corporation, Liberty Plant	Jun. 2007	
		NSK Precision America, Inc.	Jan. 2007	
		NSK Steering Systems America, Inc., Bennington Plant	Dec. 2002	
		NSK Steering Systems America, Inc., Dyersburg Plant	Mar. 2009	
		NSK-AKS Precision Ball Company	Nov. 2006	
	Mexico	NSK Bearings Manufacturing Mexico S.A. de C.V.	Oct. 2015	
	Brazil	NSK Brasil LTDA., Suzano Plant	Jan. 2000	
Europe	U.K.	NSK Europe Ltd. (administration, technology, sales, distribution)	Nov. 2000	
		NSK Bearings Europe Ltd., Newark Plant	Jul. 2006	
		NSK Bearings Europe Ltd., Peterlee Plant	Feb. 1999	
		NSK Precision UK Ltd.	May 2000	
		AKS Precision Ball Europe Ltd.	Nov. 2006	
		Germany	Neuweg Fertigung GmbH, Munderkingen Plant	Jan. 2001
	Poland	NSK Bearings Polska S.A., Kielce Plant	Aug. 2004	
		NSK Needle Bearing Poland Sp. Z O.O.	Dec. 2012	
NSK Steering Systems Europe (Polska) Sp. Z O.O.		Dec. 2006		
		AKS Precision Ball Polska Sp. Z O.O.	Apr. 2005	
Africa	South Africa	NSK South Africa (Pty) Ltd.	Dec. 2005	
Asia	Indonesia	PT. NSK Bearings Mfg. Indonesia	Mar. 2000	
		PT. AKS Precision Ball Indonesia	Sep. 2005	
		PT. NSK-Warner Indonesia	Mar. 2014	
	Thailand	NSK Bearings Mfg. (Thailand) Co., Ltd.	Jun. 2004	
		Siam NSK Steering Systems Co., Ltd.	Nov. 2000	
	Malaysia	NSK Micro Precision (M) Sdn. Bhd.	Jan. 2002	
		ISC Micro Precision Sdn. Bhd.	Dec. 1999	
	China		Kunshan NSK Co., Ltd.	Dec. 2003
			Changshu NSK Needle Bearings Co., Ltd.	Mar. 2007
			Dongguan NSK Steering Systems Co., Ltd.	Aug. 2007
			Zhangjiagang NSK Precision Machinery Co., Ltd.	Mar. 2009
			Suzhou NSK Needle Bearings Co., Ltd.	Sep. 2007
			AKS Precision Ball (Hangzhou) Co., Ltd.	Nov. 2007
			NSK-Warner (Shanghai) Co., Ltd.	Feb. 2010
			NSK-WANDA Electric Power Assisted Steering Systems Co., Ltd.	Oct. 2011
			NSK-Yagi Precision Forging (Zhangjiagang) Co., Ltd.	Mar. 2011
			Shenyang NSK Precision Co., Ltd.	Jun. 2014
			Shenyang NSK Co., Ltd.	Feb. 2014
			Hefei NSK Co., Ltd.	Jan. 2015
		Korea	NSK Korea Co., Ltd., Changwon Plant / NSK Needle Bearing Korea Co., Ltd.	Dec. 1997 / Feb. 2006
India		NSK-ABC Bearings Ltd.	Dec. 2013	
		Rane NSK Steering Systems Ltd., Chennai Plant	Nov. 2004	
		Rane NSK Steering Systems Ltd., Bawal Plant	Jun. 2012	
		Rane NSK Steering Systems Ltd., Pantnagar Plant	Jan. 2015	

## Scope of Environmental Management

In order to increase coverage and reliability, the Global Environmental Department of NSK headquarters and each Group site confirm environmental information and data. Moreover, the Group decides which information and data is to be disclosed, taking into account relevant laws and regulations, guidelines, social concerns and materiality of the Group.

	Category	Scope	
Environmental Management	INPUT	Steel	Procurement Volume from main suppliers
		Oils and greases	
		Energy	ISO14001 acquiring sites
		Water	
	OUTPUT	Environmentally harmful substances	ISO14001 acquiring sites in Japan
		Atmospheric gases	
		Waste	ISO14001 acquiring sites
		Wastewater	
		Environmentally harmful substances	ISO14001 acquiring sites in Japan
CSR Report 2016 p. 61: Input and Output of Global Business Activities			
CSR Report Supplemental Materials p. 88: Environmental Accounting			
CSR Report 2016 p. 60: Environmental Education		NSK Group in Japan (e-learning: NSK Group)	
Creating Environmentally Friendly Products	CSR Report 2016 p. 63: Figure: Number of Environmentally Friendly Products Developed CSR Report 2016 p. 64: Table: Environmentally Friendly Products Developed in FY2015	NSK Group (Products Development Divisions)	
Global Warming Countermeasures	CSR Report 2016 p. 66: Figure: Total CO <sub>2</sub> Emissions from Manufacturing by Region (Scope 1 and 2)		
	CSR Report 2016 p. 66: Figure: CO <sub>2</sub> Emissions from Manufacturing in Japan: Total Volume and per Production Unit Figure: CO <sub>2</sub> Emissions from Manufacturing Outside Japan: Total Volume and per Production Unit	ISO14001 acquiring sites (Production)	
	CSR Report 2016 p. 89: Change in Energy Consumption and CO <sub>2</sub> Emissions (by Country)		
	CSR Report Supplemental Materials (website) : Energy Consumption and CO <sub>2</sub> Emissions (by Site)		
	CSR Report 2016 p. 67: Figure: Energy Consumed per Ton-Kilometer and CO <sub>2</sub> Emissions from Distribution in Japan	NSK Logistics Co., Ltd., and main distribution contractors	
	CSR Report 2016 p. 68: Energy-Saving Efforts at the Head Office and Sales Departments	NSK Group sites in Japan (Headquarters, Branch Offices and Sales Offices)	
	CSR Report 2016 p. 66: Greenhouse Gas Emissions Verification Report (Japan)	NSK Group site in Japan(Headquarters, Branch Office and Sales Offices, Production, Technology Division)	



	Category	Scope
Measures for Resource Conservation and Recycling	CSR Report 2016 p. 70: Figure: Total Waste	ISO14001 acquiring sites (Production)
	CSR Report 2016 p. 70: Figure: Recycling Rate	
	CSR Report 2016 p. 70: Figure: Industrial Waste per Production Unit (Plants in Japan)	ISO14001 acquiring sites in Japan (Production)
	CSR Report 2016 p. 70: Figure: Landfill Disposal Rate (Plants in Japan)	
	CSR Report 2016 p. 70: Figure: Amount of Packaging Material Waste per Production Unit (Distribution in Japan)	NSK Logistics Co., Ltd.
	CSR Report 2016 p. 71: Figure: Water Withdrawal per Unit of Production (Plants in Japan) Figure: Water Withdrawal per Unit of Production (Plants outside Japan)	
	CSR Report 2016 p. 89: Change in Waste Emissions (by Country)	ISO14001 acquiring sites (Production)
	CSR Report Supplemental Materials (website): Water Withdrawal, Wastewater Amounts and Waste Emissions	
	CSR Report 2016 p. 90: Change in Water Withdrawal and Wastewater Amounts (by Country)	
Reducing Use of Environmentally Harmful Substances	CSR Report 2016 p. 75: Figure: Number of Machining Fluids Containing Chlorine Additives	ISO14001 acquiring sites (Production)
	CSR Report 2016 p. 75: Figure: Handling of PRTR-Designated Substances (Plants in Japan)	ISO14001 acquiring sites in Japan (Production)
	CSR Report Supplemental Materials (website): Volume of PRTR-Designated Substances Handled (Japan)	
	CSR Report Supplemental Materials (website): Air Pollutant Measurement Results (Japan)	ISO14001 acquiring sites (Production)
	CSR Report Supplemental Materials (website): Water Contaminant Measurement Results (Japan)	

## Estimating Indirect CO<sub>2</sub> Emissions (Scope 3)

NSK is making efforts to estimate the amount of CO<sub>2</sub> emitted indirectly as a result of the Group's activities, including the CO<sub>2</sub> emitted when customers use products sold by the NSK Group and the CO<sub>2</sub> emitted when suppliers produce the parts and raw materials used by the NSK Group (scope 3). The estimate for fiscal 2015 was 6.539 million tons.

## Environmental Accounting

The NSK Group has disclosed the results of environmental accounting, a tool for quantitatively ascertaining and evaluating the costs and results of environmental protection activities. The Group also has introduced environmental accounting as an information tool to broaden people's understanding of the Group's activities. The environmental conservation cost in fiscal 2015 included approximately 2.6 billion yen in investments and about 10.9 billion yen in expenses. The economic benefits came to roughly 0.8 billion yen.

The NSK Group seeks to ensure that its products contribute to environmental preservation. As a result, approximately 68% of environmental conservation costs comprised R&D costs for environmentally friendly products and environmental conservation technologies.

● **Table1: Environmental Conservation Cost**

Category	Investment			Cost			
	FY2014 Millions of yen	FY2015 Millions of yen	(%)	FY2014 Millions of yen	FY2015 Millions of yen	(%)	
Business area costs	Pollution prevention costs	330.9	183.1	6.9%	526.2	530.1	4.9%
	Global environment conservation costs	1,118.7	970.0	36.7%	979.8	963.8	8.8%
	Resource circulation costs	195.5	92.0	3.5%	841.3	669.4	6.1%
	Subtotal	1,645.1	1,245.1	47.1%	2,347.3	2,163.3	19.9%
Upstream and downstream costs	0.0	0.0	0.0%	269.9	287.1	2.6%	
Administration costs	2.3	1.1	0.0%	601.8	601.7	5.5%	
Research and development costs	1,645.2	1,383.3	52.3%	7,503.5	7,766.6	71.3%	
Social activity costs	0.0	0.0	0.0%	41.5	43.1	0.4%	
Environmental remediation costs	9.1	13.8	0.5%	20.4	30.4	0.3%	
<b>Total</b>	<b>3,301.7</b>	<b>2,643.2</b>	<b>100.0%</b>	<b>10,784.5</b>	<b>10,892.2</b>	<b>100.0%</b>	

Category	Key activities	
Business area costs	Pollution prevention costs	<ul style="list-style-type: none"> <li>• Brought to the surface and repaired underground tanks and pipes.</li> <li>• Maintained and inspected dust collectors and smoke removal units.</li> </ul>
	Global environment conservation costs	<ul style="list-style-type: none"> <li>• Followed energy conservation policies including high-energy-efficient equipment.</li> </ul>
	Resource circulation costs	<ul style="list-style-type: none"> <li>• Installed grinding-dust briquette-making equipment.</li> <li>• Took countermeasures to reduce and recycle waste material.</li> </ul>
Upstream and downstream costs	<ul style="list-style-type: none"> <li>• Practiced green procurement (low-polluting vehicles, paper, uniforms, and office equipment and supplies).</li> </ul>	
Administration costs	<ul style="list-style-type: none"> <li>• Maintained and followed procedures for ISO 14001.</li> <li>• Measured and analyzed environmental impact.</li> </ul>	
Research and development costs	<ul style="list-style-type: none"> <li>• Conducted research and development with the main goal of environmental protection for new product development.</li> </ul>	
Social activity costs	<ul style="list-style-type: none"> <li>• Participated in and donated to the Keidanren Nature Conservation Fund.</li> </ul>	
Environmental remediation costs	<ul style="list-style-type: none"> <li>• Maintained discharge treatment facilities.</li> </ul>	

● **Table 2: Economic Benefits Associated with Environmental Conservation Activities**

Category	FY2014	FY2015
	Millions of yen	Millions of yen
Reductions in energy costs through energy conservation activities	109	100
Reductions in waste disposal costs through waste reduction activities	50	55
Sales of recyclable waste material	1,234	685
<b>Total</b>	<b>1,393</b>	<b>840</b>

● **Table 3: Physical Benefits Associated with Environmental Conservation Activities**

Area	Indicators	FY2014	FY2015
Plants	CO <sub>2</sub> emissions / production unit	6.0% improvement	1.6% worsened
	Water withdrawal / production unit	10.7% improvement	6.0% improvement
	Landfill waste disposal ratio	0.001% improvement	0.001% improvement
	Waste recycling ratio	0.001% improvement	0.001% improvement
Distribution	Energy / production unit	1.1% worsened	3.2% worsened

### Method of Calculation

● **Criteria for environmental protection costs**

Environmental costs and expenses determined in accord with the *Environmental Accounting Guidelines 2005* issued by the Ministry of the Environment in Japan. Depreciation is entered as a cost using the 5-year straight-line depreciation method. Compound costs are divided in proportion to the relevant environmental objective. Costs incurred through green procurement are entered as full amounts and not as differential amounts.

● **Criteria for environmental protection benefits**

Includes economic benefits (in monetary units) calculated from tangible evidence and physical benefits gained from environmental policies. Does not include imputed benefits (risk avoidance benefits, estimated profit contribution benefits, etc.).

## Environmental Data by Country

### ● Change in Energy Consumption and CO<sub>2</sub> Emissions\*<sup>1</sup> (by Region and Country,\*<sup>2</sup> Production Sites)

Region	Country	FY2011		FY2012		FY2013		FY2014		FY2015	
		Energy Consumption (TJ)	CO <sub>2</sub> Emissions (1000t-CO <sub>2</sub> )	Energy Consumption (TJ)	CO <sub>2</sub> Emissions (1000t-CO <sub>2</sub> )	Energy Consumption (TJ)	CO <sub>2</sub> Emissions (1000t-CO <sub>2</sub> )	Energy Consumption (TJ)	CO <sub>2</sub> Emissions (1000t-CO <sub>2</sub> )	Energy Consumption (TJ)	CO <sub>2</sub> Emissions (1000t-CO <sub>2</sub> )
Japan	Japan	7,397	420	6,792	385	7,153	405	7,200	408	7,069	401
The Americas	U.S.A.	1,006	78	1,096	85	1,134	88	1,183	92	1,131	88
	Mexico	—	—	—	—	—	—	—	—	60	5
	Brazil	165	4	158	4	167	4	171	5	163	4
	The Americas sub-total	1,171	82	1,254	90	1,301	92	1,354	97	1,354	97
Europe	U.K.	401	28	435	30	447	31	455	32	449	35
	Germany	40	3	39	3	37	2	38	2	37	2
	Poland	1,261	123	1,238	121	1,256	123	1,215	119	1,289	126
	Europe sub-total	1,702	154	1,711	153	1,740	156	1,708	153	1,775	163
Asia	Indonesia	852	48	846	47	922	51	956	53	966	55
	Thailand	272	16	328	19	339	19	363	21	342	21
	Malaysia	455	26	446	25	455	26	467	27	478	27
	China	1,309	93	1,584	111	2,084	142	2,237	152	2,165	171
	Korea	277	13	298	14	361	17	384	18	407	19
	India	94	6	110	7	125	8	147	9	178	11
		Asia sub-total	3,259	201	3,613	223	4,286	263	4,554	279	4,536
	NSK Group total	13,529	856	13,370	851	14,480	916	14,816	937	14,735	966

\*1: Including CO<sub>2</sub> emitted from production sites by combusting fuel and CO<sub>2</sub> emitted from power plants regarded as generated by the user of electricity (sum of scope 1 and scope 2).

\*2: Adding the actual values of all scope production sites by country.

### ● Total Waste, Landfill Disposal Volume and Recycling Rate (by Region and Country,\* Production Sites)

Region	Country	FY2011			FY2012			FY2013		
		Total Waste (t)	Landfill Disposal Volume (t)	Recycling Rate (%)	Total Waste (t)	Landfill Disposal Volume (t)	Recycling Rate (%)	Total Waste (t)	Landfill Disposal Volume (t)	Recycling Rate (%)
Japan	Japan	110,759	18	99.98	105,865	12	99.99	104,441	1	99.999
The Americas	U.S.A.	12,949	608	95.3	14,812	861	94.2	14,909	1,148	92.3
	Mexico	—	—	—	—	—	—	—	—	—
	Brazil	3,610	74	97.9	3,376	66	98.0	3,926	57	98.5
	The Americas sub-total	16,559	682	95.9	18,188	927	94.9	18,834	1,205	93.5
Europe	U.K.	5,374	1,309	70.6	5,351	1,239	71.0	5,363	1,267	72.4
	Germany	1,581	0	100.0	1,350	0	100.0	1,297	0	100.0
	Poland	17,912	333	98.1	18,858	342	98.1	20,375	136	99.3
	Europe sub-total	24,867	1,643	93.0	25,560	1,581	93.4	27,036	1,403	94.5
Asia	Indonesia	7,845	177	97.7	7,402	158	97.9	8,448	121	98.6
	Thailand	2,878	70	97.4	3,956	88	97.6	4,462	109	97.4
	Malaysia	2,323	82	96.5	2,541	67	97.4	2,389	54	97.7
	China	15,516	1,066	92.5	17,157	1,052	93.1	23,298	1,190	94.2
	Korea	2,627	17	99.3	2,827	17	99.3	3,619	21	99.2
	India	390	38	90.2	633	97	84.6	667	93	86.1
		Asia sub-total	31,579	1,450	95.1	34,516	1,479	95.4	42,882	1,587
	NSK Group total	183,763	3,792	97.8	184,129	3,999	97.7	193,193	4,197	97.7

Region	Country	FY2014			FY2015		
		Total Waste (t)	Landfill Disposal Volume (t)	Recycling Rate (%)	Total Waste (t)	Landfill Disposal Volume (t)	Recycling Rate (%)
Japan	Japan	105,142	1	99.999	101,865	0.1	99.9999
The Americas	U.S.A.	16,896	1,292	92.3	17,002	778	95.4
	Mexico	—	—	—	493	132	62.3
	Brazil	3,586	60	98.3	3,057	55	98.2
	The Americas sub-total	20,482	1,352	93.4	20,552	966	95.3
Europe	U.K.	6,242	1,483	72.9	6,968	1,412	77.3
	Germany	1,336	0	100.0	1,279	0	100.0
	Poland	19,524	77	99.6	20,472	75	99.6
	Europe sub-total	27,103	1,561	93.9	28,720	1,486	94.6
Asia	Indonesia	8,607	120	98.6	8,269	29	99.6
	Thailand	5,180	148	97.0	5,175	118	97.6
	Malaysia	2,401	46	98.1	1,940	41	97.9
	China	27,416	1,647	93.4	34,604	1,084	96.4
	Korea	3,619	23	99.2	3,615	23	99.3
	India	744	75	90.0	849	65	92.3
		Asia sub-total	47,967	2,058	95.4	54,452	1,361
	NSK Group total	200,693	4,972	97.4	205,588	3,813	98.0

\* Adding the actual values of all scope production sites by country.

● Change in Water Withdrawal and Wastewater Amounts (by Region and Country,\* Production Sites)

Region	Country	FY2011		FY2012		FY2013		FY2014		FY2015	
		Water Withdrawal (m <sup>3</sup> )	Wastewater (m <sup>3</sup> )	Water Withdrawal (m <sup>3</sup> )	Wastewater (m <sup>3</sup> )	Water Withdrawal (m <sup>3</sup> )	Wastewater (m <sup>3</sup> )	Water Withdrawal (m <sup>3</sup> )	Wastewater (m <sup>3</sup> )	Water Withdrawal (m <sup>3</sup> )	Wastewater (m <sup>3</sup> )
Japan	Japan	2,937,535	1,720,299	2,571,713	1,439,817	2,475,897	1,458,566	2,369,919	1,417,099	2,195,003	1,149,367
The Americas	U.S.A.	86,667	65,896	104,399	71,425	111,915	90,579	105,764	79,867	98,326	70,158
	Mexico	—	—	—	—	—	—	10,728	10,728	12,934	12,934
	Brazil	32,347	14,580	30,487	13,218	33,794	14,021	33,519	13,038	30,924	14,409
	The Americas sub-total	119,014	80,476	134,886	84,643	145,709	104,600	150,011	103,633	142,184	97,501
Europe	U.K.	74,451	74,451	71,915	71,915	60,818	60,818	73,579	73,579	76,569	64,688
	Germany	2,534	2,534	2,056	2,056	3,580	3,580	2,944	2,944	4,246	3,296
	Poland	253,041	132,598	238,863	124,379	242,882	125,952	227,838	122,034	247,652	135,137
	Europe sub-total	330,026	209,583	312,834	198,350	307,280	190,350	304,361	198,557	328,467	203,121
Asia	Indonesia	214,563	192,713	210,570	188,843	234,968	210,726	241,523	214,577	270,010	243,308
	Thailand	107,668	86,135	122,127	97,701	99,385	79,508	109,106	87,284	146,061	101,792
	Malaysia	90,984	90,984	105,806	105,806	71,951	71,951	46,425	46,425	97,840	69,806
	China	693,164	512,633	816,690	601,539	1,028,219	737,984	1,156,794	865,035	1,134,381	807,052
	Korea	41,665	31,999	44,318	33,207	55,361	22,698	56,629	23,318	59,960	24,690
	India	24,742	5,902	31,056	8,360	57,524	27,897	61,257	5,485	64,046	8,067
	Asia sub-total	1,172,786	920,366	1,330,567	1,035,456	1,547,408	1,150,764	1,671,734	1,242,123	1,772,299	1,254,715
NSK Group total		4,559,361	2,930,724	4,350,000	2,758,266	4,476,294	2,904,280	4,496,025	2,961,413	4,437,954	2,704,703

\* Adding the actual values of all scope production sites by country.

## Greenhouse Gas Emissions Verification Report



No.1811002400

### Greenhouse Gas Emissions Verification Report

**To: NSK Ltd.**

#### 1. Objective and Scope

Japan Quality Assurance Organization (hereafter JQA) was engaged by NSK Ltd. (hereafter NSK) to provide an independent verification on “FY2015\* NSK Group GHG emission calculation report” (hereafter the Report). The content of our verification was to express our conclusion, based on our verification procedures, on whether the statement of information regarding the FY2015 GHG emissions in the Report was correctly measured and calculated, in accordance with the “NSK Group GHG emission calculation standard (Ver.01-03, as of May 31, 2016)” (hereafter the Rule). The purpose of the verification is to evaluate the Report objectively and to enhance the credibility of the Report.

\*The fiscal year of NSK Ltd. ended on March 31, 2016.

#### 2. Procedures Performed

JQA conducted verification in accordance with “ISO 14064-3”. The scope of this verification assignment covers energy-derived CO<sub>2</sub> emissions from Scope 1 and 2. The verification was conducted to a limited level of assurance and quantitative materiality was set at 5 percent of the total emissions in the Report. The organizational boundaries of this verification cover all NSK Group sites in Japan, including production sites, technology centers and non-production sites of NSK Ltd., NSK equity affiliates\* and NSK brand producing companies.

\*NSK equity affiliates which 50 percent or more of the voting stock is owned by NSK.

Our verification procedures included:

- Visiting NSK Head offices to perform validation to check the Rule prior to the Site Visit.
- Visiting five domestic sites: NSK Head offices, Amatsuji Steel Ball Mfg. Co., Ltd. Head office and Main Works (Osaka), NSK Ltd. Ohtsu Plant, Osaka Nissei Bldg. and NSK Steering System Co. Ltd. Soja plant (Soja Manufacturing Department), selected on the basis of sampling.
- On-site assessment to check the report boundaries, GHG sources, Monitoring points, Monitoring and Calculation system and its controls.
- Vouching: Cross-checking the GHG emissions data against evidence for all sampling site.

#### 3. Conclusion

As a result of the verification activity, JQA hereby confirm that the statement of the information for all NSK Group’s FY2015 GHG emissions in the Report contains no material discrepancy (any errors due to measurements or calculations are less than 5%) and fairly represented in all important points; and that it has been prepared in accordance with the Rule.

#### 4. Consideration

NSK was responsible for preparing the Report, and JQA’s responsibility was to conduct verification of Greenhouse gas in the Report only. There is no conflict of interest between NSK and JQA.

Tadayuki Yano, Senior Executive Board Director  
For and on behalf of Japan Quality Assurance Organization  
1-25, Kandasudacho, Chiyoda-ku, Tokyo, Japan  
June 24, 2016

## Independent Assurance Statement



### Independent Assurance Statement

October 19, 2016

Mr. Toshihiro Uchiyama  
President & CEO  
NSK Ltd.

#### 1. Purpose

We, Sustainability Accounting Co., Ltd., have been engaged by NSK Ltd. ("the Company") to provide limited assurance on the Company's Global Lost-Worktime Injury Rate, which were 0.70 for FY 2015 reported in the CSR Report 2016 ("the performance data"). The purpose of this process is to express our conclusion on whether the performance data were calculated in accordance with the Company's standards. The Company's management is responsible for calculating the performance data. Our responsibility is to independently carry out a limited assurance engagement and to express our assurance conclusion.

#### 2. Procedures Performed

Our assurance engagement has been planned and performed in accordance with International Standard on Assurance Engagement 3000 (ISAE3000).

The key procedures we carried out included:

- Interviewing the Company's responsible personnel to understand the Company's standards
- Reviewing the Company's standards
- Performing cross-checks on a sample basis and performing a recalculation to determine whether the performance data were calculated in accordance with the Company's standards.

#### 3. Conclusion

Based on the procedures performed, nothing has come to our attention that causes us to believe that the performance data have not been calculated, in all material respects, in accordance with the Company's standards.

We have no conflict of interest relationships with the Company.

A handwritten signature in black ink, appearing to read "Takashi Fukushima", is written over a light blue horizontal line.

Takashi Fukushima  
Representative Director  
Sustainability Accounting Co., Ltd.



## Third-Party Comments

Again this year, NSK asked Professor Yoshinao Kozuma of Sophia University's Faculty of Economics to provide third-party comments on this report.

### Yoshinao Kozuma

Professor, Faculty of Economics, Sophia University, Japan

After leaving the Sophia University Graduate School of Economics upon earning credits in the latter half of the doctoral program, Professor Kozuma worked as a research assistant at the Nagoya Institute of Technology, a visiting researcher at the Limperg Instituut in the Netherlands, an associate professor at the University of Shizuoka, and an associate professor in the Faculty of Economics at Sophia University, before taking up his current position. He has held successive positions as the chair or member of various CSR or environment-related advisory panels, study groups, and research conferences for the Ministry of the Environment; the Ministry of Economy, Trade and Industry; the Ministry of Land, Infrastructure and Transport; the Ministry of Agriculture, Forestry and Fisheries; the Cabinet Office; and the Japanese Institute of Certified Public Accountants. His specialty is environmental accounting, and his recent work includes *Carbon Labeling to Visualize CO<sub>2</sub>* (Chuokeizai-sha, Inc., in Japanese).

## Contributing to a Sustainable Society

One of the themes for NSK's Fifth Mid-Term Management Plan, which began in 2016, is "Innovate and Challenge." This growth strategy focuses on the creation of new value for the future through new technologies, products and businesses. This growth strategy demonstrates that the Group's CSR policy, which aims to contribute to a sustainable society, is integrated into business activities.

The NSK Group's main products, such as bearings and linear motion components, directly impact the efficiency of energy use. As industrial components, they are indispensable to building a more sustainable society, which cannot be done without better energy-saving and resource-saving technologies. The relationship between NSK's business and global sustainability is made even clearer in that NSK's targets in the areas of improving the efficiency of resource utilization and expanding the introduction of environmentally friendly technology include references to the United Nations Sustainable Development Goals (SDGs). Rather than being satisfied with high aims, however, NSK has actually tripled the number of newly developed products that make an environmental contribution over the last ten years. In addition, more than eight times more of the products NSK develops have an NSK Eco-Efficiency Indicator (Neco) score of 1.2 or higher, compared to when the Neco scores were introduced. Both of these results should be highly praised. I hope to see NSK make even more efforts like these in the future.

## Establishing Compliance Awareness

In 2016, NSK declared that July 26 every year will be Corporate Philosophy Day. It is no accident that July 26 is the date that the Japan Fair Trade Commission's on-site investigation into the cartel incident took place in 2011. NSK management is showing firm resolve, by establishing this date as an annual reminder, to ensure everyone remembers the lessons learned and to eradicate any chance of such a thing occurring again. The year 2016 has been a transformative year for compliance awareness. Several initiatives helped it to take root in the company: changing compliance month to start on the same day as Corporate Philosophy Day, carrying out the compliance awareness survey again this year, and launching a global anti-bribery initiative.

## Globalizing CSR Management

With sales outside Japan representing 67% of consolidated sales, and with 150 sites in 29 countries, the NSK Group is a global business in both name and deed. NSK has been included in the Dow Jones Sustainability Asia Pacific Index and FTSE4Good Global Index, suggesting that its group CSR management is functioning well. In another sign of progress, NSK disclosed the percentage of women in the workforce and the lost-worktime injury rate for the first time in fiscal 2015. Many unexpected CSR risks, however, lurk in business environments around the world. I would like to see continued improvements as NSK works to enhance its capacity to address risks, especially those outside Japan.

## Future Challenges

It is vital to address important CSR issues such as climate change, insufficient access to water, and human rights violations in the workplace, throughout the supply chain. However, since NSK does not disclose sufficient information on supply chain management, there is not enough transparency to enable a proper evaluation of the situation. There are a number of items remaining regarding disclosure of information that must be dealt with, such as, is the application of NSK Supplier CSR Guidelines effective beyond primary suppliers? Are there hot spots that can be reduced in the breakdown areas for Scope 3 emissions? And, are there serious CSR risks in community supply chains that operate outside Japan? I look forward to improvements in these areas in the future.

## Response to Mr. Kozuma's Comments

### Yukio Ikemura

Senior Vice President and CSR Division HQ-Head

Thank you very much for your valuable opinions.

I would like to express my sincere thanks for your commendation of points such as contributing to a sustainable society, establishing compliance awareness, and globalizing CSR management.

Thank you also for your helpful opinions regarding enhancing our information disclosure about supply chain management. Based on your comments, we will make efforts to further expand socially responsible procurement and green procurement activities to the entire global supply chain, and to improve information disclosure about these efforts.

The NSK Group aims to achieve sustainable growth by being a company that society can trust. We look forward to your continued support.





**Contact**

**CSR Division HQ, NSK Ltd.**

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