

Sustainability Management | **Toward Realization of a “NAMERAKA Society”**

In December 2021, we formulated a roadmap for realizing a “NAMERAKA Society” as an overview of our management to ensure that our Group continues to grow as a company that contributes to society. The roadmap shows the Group’s approach to materiality, envisioning the period from the 2020s to the 2050s.

■ Roadmap for realizing a “NAMERAKA Society”

Contribution to solving social issues toward the future we aim for

ESG issues	Materiality	Initiatives	2020s	2030s	2040s	After 2050		
Environment	Realize carbon neutrality	Respond to climate change 13 Climate Action	Reduce CO2 emissions in business activities	Visualize and improve electric power at production plants Promote the introduction of natural energy generation and purchase of renewable electricity Introduce internal carbon pricing	Scope1 and 2 ★ FY2030 ▲50% (compared to FY2018) Scope1 and 2 ★ FY2035 Carbon neutrality	Scope3 ★ FY2050 Carbon neutrality		
	Contribute to carbon-free society	Realize a sustainable society using natural energy	Contribute to spread of wind turbine and hydrogen society	Contribute to the spread of wind turbine use with hardware and software Hardware Software	Contribute to hydrogen society Hydrogen embrittlement resistant bearing			
		Reduce energy loss	Save energy for EVs and electrification (core products)	Propose CO2 reduction by high efficiency and low friction of core products (CVJ, hub bearing, and bearing)	Driveshaft that transmits driving force	Hub bearing that supports the wheel	CFJ 50% reduction in torque loss (compared to EBJ of conventional products)	Low friction hub bearing III 62% reduction in friction (compared to 2009)
			Save energy for EVs and electrification (new areas)	Propose CO2 reduction by multi-functional module products utilizing core technology	eHUB Contribute to fuel efficiency of HV such as drive assist and power regeneration during deceleration	sHUB Contribute to stable vehicle driving and improved fuel efficiency Adaptation to avoidance behavior of self-driving cars	Ra-sHUB Control steering angle at the left and right rear wheels separately Expected to contribute to autonomous driving	Electric motor actuator Support electrification of brakes and auxiliary equipment such as pumps
			Increase efficiency of manufacturing equipment	Contribute to reducing wasteful electricity consumption by increasing the operating rate of manufacturing facilities through IoT and sensing	Talking bearing™ NTN Portable Vibroscope	Condition Monitoring System	EDGE CROSS Edge Application for Bearing Diagnostics	
			Bearing refurbish business	Contribute to reducing CO2 emissions in the entire supply chain by reusing used bearing	Extra-large bearing for paper mill application Spindle for machine tool	Recycling Use Circular economy Establish bearing refurbish business		
Social	Contribute to prosperous lives	Provide safety and comfort	Robot-related	Establish robot-related modules to compensate for labor shortage due to the declining working-age population	Propose solutions for automation, efficiency, and labor saving at production sites			
			Disaster mitigation and disaster prevention	Provide independent power supply equipment that contributes to the preparation for natural disasters	Green Power Station N ³ N-CUBE			

Foundation to support ESG management

ESG issues	Environment / Environmental protection	Social / Sustainable supply chain	Social / Prosperous human development	Governance
Materiality	Resource recycling and pollution prevention 12 Responsible Consumption and Production 14 Life Below Water	Improve the reliability of products and services (Quality assurance and stable supply) 12 Responsible Consumption and Production	Promote safety and health 8 Decent Work and Economic Growth	Thorough compliance 8 Decent Work and Economic Growth
		Procurement activities with an emphasis on environment and society 10 Affordable and Clean Energy 13 Climate Action	Respect for human rights 10 Affordable and Clean Energy	Strengthen governance 5 Gender Equality

Promotion of ESG management

The roadmap for realizing a "NAMERAKA Society" consists of "contribution to solving social issues toward the future we aim for" and "foundation to support ESG management," which forms the base for its activities. The roadmap represents related materiality and specific measures based on the seven ESG issues of "realize carbon neutrality," "contribute to carbon-free society," "contribute to prosperous lives," "environmental protection," "sustainable supply chain," "prosperous human development" and "governance." We have defined the measures that must be taken by combining the perspective of forecast, which identifies the anticipated future as an extension of conventional business activities, with the perspective of backcast, which considers what needs to be done and at what point in time by working backward from the targeted future.

We will promote ESG management along the roadmap to achieve sustainable growth, creating environmental and social value. We aim to realize a "NAMERAKA Society."

Contribution to solving social issues toward the future we aim for

Reduce CO2 emissions in business activities

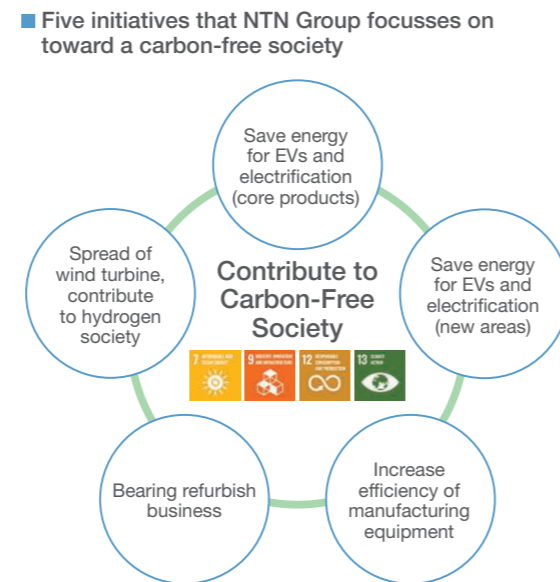
In "realize carbon neutrality," we have set "Achieve carbon neutrality by the fiscal year 2035 (by the fiscal year 2050 for the entire supply chain)" as the target, and are working to reduce CO2 emissions in our business activities. We are accelerating our efforts toward carbon neutrality by mainly implementing the following measures.

- (1) Confirmation of power usage status and systematic reduction of CO2 emissions by visualizing power consumption in the product manufacturing process
- (2) Introduction of solar and wind power generation facilities at business sites and the promotion of purchasing renewable energy power
- (3) Utilization of internal carbon pricing

Contribution to society by providing products and services

In "contribute to carbon-free society," we will contribute to the spread and stable operation of wind power generation equipment by providing bearings that support the increase in size of wind power generation equipment and providing condition monitoring services that utilize IoT. In addition, as a response to the electrification and EVs shift in the automobile industry, we are promoting higher efficiency, smaller size and lighter weight of core products, and developing multifunctional module products that utilize core technologies.

In "contribute to prosperous lives," we will propose solutions such as robot-related modules to meet the growing demand for labor saving due to the declining working population. In addition, to prepare for frequent natural disasters, we will contribute to disaster mitigation and disaster prevention by providing independent power supplies and others.



Foundation to support ESG management

Environment

We are striving for "environmental protection" by promoting efforts in resource recycling and pollution prevention as part of our business activities.

Social

We will strive to improve the reliability of our products and services, promote CSR procurement, and aim to realize a "sustainable supply chain." In addition, we believe that it is important for business operations to protect the safety of employees who support the business and improve the quality of human resources. Based on this thought, we are working to achieve "prosperous human development" by promoting safety and health, and fostering a culture of learning and development in the workplace.

Governance

As a company that is trusted and needed by society, we engage in business activities with an emphasis on compliance. We also strive to increase corporate value over the medium to long term through management that emphasizes transparency and fairness.

Sustainability Management | Contribute to Carbon-Free Society

Materiality
Reduce energy loss
Realize a sustainable society using natural energy

Materiality | Reduce energy loss

Save Energy for EVs and electrification

The electrification of cars and electric vehicles are essential to achieving carbon neutrality, and the electric drive units needed to power vehicles are becoming more sophisticated and powerful at an accelerating rate. We will contribute to energy conservation for electric vehicles by developing automotive deep groove ball bearings compatible with the miniaturization of electric drive units and the high-speed rotation of motors, as well as modular products that add energy recovery and steering functions to hub bearings.

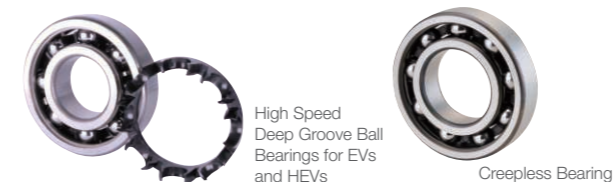
Providing high-performance bearings (core products)

The electric drive units used in EVs and HEVs are increasingly needed to be more efficient, compact and lightweight. The development of e-axes, in which the motor is integrated with an inverter and reduction gearbox, is gaining momentum. We have already marketed "High Speed Deep Groove Ball Bearing for EVs and HEVs" with a dmn value* 1.8 million, and highly evaluated by our customers. Rolling bearings used in motors and reduction gears, which are becoming smaller and faster, are required to rotate at higher speeds. We have developed a high speed deep groove ball bearing with a dmn* value of 2.2 million under oil lubrication by optimizing the internal dimensions of the bearing through the establishment of a calculation method for the amount of oil supplied to optimize the balance of heat generated by the bearing and its lubrication conditions, and by reviewing the cage shape to suppress deformation caused by centrifugal force.

Furthermore, the housing of the drive unit is thinner, reducing the overall weight of the drive unit. "Creep phenomenon," in which the bearing gently rotates and shifts on the mating surface between the housing and bearing, may occur due to outer ring deformation caused by the rotational load. We have developed "Creepless bearings" with a relief portion on the outer diameter surface of the bearing outer ring to make the housing and bearing mating surfaces discontinuous, thereby stopping creep and preventing abnormal noise and vibration in the equipment and reducing bearing life.

In the future, the demand for bearings in the automotive market is expected to continue to grow in response to the progress of EVs and HEVs. We will continue to enhance and develop our product lineup that anticipates market needs and contribute to the carbon neutrality of automobiles by leveraging our core competencies and incorporating next-generation technologies.

(*dmn value: Index of the bearing rotational performance Rolling element pitch circle diameter mm x rotational speed min⁻¹)



Providing high-performance module products (new areas)

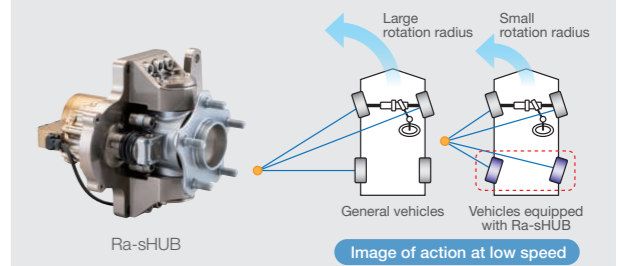
We are developing "Ra-sHUB" hub bearings with a steering function for rear wheels, which individually compensates for the steering angles on the right and left sides by making full use of the technologies we have accumulated in our hub bearings.

The rear-wheel steering systems on the market are limited to some suspension systems, such as multi-link system used in luxury vehicles, and it is difficult to achieve a large steering angle with the existing structure.

"Ra-sHUB" is a module product that adds a steering function to our hub bearings with using our proprietary technologies. They are as small as existing hub bearings, and can be mounted on any type of suspension system, to achieve rear wheel steering. By controlling the steering angle of the rear tires from the steering angle and driving information of the front wheels separately from the left and right sides, the cornering performance and high-speed straight driving stability of the vehicle can be improved. At low speeds, the minimum rotation radius can be reduced to improve the vehicle's small turning performance and tire traveling resistance. In addition, as the level of automated driving increases, vehicle operation control must become even more sophisticated. "Ra-sHUB" also contributes to safe driving during crisis avoidance.

Characteristics of "Ra-sHUB"

- Module product with steering function for hub bearings
- Controls the rear wheel angle independently on the left and right sides
- Rotation angle +/-10 degree
- Improved cornering performance and high-speed straight driving stability of vehicles
- Reduce the minimum rotation radius of the vehicle



Development of environment-contributing product

We continue unwavering efforts to realize its corporate philosophy by developing and providing higher-grade products that contribute to the environment while quantifying the degree of environmental contribution of our main products, such as bearings and drive shafts, and green energy products.

Trend in achievements and forecasts

Driveshafts and hub bearings, which are our main products and account for about 50% of our net sales, and green energy products contributed 1,474 thousand tons of CO₂ reduction in the fiscal year ended March 31, 2023. Sales of S- to B-eco grade environment-contributing products, which are the result of our recent development efforts, comprised 52.6% of net sales in the fiscal year ended March 31, 2023.

*Products are classified according to environmental factor standards specified for different products in line with technology standards across the world.

Calculation methods for environmental factors and eco-efficiency

To quantify products' environmental friendliness, NTN adopted environmental factors and eco-efficiency that are defined in formula ① and ② as follows.

$$\text{Environmental factors} = \frac{\text{Eco-efficiency of developed products}}{\text{Eco-efficiency of benchmark products}^1} \dots \text{①}$$

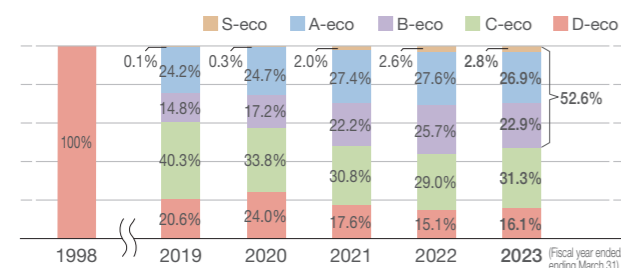
$$\text{Eco-efficiency} = \frac{\text{Product value}^2}{\text{Environmental impact}^3} \dots \text{②}$$

*1 D-eco product (Products that help to reduce energy loss of finished products at the same performance level as that of around 1997)

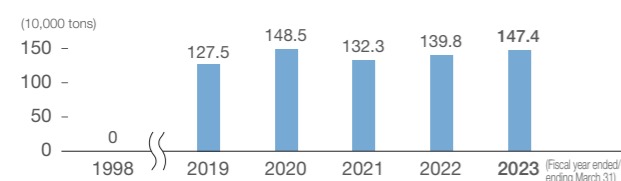
*2 Values are quantified by using the QFD method (including CO₂ reduction contribution of finished products)

*3 From the perspective of evaluating contribution toward measures against climate change, environmental impact is calculated as CO₂ emissions generated throughout the process of raw materials mining to production (using the LCI calculation tool by the Japan Auto Parts Industries Association)

Trend in composition of environment-contributing products by grade (driveshafts and hub bearings)



Contribution to CO₂ reduction*



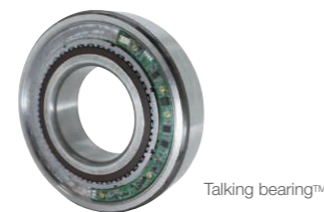
Calculation standard
JAPIA LCI Calculation Guidelines by Japan Auto Parts Industries Association
(Consumer Use-phase LCI calculation tool)
*Applicable to S to C-eco products

Increase efficiency of manufacturing equipment

To improve productivity at manufacturing sites, there is a desire to minimize equipment downtime by monitoring equipment operating conditions and accurately and systematically performing maintenance and parts replacement based on the data. Furthermore, in recent years, with the advancement of DX and IoT technologies, there is a growing need for remote and automatic monitoring of equipment that is not restricted by location or time, as well as the stabilization and improvement of manufacturing quality through the use of condition monitoring information obtained.

To meet these condition monitoring needs, we have developed "Talking bearing™," which incorporates a power generation unit and wireless communication device into a standard rolling bearing without changing the bearing dimensions or load capacity and wirelessly transmits sensing information on temperature, vibration and rotation speed. The energy generated by the rotation of the bearings is used to power sensors and wireless communication devices to transmit sensing information automatically. Because the sensor is built into the bearing, the bearing condition can be detected with greater sensitivity than when the sensor is mounted externally on the equipment housing, allowing earlier detection of abnormalities.

This newly developed product will enable advanced condition monitoring. It will help increase the efficiency and productivity of manufacturing facilities.



Bearing refurbish business

We are engaged in the business of refurbishing bearings used in various types of machinery and equipment, such as extra-large sized bearings for paper mill, large sized bearings for steel mill, and bearings for railway application. We provide optimal bearing refurbishing services based on our bearing technology know-how in response to these customer requirements. Furthermore, along with training on the proper use of bearings and condition monitoring services, we will expand our comprehensive approach to NTN Group's materiality, which includes "Provide safety and comfort," "Reduce energy loss," and "Resource recycling and pollution prevention."



Extra-large sized spherical roller bearing for paper mill application

Materiality

Realize a sustainable society using natural energy

Contribute to spread of wind turbine and hydrogen society

In order to realize a carbon neutral society, natural energy generated using wind and solar power to generate electricity and hydrogen energy that does not emit CO₂ at combustion, are attracting attention as next generation clean energy.

In the field of wind power generation, there is a growing demand for developing higher durability and reliability of components than ever before, especially in offshore wind power generation, due to the increasing size of power generation equipment and the lack of easy maintenance. In the hydrogen-related field, there is also a need to extend the service life of rolling bearings and plastic products used in hydrogen stations and other hydrogen-related infrastructure.

We will contribute to the realization of a sustainable society through product development and business initiatives.

Wind power

Wind power generation projects are expanding to achieve a carbon-neutral society. Especially in recent years, offshore wind turbines have been installed in sea areas with stable wind directions. Offshore wind turbines are larger than their onshore counterparts, and their components must be highly durable and reliable. In order to meet the needs, we are marketing "left-right rows asymmetrical spherical roller bearings" with a DLC (diamond-like carbon) film on the roller surface, which has excellent wear resistance, thereby enhancing the reliability of rolling bearings.

Furthermore, in order to improve the operation rate of wind power generation, we provide wind power generation operators with a service that distributes operational status using "Wind Doctor™," a Condition Monitoring System (CMS) for wind turbines. In 2022, we entered into a business alliance with Hokutaku Co., Ltd. (hereinafter referred to as "Hokutaku"), expanding the maintenance business for wind power generation equipment. If any abnormal trends are observed, we will distribute information to wind power generation operators that have installed our CMS and suggest the need for maintenance. After that, upon request, we will inspect the wind power generation equipment jointly with Hokutaku, identify any abnormal parts and arrange for repair bearings in a single operation. Power generation companies have received this well for our ability to provide a full range of services from abnormality detection, inspection and repair.

For offshore wind turbines, which are expected to be expanded in the future, improving the accuracy of condition monitoring and performing appropriate maintenance based on accurate data analysis will become even more critical. As a manufacturer that can provide products and services on a one-stop basis, we will contribute to expanding the wind power generation equipment market.



Hydrogen

Hydrogen is attracting attention as a next-generation energy source, and technological development is being actively pursued globally in all aspects of its utilization, including production, transport, storage and use. We are developing the application of products used in high-pressure hydrogen compressors for hydrogen stations, which are indispensable for the widespread use of fuel cell vehicles (FCVs). Mechanical parts used in hydrogen-related equipment are used in special environments such as hydrogen exposure and high pressure, requiring higher reliability and durability.

We have developed new steel material with many hard, fine metal compounds dispersed on the bearing raceway, combining them with a newly developed special heat treatment technology to develop a hydrogen embrittlement-resistant bearing that has more than three times a longer life compared to our standard bearing against premature failure of bearings caused by hydrogen and started sample prototyping and delivery. In addition, resin products developed using our composite material technology have been adopted as sealing components for hydrogen environments. To further enhance the functionality of these products, we are also working on development in collaboration with industry and academia.



Please refer to our website for details on "Contribute to carbon-free society."
<https://www.ntnglobal.com/en/csr/idea/carbon-free.html>

Materiality Respond to climate change

The NTN Group Target Year for Carbon Neutrality

● Reduce CO2 emissions in business activities (Scope 1 and 2)	→ 50% reduction by the fiscal year 2030 (compared to the fiscal year 2018) Achieve carbon neutrality by the fiscal year 2035
● Reduce CO2 emissions in business activities (Scope 3)	→ Achieve carbon neutrality by the fiscal year 2050

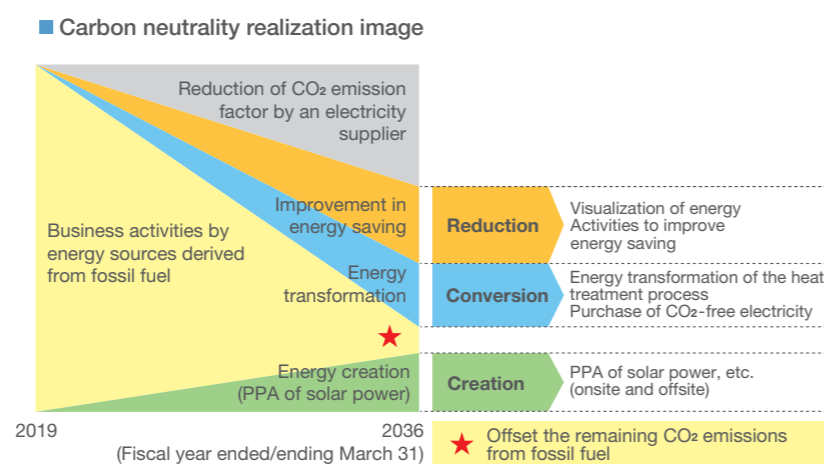
Carbon Neutrality Strategy Promotion Dept. Launched

Based on the activity result of the carbon neutrality promotion project from July 2022 to March 2023, the "Carbon Neutrality Strategy Promotion Dept." was launched in April 2023. It inherits the projects, establishes the global promotion system, and shifts to the execution phase, including the mid-to-long-term issues.

With the Goal of Target Year for Carbon Neutrality

The NTN Group is working on the following priority measures for the purpose of steadily promoting an action plan for achieving carbon neutral targets.

- Reduce CO2 emissions generated by processing machines and heat treatment equipment by visualizing the energy used in the manufacturing process, and reduce CO2 emissions by improving the efficiency of energy used in utilities such as air, air conditioning, and lighting. [Reduction]
- Reduction of CO2 emissions by energy conversion of heat treatment equipment [Conversion]
- Reduction of CO2 emissions derived from fossil fuels by purchasing CO2-free electricity [Conversion]
- Reduction of CO2 emissions derived from fossil fuels through renewable energy power generation such as solar power PPA [Creation]

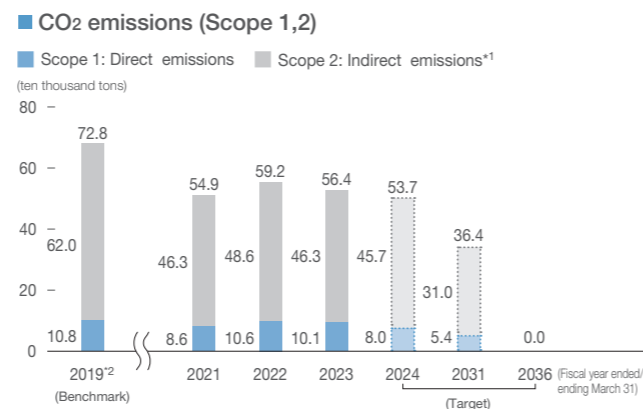


CO2 emissions reduction results

The NTN Group is working on CO2 reduction in the whole of the company's business activities and aiming to reduce CO2 by 50% compared to the fiscal year 2018 by fiscal year 2030 and achieve carbon neutrality by fiscal year 2035. We receive a third-party verification to ensure no problem in the calculation method of CO2 emissions. For Scope 2, the calculation uses emission factors¹ of the market-based approach for domestic business sites and emission factors² of the location-based approach for overseas business sites. We are also considering emission factors of the market-based approach to calculate the emissions of overseas businesses.

³Please refer to the website for the CO2 emissions verification opinion from. <https://www.ntnglobal.com/en/csr/idea/carbon-neutrality.html#anchor02>

Please refer to the website for Environmental data of each site
Japan:<https://www.ntnglobal.com/en/csr/environment/sitereport-japan.html>
Overseas:<https://www.ntnglobal.com/en/csr/environment/sitereport-overseas.html>



^{*1} Calculated using emission factors sourced from "Electric Utility Emission Factors" (Ministry of the Environment and the Ministry of Economy, Trade and Industry) in Japanese sites and calculated using emission factors sourced from "Emissions Factors 2022" (IEA) in overseas sites.
^{*2} Set the carbon neutral benchmark as fiscal year ended March 31, 2019.

Reduction of CO2 emissions from the burning of fuel and the use of electricity (Scope 1 and 2)

The NTN Group is working to reduce CO2 emissions (Scope 1) from fuel combustion in heat treatment facilities and boilers, etc. For heat treatment facilities, which are a major source of CO2 emissions, we have completed fuel conversion to LPG* and city gas at major facilities as the first phase of energy-saving measures. In the future, we will not only expand the use of high-efficiency high-frequency heating equipment and electric furnaces that use renewable energy, but also consider the use of green energy sources such as ammonia and hydrogen, which do not emit CO2 during production and use, to promote carbon neutrality by utilizing a variety of energy sources.

In addition, The NTN Group is working to improve the efficiency of air, air conditioning, lighting, and other utilities as part of its efforts to reduce CO2 emissions (Scope 2) associated with the use of electricity in its production activities. We are conducting steady activities to reduce energy use by installing high-efficiency compressors, air conditioning, lighting, and other equipment, regularly taking measures to prevent air leaks, and turning off non-operating equipment.

*Liquefied natural gas

Promotion of Introduction of Natural Energy Generation and Renewable Energy

The NTN Group is working on reducing CO2 emissions (Scope 2) by introducing self-consumption type natural energy generation to business sites based on various schemes (PPA¹, lease, and self-investment). We are actively promoting the procurement of renewable energy and electricity offset with carbon credit. Reduced 477 tons of CO2 in Japan and 11,409 tons in overseas in the fiscal year ended March 31, 2023.²

Natural Energy Generation Results (Fiscal Year Ended March 31, 2023)

Region	Power generation ² (kWh)	CO2 emission reduction (tons-CO2)
Japan	1,073,015	430
China	11,961,519	7,348
Total	13,034,534	7,778

Actual Procurement of Renewable Energy (Fiscal Year Ended March 31, 2023)

Site name	Energy type	Procurement (kWh)	CO2 emission reduction (tons-CO2)
Nagoya Sales Office	CO2-free electricity	80,982	31
Hamamatsu Automotive Sales Office		13,077	5
Hiroshima Automotive Sales Office		20,059	11
NTN-AT		13,057,800	4,061
Total		13,171,918	4,108

An Example of the Introduction of Natural Energy Generation Equipment in Japan

NTN Mie Corp. (Japan) installed a total of 828 solar panels on the roof of a roller factory based on PPA¹. Its operation started in April 2023, and the amount of power produced and CO2 reduction are expected to be 541,342 kWh/year and 205 tons-CO2/year², respectively.



Roller Factory (NTN Mie)

An Example of the Introduction of Natural Energy Generation Equipment in Overseas

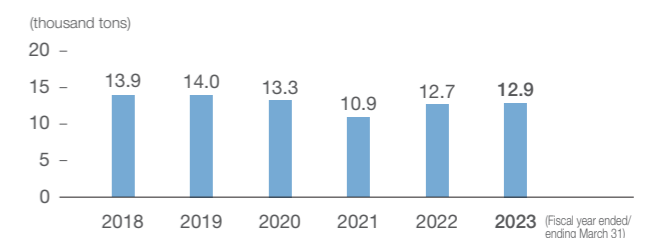
NTN MANUFACTURING DE MEXICO, S.A.DE C.V. (Mexico) installed a total of 1,180 solar panels on the roof of a factory based on PPA¹. Its operation started in August 2023, and the amount of power produced and CO2 reduction are expected to be 1,012,000 kWh/year and 403 tons-CO2/year², respectively.

¹A contract to install solar power generation equipment owned by a third-party power producer on a roof or other location and purchase its electricity.
² Calculated using emission factors sourced from "Electric Utility Emission Factors" (Ministry of the Environment and the Ministry of Economy, Trade and Industry) in Japanese sites and calculated using emission factors sourced from "Emissions Factors 2022" (IEA) in overseas sites.

Reducing CO2 Emissions in Logistics

The NTN Group is reducing CO2 emissions (Scope 3 Category 9) during product transportation by improving logistics efficiency. Main measures include "shortening transportation distances by optimizing distribution routes," "increasing the loading ratio by expanding the use of module outer boxes," "reducing the number of containers by increasing the loading ratio of export containers," "promotion of reuse and recycling (repair) of wooden pallets," and "having carries strictly adhere to non-idling requests". CO2 emissions from the transport of domestic products in the fiscal year ended March 31, 2023, was 12.9 thousand tons-CO2/year (target: 12.8 thousand tons-CO2/year), which is slightly below the target. We will continue to promote the measures, including optimizing a truck's loading capacity to increase transportation efficiency.

CO2 emissions in logistics* (Japan)



*Including CO2 emissions during intra-company transportation

Initiatives for TCFD recommendations

In May 2021, we expressed our support of TCFD (Task Force on Climate-related Financial Disclosures) recommendations. We identify the risks and opportunities posed by climate change in our business and reflect them in our management strategies. We also disclose information based on TCFD recommendations. Through dialog with a wide range of stakeholders, the Group will further strengthen its efforts to address climate change and contribute to the sustainable development of society through its business activities.

Governance

The Group has established the Sustainability Committee as an organization to promote sustainability management, and has established a system to report its efforts to the Board of Directors as appropriate.

Structural diagram



Strategy

Responses to the risks and opportunities assumed from the scenario analysis results, in line with the TCFD recommendations, are applied to business activities as measures for related materialities such as "Reduce energy loss" and "Respond to climate change." In addition, we concentrate our R&D resources on areas that lead to "carbon neutrality (environmental impact reduction and decarbonization)" and the "pursuit of safety and comfort" and are accelerating our R&D activities for future growth.

Risk management

Our financial condition, results of operations and cash flows could be impacted by extreme weather conditions (such as shutting down operations and businesses due to heavy rain, floods or storms) associated with climate change (temperature increases), and by stricter environmental regulations (such as increased procurement costs for raw materials and energy due to the introduction of carbon taxes) in the countries and regions in which we operate.

Regarding the effects of climate change (temperature increases), the risks and opportunities assumed based on the scenario in which the temperature rise during the 21st century is "4 °C" and "less than 1.5 °C" are as follows.

Outline of the future vision assumed in scenario analysis

	When the temperature rises by 4 °C (Physical)	When the temperature rises less than 1.5 °C (Transition)
Future image of society	<ul style="list-style-type: none"> Environmental policies such as from the government are passive, and the move to low-carbon and decarbonization has not progressing. The scale and intensification of natural disasters due to climate change are progressing. The number of hot days increases even in seasons other than summer, increasing the risk of heat stroke. 	<ul style="list-style-type: none"> Due to the aggressive environmental policies of the government and other parties, carbon taxes have been introduced, fossil fuel-derived electricity is limited, and the industrial structure is centered on renewable energy (wind power, hydrogen, etc.). The industry as a whole is strengthening efforts such as energy saving to reduce CO₂ emissions. In the automobile industry, the electrification and EVs shift is progressing.

Risks and Opportunities

Classification		Anticipated risks and opportunities	Our countermeasures	Related materiality
Risks	Physical	Downtime at our plants and within the supply chain due to extreme weather conditions (heavy rain, floods, storms)	<Internal> <ul style="list-style-type: none"> Regular confirmation using a hazard map of domestic business sites <Business Partners> <ul style="list-style-type: none"> Encouragement to build BCP and BCM through Procurement Policy briefing sessions and CSR Procurement Guidelines Introduction of supplier crisis management system 	<ul style="list-style-type: none"> Promote safety and health Procurement activities with an emphasis on environment and society
	Transition	Risk of heat stroke among employees at plants and such	<ul style="list-style-type: none"> Identification of working environments where air conditioning is not effective Systematic implementation of heat measures 	<ul style="list-style-type: none"> Promote safety and health
Opportunities	Physical	Increase in procurement and operating costs due to carbon taxes, etc.	<ul style="list-style-type: none"> Promotion of decarbonization in our business activities Considering the introduction of internal carbon pricing 	<ul style="list-style-type: none"> Respond to climate change
	Transition	Increase in demand for solutions that are useful in preparing for natural disasters and in the event of disasters	<ul style="list-style-type: none"> Securing a lifeline that prevents power shutdown due to natural disasters (providing stationary independent power supply units and transportable independent power supply units to the market) 	<ul style="list-style-type: none"> Provide safety and comfort
		Increase in demand for energy saving in mechanical devices	<ul style="list-style-type: none"> Reduction of CO₂ emissions by core products 	<ul style="list-style-type: none"> Reduce energy loss
		Spread of wind power generation equipment	<ul style="list-style-type: none"> Provision of large bearings and CMS services for wind turbines 	<ul style="list-style-type: none"> Realize a sustainable society using natural energy
Transition	Spread of hydrogen energy	<ul style="list-style-type: none"> Development of product technology and market provision of bearings for hydrogen energy-related equipment 	<ul style="list-style-type: none"> Realize a sustainable society using natural energy 	
	Spread of EVs and electrified vehicles	<ul style="list-style-type: none"> Development of product technology and market provision of electric module products 	<ul style="list-style-type: none"> Reduce energy loss 	

Metrics and targets

Among 13 items of materiality, the target of "respond to climate change" is "Achieve carbon neutrality by the fiscal year 2035 (by the fiscal year 2050 for the entire supply chain)." Also, we have set a "50% reduction in CO₂ emissions in business activities in the fiscal year 2030 compared to the fiscal year 2018" as KPIs (management indicators) for the fiscal year ended March 2023 and beyond.

For the fiscal year ended March 31, 2023, CO₂ emissions were reduced by 22.6% compared to the fiscal year 2018, relative to the KPIs (management indicators). We recognize the need to strengthen further our efforts to achieve the plan. As of April 1, 2023, we have established the Carbon Neutrality Strategy Promotion Department, a dedicated organization for promoting carbon neutrality, to strengthen the promotion of various measures to achieve carbon neutrality.

Materiality **Provide safety and comfort**

Manufacturing facilities are responding urgently to the need for automation to sustain economic activity in a social environment with a declining birthrate and an aging population. We have developed a “Rotary Actuator Type Hand” and the feeder for a picking robot, “TRINITTE™,” that contribute to human replacement and efficiency at production sites. Meanwhile, as natural disasters due to abnormal weather and other factors increase, disaster prevention and mitigation efforts are being promoted to reduce the impact of disasters on people’s lives. We have also developed and marketed “N³ N-CUBE,” which houses small-sized wind generators, solar panels, and storage batteries in containers from the perspective of disaster prevention and disaster mitigation, which are used in a wide range of fields.

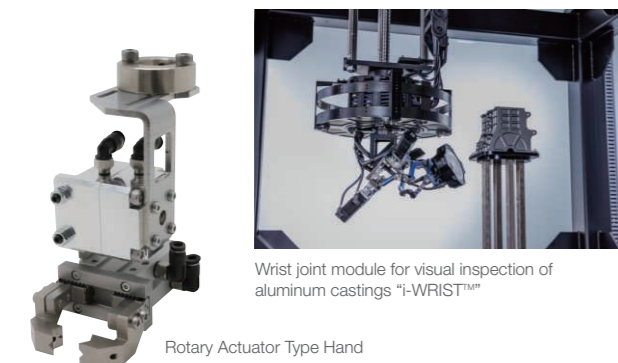
Through these products, we provide peace of mind and comfort to customers.

Robot-related

We have launched the “TRINITTE™,” our unique feeder for picking robots, which supplies parts from a rotating disk that automatically provides parts and has been well received. “TRINITTE™” is connected in conjunction with a camera and picking robot and provides continuous picking of moving workpieces by following the workpieces on a circular arc path. We have also developed a compact and lightweight “Rotary Actuator Type Hand” for picking robots to be used in combination with “TRINITTE™.” The position and posture can be adjusted within a range of 0 to 100° by rotating the mounting section with the chuck section gripping the workpiece around the rotary axis of the rotary actuator. When attached to a SCARA robot, picking can be performed from the side or diagonally. This system can significantly reduce the number of parts missed, and it realizes stable and continuous picking of parts with an inexpensive equipment configuration.

In addition, in response to numerous requests for improved portability of the “i-WRIST™” wrist joint module for robots, we have developed the “IWS-C01,” which increased the maximum payload capacity from 1 kg to 3 kg. The “IWS-C01” has been well received by the market as it has expanded the range of applications.

We will continue to propose modular products for robots that contribute to the promotion of efficiency and reduce manpower as a measure of automation at manufacturing sites.



Wrist joint module for visual inspection of aluminum castings “i-WRIST™”

Rotary Actuator Type Hand

Disaster mitigation and disaster prevention

We have developed “N³ N-CUBE,” a transportable independent power source containing small-sized wind power generators, solar panels and storage batteries in containers. The initial purpose of the development was to create storage facilities in preparation for natural disasters and rescue facilities in the event of a disaster. However, as the market has evolved, many of these facilities have also been adopted as infrastructure equipment in places where commercial power has not been installed.

Disaster prevention centers are being built in various locations to serve as disaster relief operations bases and storage facilities for stockpiling emergency food and medical supplies. We propose to install “N³ N-CUBE” in the center to provide electric power for lighting and air conditioning in the center in normal times and to use it as a first-aid facility and emergency power source during a disaster.

We have also developed the “N³ N-CUBE” equipped with a circulation-type flush toilet and treatment tank to be installed at parks and facilities in mountainous regions etc. where commercial power has not been introduced. Water used in the toilet is filtered in the treatment tank and circulated as reclaimed water. Maintenance only requires a few changes of water a year, and no water supply or sewerage construction is required. Because water is recycled as reclaimed water, it is possible to use clean water without draining it outside. In addition, our products are widely used in various situations, such as in bus waiting areas and workcation facilities.



“N³ N-CUBE” installed as a waiting room at a bus stop in Yoshida Town, Shizuoka Prefecture, Japan

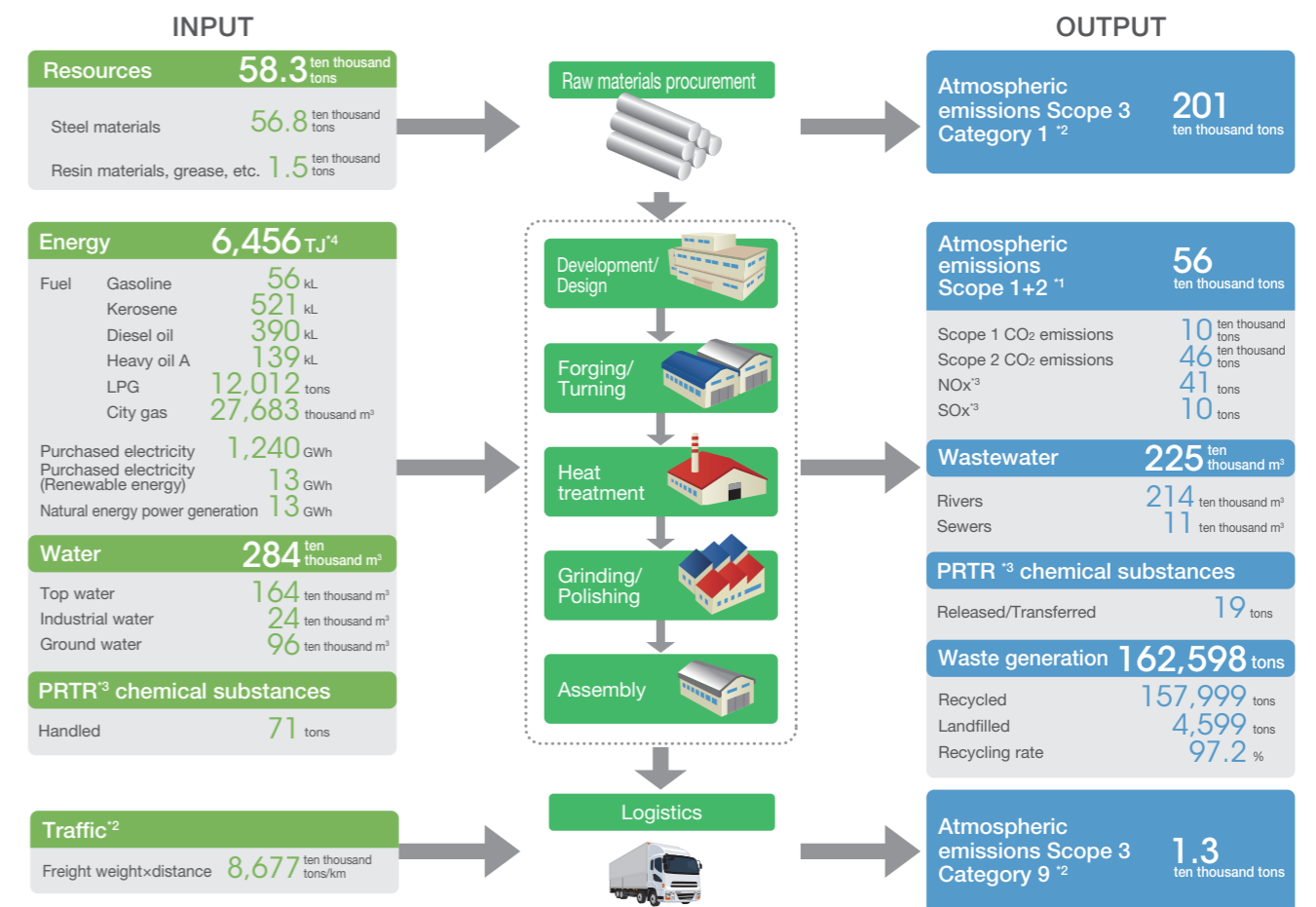
Materiality **Resource recycling and pollution prevention**

The NTN Group has established a system to comprehensively promote the 3Rs (Reduce, Reuse, Recycle), taking into consideration the sustainable use of resources, input resources such as raw materials and water, and waste reduction. In addition, we thoroughly manage chemical substances used in our products and manufacturing processes, and actively promote the conversion of procured products containing PRTR*-listed chemical substances to alternatives. We have set annual targets for the amount of waste generated, the recycling rate, and the amount of chemical substances subject to the PRTR Law handled, and are promoting efforts to achieve these targets.

*Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

Material Balance

■ Material balance of business activities (Fiscal year ended March 31, 2023)



*1 Calculated using emission factors sourced from “Electric Utility Emission Factors” (Ministry of the Environment and the Ministry of Economy, Trade and Industry) in Japanese sites and calculated using emission factors sourced from “Emissions Factors 2022” (IEA) in overseas sites.
 *2 Transport volume and Scope 3 CO₂ emissions are results in Japan only.
 *3 NO_x, SO_x, PRTR chemical substances, and recycled amount are results in Japan only.
 *4 The energy of electric power is calculated using physical quantity (3.6MJ/kWh), and the energy of fuel is calculated using the emission factor sourced from “Emission intensity database for calculation of greenhouse gas emissions of organizations through the supply chain (Ver.3.3)” (Ministry of the Environment).
 Please refer to the website for details on “Resource Recycling and Pollution Prevention”
<https://www.ntnglobal.com/en/csr/environment/chemical.html>

Biodiversity Preservation

In cooperation with local residents and non-profit organizations (NPOs), The NTN Group is working to conserve forest ecosystems through sustainable forest management, such as appropriate thinning and afforestation, and to preserve biodiversity by protecting endangered species in the vicinity of each business site and by maintaining natural parks. Since the COVID-19 pandemic, we have been working to ensure that our activities do not become a mere formality by adjusting the number of participants and taking thorough measures to prevent infection.

Environmental Contribution to the Community

As part of its environmental contribution to the local community, The NTN Group promotes environmental protection activities in mutual cooperation with the local community through various activities such as cleanups, weeding, and tree planting along roads, rivers, beaches, and parks around its business sites. Through our activities, we will continue to make further efforts to strengthen cooperation and build good relationships with surrounding residents and other interested parties.

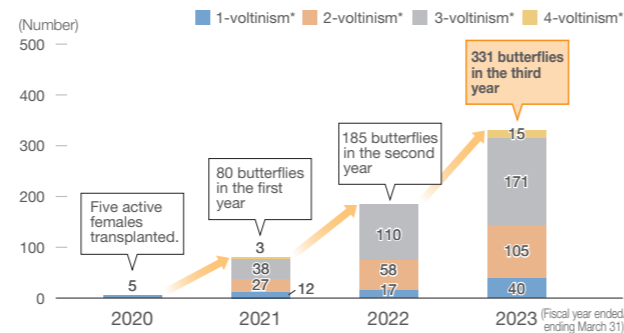


Tree-planting scene at Chubudai Sports Park (Mikumo Works)

Conservation Activities for the Endangered Reverdin's Blue (butterfly)

Nagano Works (Japan) signed a biodiversity partnership agreement with Nagano Prefecture in 2019 and has established a sanctuary for the endangered Reverdin's Blue (butterfly) within the works to continue conservation activities. Since the establishment of the sanctuary, we have faced various problems, such as a lack of indigo plants, on which the larvae feed, due to a large number of inchworms and aphids, and predation of the larvae by natural enemies such as paper wasps and praying mantis. However, the population has steadily increased as a result of replanting of indigo plant and implementation of measures such as extermination of natural enemies on a case-by-case basis. In August 2022, we accepted work experience students from a local high school and organized a special class to help students understand the importance of biodiversity and participate in the conservation of the Reverdin's Blue (butterfly). As for future activities, since the population has been steadily increasing due to protection activities, we will continue to accept outside visitors and increase the number of sanctuaries within the business site to further increase the population through more active protection activities.

■ Reverdin's Blue Butterfly sanctuary, Number of adult occurrences (Nagano Works)



*There are 1, 2, 3, and 4 voltinism, respectively, depending on the number of generations per year, and those that are 3 or more voltinism are called multi-voltinism.



Male 3-voltinism imago perched on a verbena flower.

Please refer to the website for details on "Environmental Protection." <https://www.ntnglobal.com/en/csr/environment/protection.html>

- Improve the reliability of products and services (Quality assurance, stable supply)
- Procurement activities with an emphasis on environment and society

Improve the reliability of products and services (Quality assurance, stable supply)

Build the quality assurance system

Create the quality to improve customer satisfaction

We strive to maintain and improve product quality globally in accordance with our Quality Policy, which serves as the basic philosophy for all of our manufacturing activities, in order to create quality that satisfies our customers.

We also conduct customer satisfaction surveys as an opportunity to hear directly from our customers about their satisfaction level and requirements. In the survey for the fiscal year ended March 2023, a total of 113 customers responded and 88% of the overall evaluations were "Excellent" or "Good," as well as the results from the previous year. Going forward, we will continue to provide quality that is responsive to customer needs in order to further improve satisfaction.

Quality management system

In order to improve customer satisfaction and provide products/services in a consistent manner, the Group's domestic and overseas manufacturing sites have acquired ISO9001 certification, which is an international management system standard. We are steadily working to acquire certification for new businesses and newly launched plants. 100% of our domestic and overseas consolidated subsidiaries related to manufacturing have acquired certification for their quality management systems.

We have also acquired IATF16949 certification, a standard for the automotive industry, and JIS Q 9100 and Nadcap, standards for the aerospace industry, as well as CRCC (China) certification for the railway industry.

Develop quality awareness of human resources

In order to enhance knowledge and awareness of quality among employees, we provide specialized quality education such as basic and advanced QC courses. In the fiscal year 2022, 145 employees took part in these courses. In our training, we use examples of actual claim cases that have occurred in the past to show specifically how customers have been affected so that participants can be reminded of the importance of quality.

In March 2023, we issued the third edition of our "Quality Control Handbook: Quality Guidelines", which describes our approach to quality and the basic actions that are essential to maintain quality. In the future, we will translate it into English and other languages, and distribute it as a reference for suppliers, making it widely available on a global basis.

Stabilize new core system

As a company-wide project, we are rebuilding our mission-critical systems by standardizing business processes and systems using ERP* and other new

packaged systems. This will serve as an IT foundation to support future DX promotions, and we are promoting business speed and service levels as well as more efficient operations. Following the start of operations of new systems in the areas of financial accounting, human resources and salaries, and technology, a new system for sales, logistics, supply and demand adjustment, inventory management, etc. of finished products in the SCM field began full-scale operations in August 2020. Thereafter, we are promoting activities to introduce new systems into the production, procurement, process, work-in-process, and cost domains at each plant.

The new systems have enabled us to improve the efficiency of drawing and prototype control through the digitization of sales activities and the introduction of a project management system, to speed up price and delivery deadline response, to strengthen inventory management, and to enhance cost management. Furthermore, we aim to ensure a stable supply for customers and respond flexibly to fluctuations in demand by linking future demand plans to plants, not only based on fresh demand information, inventory information, and sales results, but also using statistical prediction.

*ERP is an abbreviation of Enterprise Resource Planning, which is packaged software that oversees the company's core operations, including sales, logistics, production, accounting, and human resources.

Build the CSIRT system

In response to increasing risks of cyber attacks and information leakage, we newly established "The Basic Policy of Information Security" as one of the NTN Group's Basic Policy to be set forth under our Management Policy, in view of the importance of information security in recent years.

As cyber attacks are becoming more complicated and sophisticated every day, other companies have also suffered similar damage such as information leakage quite often. In case of an information security incident, a quick response against information security risks is required, from detection to reporting and handling. Therefore, we have been developing a cross-department emergency system for handling information security risks (NTN-CSIRT: NTN Computer Security Incident Response Team).

Purposes of developing the information security emergency response system (NTN-CSIRT)

- (1) Detect information security risks and accelerate communication, reporting, handling, and recovery in case of risk occurrence
- (2) Reduce risk of and prevent information security incidents
- (3) Strengthen governance to enhance information security

Please refer to our website for other initiatives related to "Improve the reliability of products and services (Quality assurance, stable supply)." <https://www.ntnglobal.com/en/csr/sc/customer.html>

Materiality

Procurement activities with an emphasis on environment and society

Basic approach to procurement activities

In April 2021, we formulated a Procurement Policy corresponding to each SDGs. Based on the perspectives of “Fairness/impartiality,” “Compliance with Laws and Regulations,” “Green Procurement,” and “Coexistence and Co-prosperity,” purchasing departments at our head office play a central role in building a relationship of trust with business partners and we are conducting purchasing activities. Based on the “NTN Group Green Procurement Standards,” we are promoting green procurement, which prioritizes environmental preservation efforts and procurement from business partners with superior environmental quality. We have also established “NTN CSR Procurement Guidelines” and are requesting active promotion of CSR activities. We are also working to achieve local procurement at all of our manufacturing sites, including those outside Japan, and to procure materials from optimal locations globally.

In 2022, we announced our “Declaration of Partnership Building” with the aim of building new partnerships by promoting collaboration, coexistence and co-prosperity with business partners in the supply chain and businesses seeking to create value.

Risk management for suppliers

From the viewpoint of risk management, we begin transactions with our business partners after checking their management structure, quality, and environmental management. Even after beginning transactions, we conduct annual survey to confirm our partners’ business conditions, and provide partner-specific follow-ups when deemed necessary. If we determine that a transaction involves a high risk, we strive to minimize our procurement risk and ensure stable procurement by implementing risk reduction measures commensurate with the magnitude of the impact, taking into consideration procurement parts, transaction amounts, etc.

With regard to risks such as natural disasters and infectious diseases, we have established a risk management system to immediately share information with each business site and our business partners, thereby ensuring a proper risk management that enables a stable supply of our products even in an emergency.

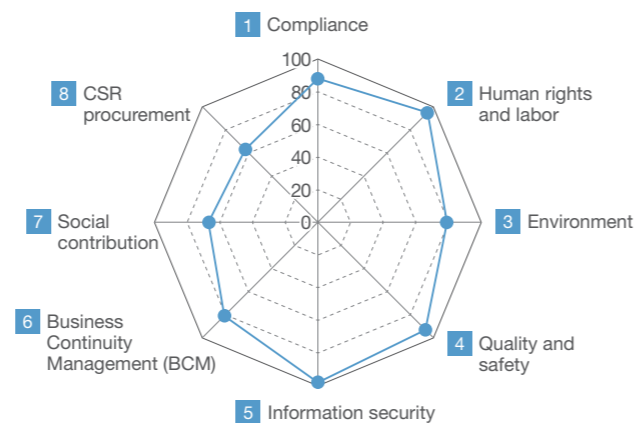
CSR questionnaires for suppliers

We conduct annual survey of business partners to further raise awareness of “NTN CSR Procurement Guidelines” and to confirm compliance.

By the fiscal year 2022 questionnaire, the achievement ratio of human rights and labor, quality and safety, and information security was more than 90%. However, the ratio of social contribution and CSR procurement was less than 70%, and it meant that their awareness was not high at this stage.

In recent years, companies have been required to not only achieve corporate performance (economic value), but also to be an entity that is needed by society (social value). To help business partners understand that social value is important, we will continue to engage in awareness-raising activities.

Degree of achievement according to CSR questionnaires



CSR questionnaires for suppliers

Questionnaire items

- 1 Compliance
- 2 Human rights and labor
- 3 Environment
- 4 Quality and safety
- 5 Information security
- 6 Business Continuity Management (BCM)
- 7 Social contribution
- 8 CSR procurement

Please refer to our website for other initiatives related to “Procurement activities with an emphasis on environment and society.”
<https://www.ntnglobal.com/en/csr/sc/client.html>

Materiality

Human resource development	Promote diversity
Promote safety and health	Respect for human rights

Sustainability Management | Prosperous Human Development



Executive Officer
 Deputy Corporate General Manager,
 Group Management HQ.
 Human Resources Strategy Dept.
 Personnel Dept.
 General Affairs Dept.

Yasuhiro Kawabata

Organization and human resource transformations are necessary to realize the basic policy of our Medium-Term Management Plan, namely, to “for the new 100 years, drive forward the transformation of our business structure, strengthen our financial and organizational structure, and build a corporate structure that can respond flexibly to changes in the business environment,” while adapting to rapid changes in the environment in recent years.

To this end, it is necessary to foster an organizational culture that works to solve various social issues and increase social value, environmental value, and economic value, and to develop diverse human resources that can work with job satisfaction. With this aim, the Group has set “prosperous human development” as one of its ESG issues. Furthermore, we will steadily work on concrete measures one by one, with “securing human resources who will lead the next generation to take on the challenge of transformation,” “creating a rewarding environment that respects the diversity of employees,” “fostering a culture of learning and development in the workplace,” “realizing a workplace where employees can work safely and healthily” and “respect for human rights” as five pillars of our human resources strategy.

Five pillars of human resources strategy

1 Securing human resources who will lead the next generation to take on the challenge of transformation

Amid a rapidly changing environment and the rapidly changing relationship between employees and companies, the Group is working to “secure human resources who will lead the next generation to take on the challenge of transformation” by creating an environment that encourages each employee to think and act independently, with passion and enthusiasm.

■ P.63 Human resource development

2 Creating a rewarding environment that respects the diversity of employees

The Group respects and recognizes diverse values regardless of nationality, race, culture, gender, age, disability, etc., and is committed to “create a rewarding environment that respects the diversity of employees” where people from all walks of life can freely contribute better ideas and maximize their abilities.

■ P.65 Promote diversity

3 Fostering a culture of learning and development in the workplace

The Group provides growth opportunities based on individual aptitudes and careers, from new hires to leaders. We also recognize that learning is essential to employees’ personal growth and that personal growth leads to company growth. We are committed to “foster a culture of learning and development in the workplace.”

■ P.63 Human resource development

4 Realizing a workplace where employees can work safely and healthily

Ensuring the safety and health of all people working in the Group is the essential value that takes precedence over all business activities as the foundation of management, and based on this fundamental stance, we aim to “realize a workplace where employees can work safely and healthily.”

■ P.66 Promote safety and health

5 Respect for human rights

The Group believes that fulfilling its corporate responsibility regarding “respect for human rights” is essential to contribute to a sustainable society and remain a necessary business for the community. Based on this belief, we are committed to not being complicit in any form of human rights abuses and providing a safe and comfortable work environment for all Group employees.

■ P.67 Respect for human rights

Materiality Human resource development

Basic approach to human resource development

We are working on specific initiatives to realize two out of the five pillars of our human resources strategy, namely, “securing human resources who will lead the next generation to take on the challenge of transformation” and “fostering a culture of learning and development in the workplace.” As our basic policy for human resource development to enable “prosperous human development” toward realizing a “NAMERAKA Society” stipulated in the Medium-term Management Plan, we aim to foster three types of human resources: (1) human resources who are competent in the international community, (2) human resources who are independent as individuals, and (3) human resource with creativity. Our human resource development is based on individual self-development and on-the-job training (OJT). In addition to providing opportunities and various support systems to promote this, we provide various types of rank-based, specialty-based, and issue-based training as Off-JT*, if necessary, with a long-term perspective in a systematic, planned and organized manner, with adaptation to meet the needs of the times.

*Off-JT is education and training outside the workplace.

NTN's human resource development system

To foster a culture of learning and development in the workplace, we deploy programs to develop human resources who “can think and act by themselves” for

all ranks. To expand our businesses for the next 100 years, it is indispensable for us to develop human resources who can work successfully not only in Japan but also overseas. As programs to enhance employees' aspiration and develop internationally-minded persons, NTN provides English-only training (global business skill training) for young employees and put in place an overseas education and tuition reimbursement system as well. We also strive to increase the awareness, knowledge, and competence of all employees by enriching the content of corporate and technical knowledge seminars through in-house e-learning and have introduced programs for improving business skills in which younger employees can voluntarily take part. On the systemic side, we have implemented an in-house recruitment system to promote employees' career ownership and been engaged in autonomous competence development according to the skills and career plan of each employee. Meanwhile, we offer AI and data literacy courses for promoting utilization of data and digital technologies, solving business issues, and leading to organizational innovation, in order to increase the number and level of users of digital literacy, such as AI literacy and data analysis. For managers, we provide training not only for new ones but also for those with certain years of experience (performance evaluator training for existing managers) to improve their ability of evaluating performance and providing guidance for subordinates. We also offer seminars (NTN Next Leader Program) to find and develop the new generation of management executives.

Manager personnel development

In addition to conventional training for managers, we offer an “NTN Next Leader Program (basic course/intermediate course)” for young managers with the aim of developing the number of candidates for next-generation management, who can make decisions on management issues on long-term perspective.

The curriculum is designed to acquire viewpoints and knowledge required for management in a systematic way, with focuses on “reviewing from the managerial viewpoint and taking a larger view” selectively in the basic source and “developing the ability for strategic planning and organizational reform in the long term” in the intermediate course. We have also introduced a succession plan through selection of executive officer candidates. These measures enable us to find management candidates at an early stage and develop them in a planned manner.

Create a workplace to enhance employee engagement

Fair evaluation and treatment

NTN has introduced a personnel evaluation system to further vitalize our employees and improve the management efficiency by evaluating the achievement of business targets, the contribution in businesses, and the performance of jobs in a certain period, reflecting them properly in salary increase, bonus, promotion/experience-based promotion, education, training, etc., implementing a fair personnel management, and raising the job performance of evaluatees to promote our businesses.

To ensure a proper operation of this system, we provide evaluator training every year. We also make sure that the system for reflecting the results of personnel evaluation in employees' treatment is well known and that evaluation will lead to human resource development.

Realize a variety of work styles

We have maintained an environment in which diverse employees can work successfully by introducing a teleworking system and a flextime system and enhancing the flexibility of when and where to work. Also for managers, we provide job ranks to balance work and life so that they can fulfill both child or other family care and managerial jobs and apply for a reduced work schedule or a flextime system, which ensures that child or other family care would not hinder career advancement.

In addition to these programs for current employees, we have also introduced a job return system that enables former employees who have left the company due to marriage, child birth, fertility treatment, family care, career advancement, etc. to come back to the company, and have maintained an environment in which they can utilize their experience, knowledge, and know-how accumulated while working in the company or after leaving the company.

We will continue to develop a work environment where many employees can work sufficiently successfully to realize a variety of work styles.

Promote RPA use

In a Japanese society where the decreasing labor force is unavoidable due to the declining birthrate and aging population, enhancement of productivity per person is becoming a major issue.

To achieve a sustainable growth under such circumstances, we are required to further improve the productivity and promote work style reforms to generate higher business outcomes.

With the aims of responding to computerization being promoted inside and outside the company and improving the efficiency through automation of routine jobs, we have continuously utilized various digital tools such as RPA (Robotic Process Automation), while promoting business reforms, combined with standardization of work processes, for back-office jobs such as payroll calculation and slip processing.

In the future, we will develop an environment that will enable us to respond flexibly to changes in the environment surrounding us, which will lead to a higher competitiveness and realization of work style reforms, by promoting further paperless business information and automation of routine jobs and reviewing the business operation system at the company-wide level, in order to promote proposal and materialization of new work styles, based on the assumption of teleworking.

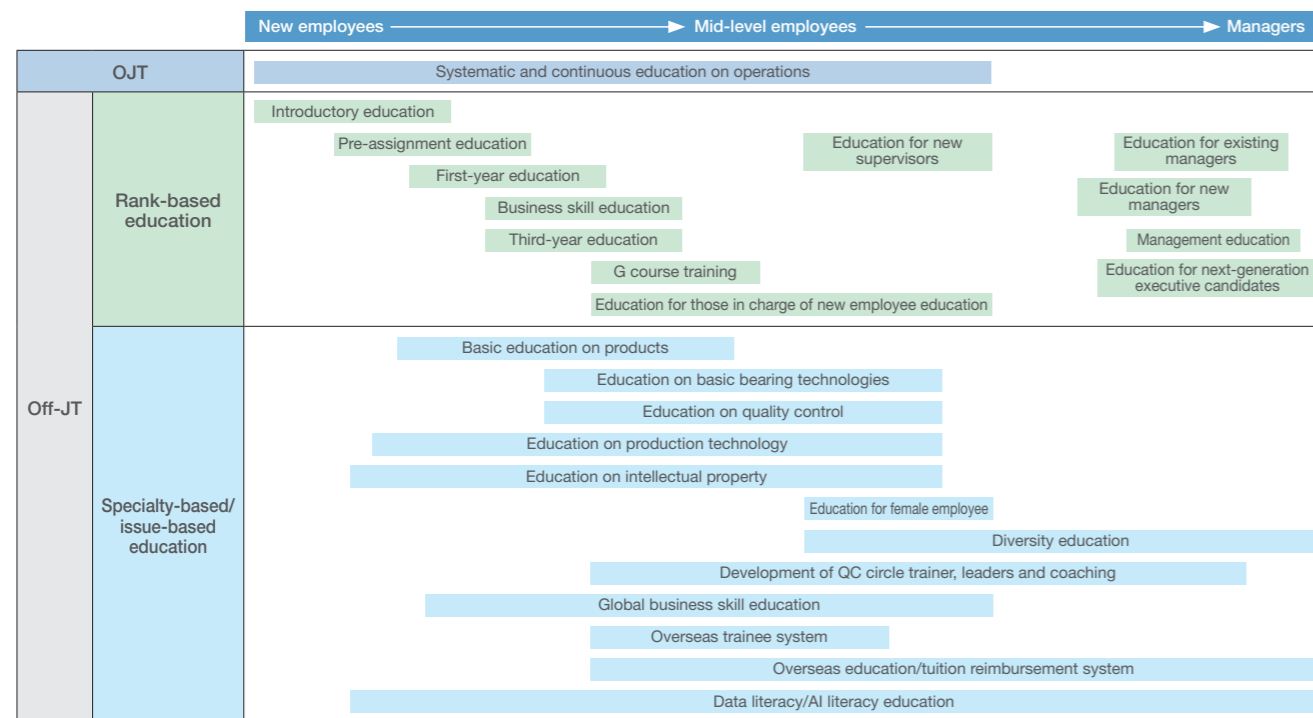
Implement employee engagement survey

To achieve sustainable enhancement of corporate competitiveness, we believe that it is important to create an open workplace in which each employee's abilities are utilized and treated fairly, as well as a good relationship of trust and communication between supervisors, subordinates, and employees. We are working to improve employee engagement.

In order to enhance the effectiveness of our initiatives, we conduct an engagement survey to gauge the thoughts and feelings of our employees and their expectations for the company. Based on the survey result, we also conduct activities to improve workplace issues in department units, activate workplace communication through one-on-one meetings, and work to develop an environment in which each employee has a good reliable relationship with each other.

Through the development of personnel measures to improve employee engagement (such as revision of the managerial personnel system), implementation of workplace improvement activities, measures to reform working styles, and initiatives linked to the promotion of health and productivity management, we will realize the “good working environment” and “motivation” of each and every employee.

Please refer to our website for other initiatives related to “Human resource development.” <https://www.ntnglobal.com/en/csr/sc/employee.html>



Materiality **Promote diversity**

Basic approach to diversity and inclusion

Our group is working to “creating a rewarding environment that respects the diversity of employees” in which a variety of human resources, regardless of nationality, culture, gender, age, or disability, can freely contribute better ideas and maximize their abilities. More specifically, we are working to further secure human resources having various career backgrounds by increasing employment of midcareer workers and maintain environments and systems that enable us to actively promote diverse human resources to positions of responsibility at domestic and overseas business sites.

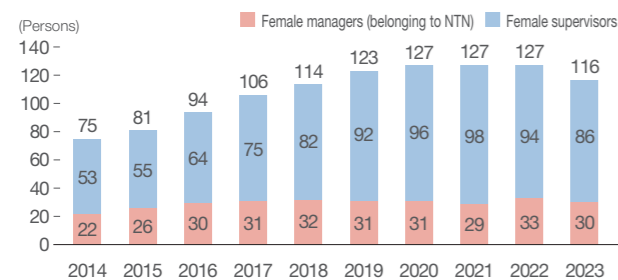
We will respect and recognize diverse values, and integrate them to create an organization that generates flexible ideas. While continuing to grow in a sustainable manner, we will realize our company’s philosophy of “We shall contribute to international society through creating new technologies and developing new products.”

Career advancement of women

One of the biggest challenges in achieving diversity is promoting women achievement in the workplace and closing the gender gap.

Currently, the percentage of female managers in our group is 14.7% globally, 4.0% in Japan, and 4.4% at NTN, revealing a lower level in Japan than overseas. In order for women to participate in important decision-making in positions of responsibility, and to create innovation based on diverse opinions and flexible ideas, we have introduced a leadership development program for female employees and systematically provide education to help them move up, thereby creating an environment in which women can aim to take managerial positions. In addition to fostering women awareness and developing their abilities, we will work to further promote women’s activities with raising the awareness of the entire workplace.

■ Trend in the number of female managers and supervisors at NTN (employees belonging to NTN)/As of April 1



Balance childcare and work

Promote male employees to take childcare leave

Measures to promote the participation of male employees in childcare leave include awareness-raising activities by posting posters promoting male employees’ childcare leave throughout the company, and holding seminars to promote the development of the next generation (papa seminars), to help male employees learn about the importance of participating in childcare and to deepen their understanding of internal systems for childcare.

As a result of these efforts, the percentage of male employees taking childcare leave in fiscal 2022 increased to 37.2%, from 11.2% in fiscal 2021.

Received a “Platinum Kurumin” certification as a child-rearing support company

We were granted a “Platinum Kurumin” certification in October 2022 for our high level of supportive initiatives related to employees’ child-rearing.

For employees in childcare, irrespective of their gender, we distribute a maternity/childcare leave handbook that summarizes laws and in-house systems related to childcare, from detection of pregnancy to maternity leave, childcare leave, and reinstatement, to make those systems known within the company. As a program for managers, we distribute a childcare support book designed for managers to deepen their understanding of childbirth and childcare and maintain an environment in which employees facing childbirth and childcare can demonstrate their maximum performance. In addition, we provide a childcare boss handbook designed for managers to develop an environment in which diverse human resources, such as those in child and other family care, can work sufficiently successfully and raise awareness for helping subordinates balance work and private life.

Promote employment of persons with disabilities

As part of developing an organization with diversity in which everyone can work successfully, we actively promote employment of persons with disabilities. Persons with disabilities “collaborate” successfully at various manufacturing sites and administrative departments with their respective characteristics. In addition, as workplaces in which persons with disabilities can work as leading members, we opened a dedicated workplace called “Yume Kobo (dream factory)” at each business site in Kuwana, Iwata, and Okayama, which contributes to local employment. We are also working to establish a work environment in which even persons with disabilities can work safely and easily, including barrier-free promotion. The rate of employment of persons with disabilities was 2.57% in the fiscal year ended March 2023 through active employment and retention programs.

Please refer to our website for other initiatives related to “Promote diversity.” <https://www.ntnglobal.com/en/csr/sc/employee.html>

Materiality **Promote safety and health**

Safety and health efforts

Nurturing strong safety consciousness

We provide risk prediction (KY) training to improve the risk awareness of employees. By implementing risk awareness training (KYT) on a workplace-by-workplace basis, mainly led by trained employees, we aim to develop people who can be aware of unsafe conditions and do not act unsafely.

Similarly, we provide risk assessment (RA) training on facilities and operations. Through trained employees’ participation in RA in their own workplaces, we intend to improve the level of risk assessment implementation. Also, through identification of hazards as part of the RA procedure and understanding of risk estimation by hazard, we aim to develop safety-conscious personnel who are able to imagine potential risks, acts resulting from personal carelessness, acts caused by impatience, omitted acts, etc.

Intrinsic safety of equipment

We continuously conduct risk assessment on facilities and work environments to reduce manifest and potential risks. In addition to taking engineering measures such as safety covers and interlocks, we also ensure the safety of facilities and operations through managerial measures such as procedures, rules, and protective equipment. Remaining risks are recorded in the residual risk management sheet in accordance with the unified company-wide residual risk management operation. Based on this, stickers indicating residual risk levels are put on the equipment for visualization. Furthermore, training on the residual risk of the equipment is provided for operators to make sure that they know where the hazardous risk lies.

Creating structures to support safety

We are promoting the introduction of an occupational health and safety management system to create a system that supports the safety of the Group. By continually implementing our management system and PDCA cycle, we will strive to comply with laws and regulations and improve the level of safety and health.

All of our manufacturing sites have completed ISO 45001¹ certification, an international standard.

In our 16 domestic manufacturing affiliates, two companies have acquired ISO 45001 certification, eight companies have acquired JISHA OSHMS certification², and two companies have acquired GSC certification³. Currently, four affiliates are in the process of acquiring GSC certification. Five overseas affiliates have also acquired ISO 45001 certification.

If any occupational accident should have occurred, its information is shared on an occupational accident report across the entire company, including the occurrence conditions and countermeasures. If an accident requiring

absence should have occurred, or multiple occupational accidents should have occurred at a same workplace (section) within a same fiscal year, a safety audit is conducted to prevent reoccurrence with members in charge of safety at other business sites.

In such cases, safety activities at the workplace are checked on site to ensure the effectiveness of its safety management system.

Regarding any occupational accident that has occurred, we identify why the victim had taken relevant actions, as well as the root cause, and provide guidance that will lead to countermeasures.

¹ ISO 45001: International standards for occupational health and safety management systems
² JISHA OSHMS: Japanese standard in compliance with the MHLW’s “Guidelines on Occupational Safety and Health Management Systems” (OSHMS Guidelines)
³ GSC: MHLW’s project for assessing occupational safety and health of small and medium-sized business sites (Good Safety Company)

Approach to Kenko Keiei* (health and productivity management)

Certified as a “Health and Productivity Management Organization in the Large enterprise category (White 500)” for the third consecutive year

We were certified as a “Health and Productivity Management Organization 2023 (White 500)” in the large enterprise category, which is selected jointly by the Ministry of Economy, Trade, and Industry and the Japan Health Council. This is our third consecutive year of certification.

“The Health and Productivity Management Organization Recognition Program” is a system for recognizing companies that practice particularly excellent health and productivity management. This year, out of 2,676 applicant corporations, top 500, including NTN, were certified as “White 500” companies.

This survey evaluates corporations’ initiatives to tackle health issues and promote health from the viewpoints such as “management principles/policies,” “system/initiative implementation,” and “organizational structure.” This year, NTN received a top-class evaluation among corporations in the machinery industry in terms of “organizational structure,” which evaluates the attitude of the management for health issues and corporations’ promotion structures.

*Kenko Keiei is a registered trademark of the NPO Health Management Research Association.



Please refer to our website for other initiatives related to “Promote safety and health.” <https://www.ntnglobal.com/en/csr/sc/employee.html>

Materiality **Respect for human rights**

Basic approach to human rights

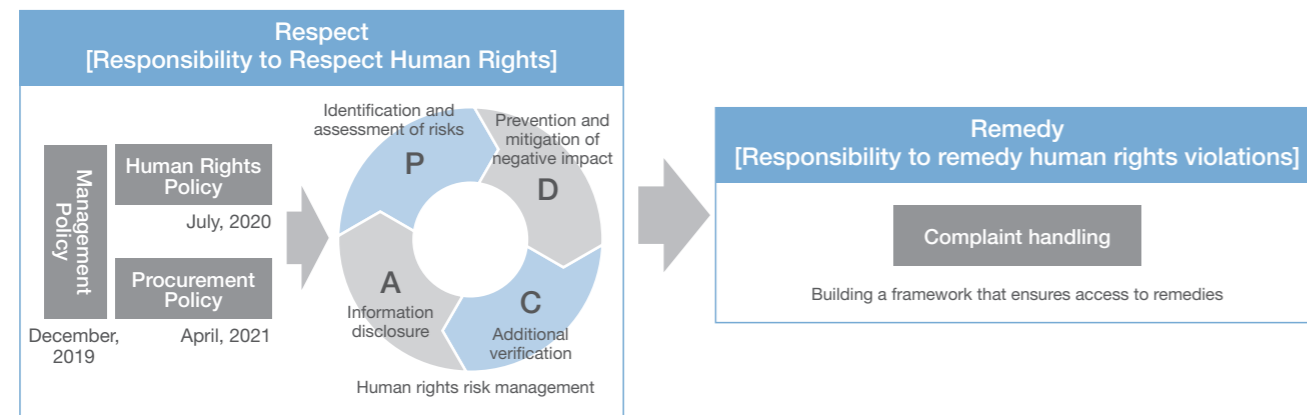
The Group believes that in order to contribute to a sustainable society and continue to be a “company needed by society,” it is essential to fulfill our corporate responsibilities relating to respect for human rights and to earn the trust of society. Accordingly, we have included “respect for human rights” in our Management Policy. In addition, we have established a Human Rights Policy, which stipulates that we will not violate any form of human rights. We are also committed to awareness-raising activities related to respect for human rights and work environment development so that varied employees of the Group can all work safely and comfortably.

Human rights due diligence

Based on the two perspectives of “respect” and “remedy” set forth in the United Nations Guiding Principles on Business and Human Rights, our Group prioritizes “responding to human rights risks in employees,” “responding to human rights risks in the supply chain,” and “building a framework that ensures access to remedies.” In order to ascertain the actual situation about negative human rights impacts in our business activities, we conducted a human rights questionnaire for our overseas affiliates. Analysis of the questionnaire results showed a low possibility of risk occurrence. We will continue to work for human rights due diligence by conducting a questionnaire regularly.

■ **Overview of human rights due diligence**

United Nations Guiding Principles on Business and Human Rights



Human Rights Policy

In order to further promote human rights initiatives, we have formulated a Human Rights Policy in which all Group employees share common sense of values related to human rights and which serves as the basis for their day-to-day activities and business activities. In doing so, we are making efforts to ensure that human rights are respected.

Based on the Human Rights Policy, we will address human rights issues which are gaining more and more global attention, as exemplified by the Sustainable Development Goals (SDGs) and the UK’s Modern Slavery Act, and fulfill our corporate responsibility for respecting human rights.

Outline of the Human Rights Policy

1. NTN will respect internationally-recognized human rights.
2. NTN will not violate the human rights of others.
3. NTN will respond appropriately to any negative impacts its business activities may have on human rights.

Respond to human rights risks in employees
Sound labor-management relations based on labor-management consultations

We strive to share the content of each measure between labor and management in a forum where labor and management can exchange information with each other. We hold quarterly “Labor-Management Roundtable Meetings,” in which executive managers provide thorough explanations about the Business Management Policy, management environment, and other topics to the labor union and listen to the views of the labor union. In addition, we hold labor-management committee meetings as appropriate according to each measure that leads to improvement of “motivation to work” and “ease of work,” with the aim of exchanging opinions to deepen mutual understanding and deciding on work styles that lead to improvement of attractiveness of a place to work.

Survey of foreign workers

We monitor the working condition of foreign workers in our group and have a system in place to enable quick response as necessary.

Respond to human rights risks in the supply chain

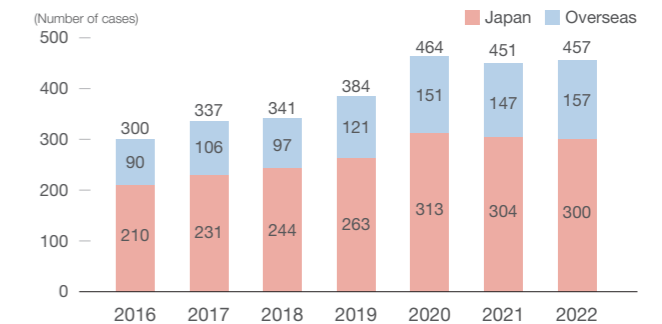
Correspond to forced labor and child labor (Conflict mineral surveys)

Incomes from the mining of tin, tantalum, tungsten and gold (3TG) in the conflict areas of the Democratic Republic of the Congo (DRC) and neighboring countries could be a source of capital for armed forces, which could lead to human rights infringement, illicit mining and smuggling. In April 2016, we established our CSR Procurement Guidelines, upholding the policy of “Responsible mineral procurement,” to continuously monitor whether the mineral resources contained in materials and components used in our products are

mined from conflict and high-risk areas. In the fiscal year ended March 2023, we traced back through our supply chain of 245 business partners to identify the material smelters, and more than 97% of such partners reported that they do not use any conflict minerals. We will continue to conduct this survey periodically.

Companies listed on U.S. Stock Exchanges are required to disclose any use of conflict minerals under the U.S. Dodd-Frank Act. Based on the results of the above survey, we respond to inquiries from our customers regarding conflict minerals. As human rights issues are gaining attention globally, corporate awareness of such issues is growing. Regardless of the U.S. Dodd-Frank Act, the number of companies voluntarily eliminating the use of conflict minerals is increasing as shown in the chart below.

■ **Number of conflict mineral surveys (responding to requests from customers)**



Excerpt from NTN CSR Procurement Guidelines

● **Responsible mineral procurement**

Mineral resources included in materials and components will be checked for any negative social impacts on human rights, the environment, etc. If a negative impact is suspected or verified to be present, we will substitute a method that does not use those conflict materials.

● **Prohibition of child labor**

We will not violate the obligation to protect children and will not employ children that do not meet the minimum working age of each country and region.

● **Prohibition of forced labor**

We will ensure that all labor is voluntary and that employees can leave their job freely. We will not use forced labor.

Materiality
Strengthen governance
Thorough compliance

Basic approach

Strengthening and enhancing our corporate governance is one of our top management priorities. We take steps to make management more efficient and robust while working to increase management transparency by disclosing information to shareholders and investors in a prompt and accurate manner.

We made a transition from a Company with a Board of Company Auditors to a Company with a Nominating Committee, etc. in June 2019 with the aim of establishing a prompt decision-making structure and operational execution organization, strengthening the supervision of management, and improving management transparency and fairness. Under this structure, we will work on further improvement of corporate value over the medium- and long-term.

Members composing Board of Directors, Nominating Committee, Compensation Committee, and Audit Committee

Fiscal year ending March 31, 2024 (As of June 27, 2023)			
Board of Directors	Nominating Committee	Compensation Committee	Audit Committee
Eiichi Ukai	○	○	
Hideaki Miyazawa			
Masaki Egami			
Masaaki Yamamoto		○	
Shumpei Kinoshita			
Isao Ozako	○		○
Ryo Kawakami ★ (Non-standing)	○		○
Tomonori Nishimura ★ (Non-standing)		◎	○
Yuriya Komatsu Chairperson ★ (Non-standing)		○	
Akira Murakoshi ★ (Non-standing)	◎	○	
Yasuo Kitani ★	○		◎

*Please note that persons with ★ are Outside Directors, persons with ◎ are Chairpersons of committees, and persons with ○ are members of committees.

5 Management Meeting

The Management Meeting discusses important matters relating to operational execution, as a supporting body for decision making of President, Executive Officer. The meeting is composed of President, Executive Officer, and Executive Officers who are designated by him, and held twice a month in principle.

6 Executive Officers Meeting

The Executive Officers Meeting is held by President, Executive Officer under the attendance of all Executive Officers. Matters resolved at the Board of Directors are instructed, and each Executive Officer reports about the status of operational execution. This meeting is held once a month in principle, to make operational execution more efficient and effective by sharing information among Executive Officers.

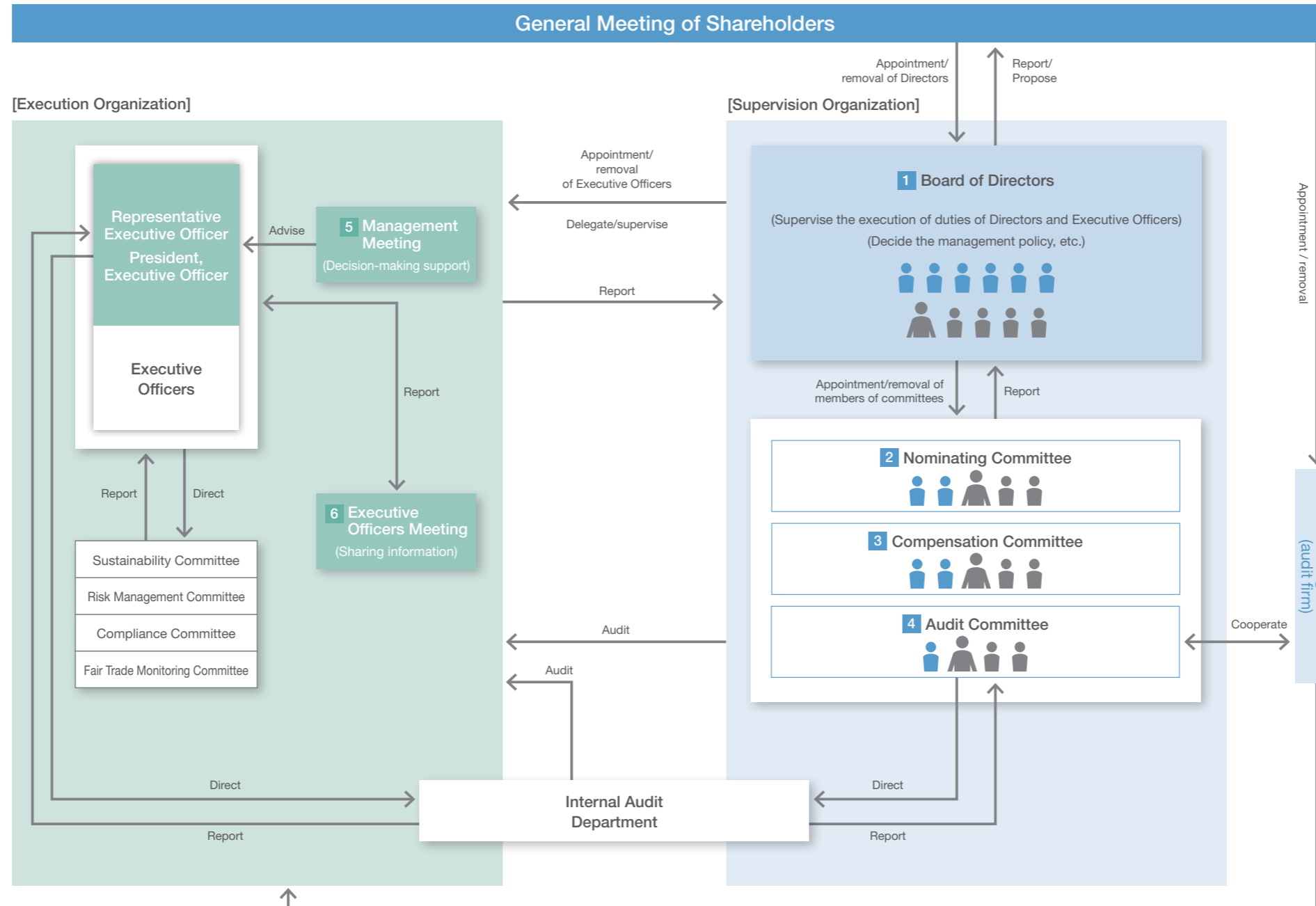
Executive Officers

Executive Officers are elected by the resolution of the Board of Directors, and are in charge of executional decision making and execution of operations delegated by the Board of Directors. Its term of office is specified as a year by the Articles of Incorporation. The number of Executive Officers is 11 as of June 27, 2023.

Basic information

Organizational design	Company with Nominating Committees, etc.
Directors	11
Of those, independent Outside Directors	5
Term of office of Directors	1 year
Executive Officers	11
Of those, Executive Officers who have the authority of representation	2
Executive Officers concurrently serving as Directors	5
Structure to support duties of Audit Committee	Available (Internal Audit Department)
Accounting auditor	Ernst & Young ShinNihon LLC

Corporate governance structure (as of June 27, 2023)



1 Board of Directors

The Board of Directors decides the basic management policies, and supervises the execution of duties of Directors and Executive Officers. Except matters stipulated by laws and regulations or the Articles of Incorporation to be resolved at the Board of Directors, the Board of Directors delegated substantial authority to Executive Officers with the aim to strengthen the supervision of management, and make decisions more promptly.

The Board of Directors is held once a month in principle, but it is also held flexibly as needed.

The Articles of Incorporation specify that the term of office of Directors shall be one year, and the number of Directors shall be within 15.

The number of Directors is 11 as of June 27, 2023, and five of them are Outside Directors. The Board of Directors is chaired by an Outside Director.

2 Nominating Committee

The Nominating Committee decides on the content of a proposal regarding appointment/removal of Directors, which is submitted to the General Meeting of Shareholders. The number of members is five as of June 27, 2023, and three of them are Outside Directors. The committee is chaired by an Outside Director.

3 Compensation Committee

The Compensation Committee decides on the policy for determining details of compensation for Directors and Executive Officers, and determines details of compensation for individual persons. The number of members is five as of June 27, 2023, and three of them are Outside Directors. The committee is chaired by an Outside Director.

4 Audit Committee

The Audit Committee audits the execution of duties of Directors and Executive Officers, and decides on the content of a proposal regarding appointment/removal of the accounting auditor, which is submitted to the General Meeting of Shareholders. The duties of the Audit Committee are supported by the Internal Audit Department, and the Secretariat of Audit Committee, etc. are staffed by persons holding different posts as well. These persons, who have proper capacity and experience for supporting the Audit Committee, are appointed by the manager of the Internal Audit Department, with the approval from the Internal Audit Committee. Regarding matters related to personal relocation, disciplinary punishment, evaluation, etc. of such persons, the approval from the Audit Committee shall be required for decision.

The number of members is four as of June 27, 2023, and three of them are Outside Directors. The committee is chaired by an Outside Director.

Materiality **Strengthen governance**

Governance-strengthening transition

2004	<ul style="list-style-type: none"> Start of Operating Officer System The Board of Managing Directors is reviewed and renamed as the Business Strategy Committee
2006	<ul style="list-style-type: none"> CSR Committee is established
2008	<ul style="list-style-type: none"> Risk Management Committee is established An Outside Director is appointed for the first time
2011	<ul style="list-style-type: none"> The number of Outside Directors is increased (from 1 to 2)
2012	<ul style="list-style-type: none"> Fair Trade Monitoring Committee is established
2015	<ul style="list-style-type: none"> Compliance Committee is established The effectiveness of the Board of Directors is assessed

2016	<ul style="list-style-type: none"> Compensation Advisory Committee is established
2018	<ul style="list-style-type: none"> New corporate philosophy system is established
2019	<ul style="list-style-type: none"> Transition to a Company with Nominating Committee, etc. The number of Outside Directors was increased (from 2 to 5) Sustainability Committee is established
2020	<ul style="list-style-type: none"> Woman appointed as an Outside Director
2021	<ul style="list-style-type: none"> Flattening Executive Officer System
2022	<ul style="list-style-type: none"> ESG items set in the Executive Officer evaluation system Female Outside Director appointed as the chairperson of the Board of Directors

Board of Directors

Approach of Board of Directors

Directors other than Outside Directors are appointed from a wide range of fields, including manufacturing, marketing, technology, and administrative divisions. In addition, Outside Directors are appointed after considering diversity and balance, such as being a person with knowledge of finance, experienced management, and being a lawyer. We believe that the current number of Directors is an appropriate size for strengthening corporate governance and expanding our global businesses.

Diversity of Directors

Upon the approval of the General Meeting of Shareholders in the fiscal year ended March 2020, a female Director (Outside Director) was newly appointed for the first time at the Company. The female Director with experience in a different industry than ours supervises management. This will enable us to integrate diverse values and accelerate transformation aimed at achieving sustainable growth.

Assessment of effectiveness of the Board of Directors

We annually evaluate the effectiveness of the Board of Directors to improve the effectiveness. In the fiscal year ended March 31, 2023, we conducted a self-assessment of the Board of Directors by sending out questionnaires to Directors from the viewpoints such as role/structure/management of the Board of Directors and management of committees. Although this evaluation was generally positive, it was mentioned, regarding the performance evaluation of Executive Officers, that the target management system has been developed, but its operation is still in the developing stage. There was also another comment on reverification of matters resolved at the Board of Directors. On these matters, we have decided to continue discussion. We will continue to analyze and evaluate the effectiveness of the Board of Directors on a regular basis to make improvements.

Executive Officers

The appointment of Executive Officers

The appointment of Executive Officers shall be determined after careful deliberation by the Board of Directors, comprehensively considering whether they possess personalities, insights, capabilities, experience/performance, etc. that are appropriate for fulfilling their duties. In addition, if it becomes clear that an Executive Officer lacks the required qualifications, he/she will be promptly dismissed by the Board of Directors.

Flattening of the system and compensation

On June 25, 2021, the Company removed the Managing Executive Officers and eliminated hierarchical relationships among Executive Officers and made them one team. It enables all Executive Officers to activate discussions and respond to various issues quickly toward further enhancement of its corporate value.

In line with the flattening of the system, in April 2022 we abolished the conventional system of compensation by position and shifted to a system of compensation for Executive Officers based on the responsibilities of the division to which they are in charge.

Introduction of ESG evaluation

Since April 2022, ESG items have been set as key individual target measures for Executive Officers involved in the calculation of annual incentives (bonuses). The degree of achievement of these ESG items is one of the evaluation indicators. By introducing ESG items into the evaluation system, Executive Officers are promoting active ESG initiatives.

Nominating Committee (from April 1, 2022 to March 31, 2023)

■ Members, the number of meetings, and attendance

Name	Title	Attendance	Number of attendances
Noboru Tsuda	Chairperson Outside Director	100%	5 times/5 times
Kouji Kawahara	Outside Director	100%	5 times/5 times
Akira Murakoshi	Outside Director	100%	5 times/5 times
Eiichi Ukai	Director	100%	5 times/5 times
Isao Ozako	Director	100%	5 times/5 times

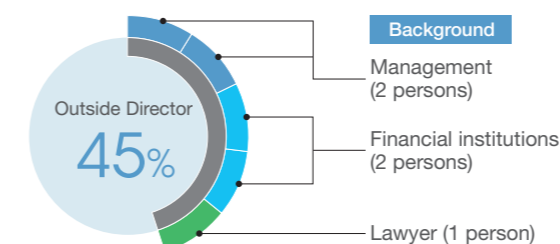
Discussions on Nominating Committee

The committee was held five times for the year ended March 31, 2023, with discussions mainly on the follow up on the business execution plans of Executive Officers, the structure of officers for the fiscal year ending March 31, 2024, and the selection of candidates for President, Executive Officer, Representative Executive Officers and Executive Officers and Directors.

About Outside Directors

As of June 27, 2023, the Board of Directors consists of 11 members, including six Inside Directors and five Outside Directors, and the ratio of Outside Directors is 45%. We will continue to strengthen the supervision of management and improve management transparency and fairness. In addition, in order to ensure appropriate corporate governance, we have established our own standards regarding the independence of Outside Directors, stipulating qualification and independence standards for them. These standards are used for appointing Outside Directors. Also, all of the Outside Directors are designated as Independent Officers as defined by the rules of the Tokyo Stock Exchange, Inc. (TSE), and are reported to TES as such.

For Outside Directors, we have established an environment where active discussions can be held at the Board of Directors through actions such as explaining the issues as necessary by secretariat and others prior to a relevant meeting of the Board of Directors. Moreover, we continuously provide information necessary to effectively fulfill the roles and responsibilities of an Outside Director by creating opportunities to deepen their understanding of our business through on-site inspection of business sites and other means.



Standards for Selection of Directors

Candidates for Directors will be selected from inside and outside the Company based on standards for selection of Directors as described below, considering the diversity and balance of the Board of Directors (including gender and internationality), after careful deliberation by the Nomination Committee.

- Must be in good condition both physically and mentally.
- Must have a high sense of ethics and a law-abiding spirit.
- Must be able to engage in constructive discussion from an objective viewpoint.
- Must be highly motivated to improve their abilities.
- Must have excellent decision-making skills from a company-wide and medium- to long-term perspective.
- Must have excellent insight and foresight concerning changes to the overall environment and to society.
- Must have sufficient record of performance and expertise in relevant fields. (Corporate manager or expertise)
- Outside Directors must (1) have sufficient time to accomplish their duties, (2) satisfy the standards regarding the independence of Outside Directors, (3) ensure diversity between the Outside Directors, and (4) have the requisite abilities to accomplish duties as a member of any of the three Committees.

Compensation Committee (from April 1, 2022 to March 31, 2023)

■ Members, the number of meetings, and attendance

Name	Title	Attendance	Number of attendances
Tomonori Nishimura*	Chairperson Outside Director	100%	6 times/6 times
Ryo Kawakami	Outside Director	100%	7 times/7 times
Yuriya Komatsu	Outside Director	100%	7 times/7 times
Eiichi Ukai	Director	100%	7 times/7 times
Masaaki Yamamoto*	Director	100%	6 times/6 times

*The number of attendances after becoming as a member of the Committee

Discussions at the Compensation Committee

The Compensation Committee was held seven times from April 2022 to March 2023.

The Compensation Committee aims to improve fairness, transparency, and objectivity of procedures regarding the decision making of compensation for Directors and Executive Officers and enhance corporate governance. Also, the committee passed resolutions regarding the details of compensation (such as compensation specified for each individual) of Officers.

■ Compensation Committee (from April 1, 2022 to March 31, 2023)

1st	<ul style="list-style-type: none"> Points granted by BIP Trust for compensation of Officers Bonus for Executive Officers in 2022
2nd	<ul style="list-style-type: none"> Decision of the order of substitution for the chairperson in the event of an accident Basic policy for determination of compensation Director compensation Changes in compensation for Executive Officers due to organizational change Compensation Committee's annual activity plans
3rd	<ul style="list-style-type: none"> Executive Officer's business execution plans
4th	<ul style="list-style-type: none"> Review of compensation levels and compensation structure of Officers Winter bonus for Operating Officers
5th	<ul style="list-style-type: none"> Punishment of Executive Officer
6th	<ul style="list-style-type: none"> Executive Officer compensation
7th	<ul style="list-style-type: none"> Basic compensation for Executive Officers Executive Officer compensation Revision of stock issuance regulations and internal regulations

Basic policy for determining compensation

The system and level of compensation for Officers, compensation specified for each individual, etc. are determined in the Compensation Committee chaired by an Outside Director using objective information including the level and trends of other companies as reference.

Compensation for Executive Officers and compensation for Directors are determined separately, and if a Director also serves as an Executive Officer, those compensations are added up.

Compensation for Directors

Compensation for a Director consists only of fixed compensation.

Fixed compensation shall be calculated by increasing basic compensation (which is determined based on his/her concurrent duties as an Executive Officer and whether he/she works full-time or part-time), taking into account a committee to which a Director belongs and his/her role at the committee.

Compensation for Executive Officers

Compensation for Executive Officers consists of fixed compensation and performance-linked compensation which fluctuates according to performance. The ratio of fixed compensation to performance-linked compensation is approximately 6:4 as a standard.



Fixed compensation

Fixed compensation consists of basic compensation, compensation by responsibility and compensation by representation.

Performance-linked compensation

■ Annual incentives

For Executive Officers, the Company determines whether or not to provide payment of monetary compensation that reflects the performance of a single fiscal year, based on consolidated financial results indicators, etc. of the previous fiscal year and, in the case of providing such payment, the total amount. The payment or non-payment of each Executive Officer, and in the case of payment, the amount, is determined within the total amount of provision by considering the Executive Officer's progress on priority target measures. Indicators related to the calculation of bonuses are based on consolidated financial results: net sales, operating income and net income from the perspective of emphasizing the achievement of earnings growth. The provision is made once a year in June after the determination of the Compensation Committee.

■ Medium- to long-term incentives

Company's shares shall be issued based on the achievement level of major target figures in the Medium-term Management Plan (money equivalent to the converted amount of shares shall be paid for a certain portion) as incentives to motivate them to achieve the targets in the Medium-term Management Plan and contribute to raising shareholder value, and in order to promote the holding of the Company's shares. Medium- to long-term performance targets include key performance indicators (consolidated operating margin, consolidated net sales, etc.) that take into account the Company's management policies.

Audit Committee (from April 1, 2022 to March 31, 2023)

■ Members, the number of meetings, and attendance

Name	Title	Attendance	Number of attendances
Kouji Kawahara	Chairperson Outside Director	100%	15 times/15 times
Ryo Kawakami	Outside Director	100%	15 times/15 times
Tomonori Nishimura	Outside Director	100%	15 times/15 times
Isao Ozako*	Director	100%	11 times/11 times

*The number of attendances after becoming as a member of the Committee

Discussions at the Audit Committee

Major items to be discussed at the Audit Committee include the formulation of the Audit Committee's auditing standards, the formulation of auditing policies and auditing plans, the evaluation of the content of auditing plans of independent auditors, and the assessment of the selection of independent auditors, and the assessment of the status of development and operation of internal control systems.

Audit Status

The Audit Committee members attend meetings of the Board of Directors and other major meetings in

accordance with auditing standards, policies, and plans determined by the Audit Committee. The Audit Committee receives reports or hears from Directors, Executive Officers, employees, etc. on the status of the execution of their duties, and audits the execution of duties by Directors and Executive Officers. In addition to the Board of Directors and Executive Officers Meetings, members of the Audit Committee attend and monitor the Sustainability Committee, the Risk Management Committee, the Compliance Committee, and the Fair Trade Monitoring Committee, which operate internal control systems.

Internal Control/Internal Audit

Internal control system

We regard risk management and compliance as one of the most important management issues, and have established a basic approach to internal control system (Internal Control Policy). Based on this basic policy, we maintain and operate the Group's internal control system, and are working to improve the soundness and efficiency of our management by constantly reviewing our internal control system in response to changes in the business environment.

Internal audit activities

The Internal Audit Department reports directly to the President, Executive Officer and is in charge of internal audit operations independently from the divisions to be audited. The Internal Audit Department conducts internal audits of the execution status of execution organizations from the perspectives of compliance with laws and internal regulations, appropriateness, and the effectiveness and efficiency of business activities.

For internal audits, audits are conducted by each organization of the execution organization (operational audits) and cross-organizational audits by risk and business function (thematic audits). Based on the results of these audits, we provide advice and recommendations

for improvement to divisions subjects to audits, as well as conducting follow-up audits to confirm the implementation status of improvement measures until their completion.

Overseas, we have established the Administration & Internal Control Department within the General Manager's Office of each region. The Internal Audit Department and the Administration & Internal Control Department work together to strengthen internal controls while taking into account the circumstances and characteristics of each region. In the fiscal year ended March 2023, we resumed operational audits by visiting overseas affiliates, which had been voluntarily restrained due to the COVID-19 pandemic.

The results of internal audits are reported to the President, Executive Officer and to the Audit Committee, and are shared also with all Executive Officers. In addition, the Audit Committee, the Internal Audit Department and the Accounting Auditor hold regular meetings to exchange information and opinions about the audit policies, audit plans, audit results, etc., and strive to improve efficiency and effectiveness of audits.

Overview of the Committees

Sustainability Committee

Under an ever changing environment surrounding our Group's businesses, we are promoting sustainability activities to solve environmental and social issues and enable our Group's sustainable growth, as well as to realize a "NAMERAKA Society."

As an advisory body on sustainability activities, we have established the Sustainability Committee, chaired by the Executive Officer (Chief Management Officer of sustainability activities), who is in charge of the ESG Promotion Department. The committee mainly consists of the General Managers of ESG-related departments and deliberates on risks, opportunities, and initiatives related to sustainability. The status of our initiatives is checked regularly as materiality measures associated with risks and opportunities. Risks, opportunities, and initiatives discussed at the Sustainability Committee are reported to the Board of Directors as necessary.

Risk Management Committee

To respond to various risks surrounding the business of the Group, we have established the Risk Management Committee, chaired by the Executive Officer (Chief Management Officer of risk management), who is in charge of the ESG Promotion Department, as an advisory body on risk management to prevent risks from occurring and to minimize damage in the event of a crisis. The committee mainly consists of the General Managers of the Promotion Departments of the risk management. The committee regularly checks activities including identification, analysis, evaluation, and treatment with regard to risks that have a major impact on the management of the NTN Group. The result of discussion at the Risk Management Committee is reported to the Board of Directors and instructions are fed back to the relevant departments.

Compliance Committee

The Compliance Committee, chaired by the Executive Officer in charge of Legal Department (Overall Control Administrator of Compliance Promotion Activities), handles global compliance risks, excluding violation risks of the antimonopoly law and the Subcontracting Act. The committee members are comprised primarily of the heads of related risk management divisions. The committee members formulate and implement risk mitigation measures in cooperation with the Compliance Promotion Activity Supervisors appointed at each business site in Japan and the Administration & Internal Control Department established at each Office of General Manager in five overseas regions, and report to the committee on action plans and the status of implementation. The committee deliberates on the contents of such reports and then reports the findings to the Board of Directors.

Fair Trade Monitoring Committee

The Fair Trade Monitoring Committee is chaired by the President and Executive Officer and consists of Executive Officers in charge of sales and procurement divisions, an Outside Director, external lawyer and so on. In principle, this meeting is held twice a year to discuss the implementation plans and the performance reports for compliance with the Antimonopoly Act and the Subcontracting Act, and to provide supervision and guidance on effective control for fair trade practices along with education and awareness-raising activities. In addition, we have established the Fair Trade Promoting Group in Legal Department as an overall supervisory department for compliance with antimonopoly law. Under the direction of the Fair Trade Monitoring Committee, the Group conducts various activities (such as education, instruction and audit) for relevant divisions in Japan. Additionally, overseas subsidiaries are monitored for the implementation status of compliance with antimonopoly law in cooperation with the Administration & Internal Control Department in each region.

Risk Management

Basic approach to risk management

We have developed a Risk Management Policy that outlines our basic approach to prevention and handling of risks that may hamper the execution of the Group's business, and the Risk Management Regulations that set forth risk management organizations and their roles. Through these measures, we promote group-wide risk and crisis-management and BCP/BCM (Business Continuity Planning/Business Continuity Management).

We convene the Risk Management Committee as an advisory body for risk management twice a year, in principle. The committee regularly checks risk management process including identification, analysis, evaluation, and treatment with regard to risks that have a major impact on the management of the NTN Group in light of changes in the internal and external environment and other factors. We have classified risks into the following 12 categories from the perspective of ensuring completeness. After that, an administrative manager

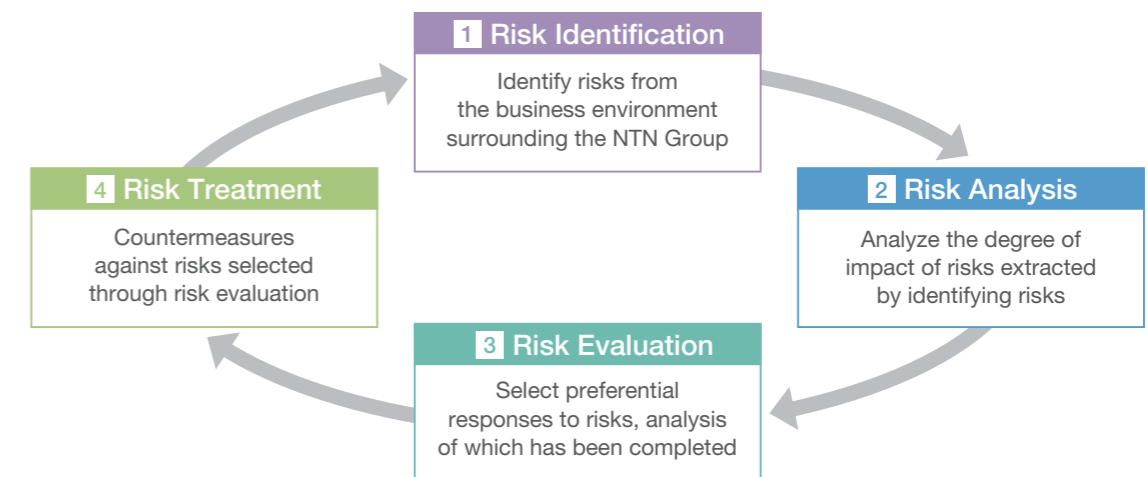
and a promotion department have been determined for each specific risk that will have a significant impact on the management of the NTN Group. Through these measures, we endeavor to reduce risks. The results of the discussion at the Risk Management Committee are reported to the Board of Directors.

Promotion of BCP/BCM

We have been developing a BCP/BCM structure designed to respond to major earthquakes in Japan and are working to strengthen our disaster response systems, including those of our group companies.

We have completed the formulation of BCP to enable early disaster recovery at all domestic production sites. Now we have also implemented BCP training to assess the effectiveness of the formulated action plans and have taken necessary advance measures. In doing so, we are moving ahead with development of BCM.

Risk management process



Risk Category

- | | | |
|--|--|--|
| 1 Risks related to technology and R&D | 5 Risks related to sales and marketing | 9 Risks related to finance and accounting |
| 2 Risks related to procurement and logistics | 6 Risks related to personnel and labor | 10 Risks related to legal affairs and compliance |
| 3 Risks related to production and inventory | 7 Risks related to the environment and health & safety | 11 Risks related to fire and disaster prevention, etc. |
| 4 Risks related to quality | 8 Risks related to information systems | 12 Others |

Structure



Materiality **Thorough compliance**

Basic approach to compliance

We believe that earning the trust of society is essential for us to contribute to the realization of a sustainable society and to continue to be a company needed by society. Accordingly, we are placing importance on compliance in our Management Policy. We formulated the Business Code of Conduct to specify the policy of actions which officers and employees should observe so that we can conduct business activities in accordance with laws and regulations and generally accepted standards and practices in each country, and our internal rules. We have also established and have been operating the compliance promotion structure that includes rules related to compliance, a whistle-blower system, the Compliance Committee, and the Fair Trade Monitoring Committee.

Promotion structure

We have established and have been operating the Compliance Committee and the Fair Trade Monitoring Committee to promote compliance through the activities of both committees. (See page 75 for Overview of the Committees.)

Aside from the efforts made by the two committees, the Legal Department conducts the rank-based training and the topic-specific training for officers and employees as part of compliance-related educational and awareness-raising activities. In addition, we hold a group training session for Compliance Promotion Activity Supervisors in Japan once a year. By sharing information and exchanging opinions on important issues, we are enhancing the promotion activities at each business site and providing support for the initiatives at each business site. Furthermore, with regard to activities for global compliance risks such as corruption prevention, we regularly exchange information and opinions with the Administration & Internal Control Department at each Office of General Manager in five overseas regions and legal/compliance departments of overseas subsidiaries, thereby

confirming each other's ongoing activities and setting new agendas.

In addition, we have established the Fair Trade Promoting Group in Legal Department of an overall supervisory department for compliance with antimonopoly law. Under the direction of the Fair Trade Monitoring Committee, the Group conducts various activities (such as education, instruction and audit) for relevant divisions. Additionally, overseas subsidiaries are monitored for the implementation status of compliance with antimonopoly law in cooperation with the Administration & Internal Control Department at the Office of General Manager in each region.

Internal corporate culture survey

As part of its fraud prevention activities, the Group has investigated employee evaluations for the attitudes of the presidents of affiliated companies and their corporate culture related to compliance, since the fiscal year ended March 2018.

It is said that there is a high probability of occurrence of fraudulent acts in a company when motives/pressures, opportunities, and rationalization triangles are formed. While advancing the development of regulations, rules, and penalties, it is important to develop an internal corporate culture and environment. Therefore, we regularly confirm changes in the organizational culture of affiliated companies through employee evaluations.

By disclosing the results of this survey to the presidents of affiliated companies, we are making use of the results to create an internal corporate culture of not being motivated to conduct fraudulent acts, based on the awareness that fraudulent acts are constantly seen within the company and at the head office. Also, such results are used to create better relationships with employees.

In the fiscal year ended March 2023, we conducted a survey of approximately 680 employees of 12 affiliated companies (6 in Japan and overseas, respectively) where a change of the president or other event occurred.

Corruption prevention initiatives

Initiatives in Japan

We have established and have been applying in-house rules and regulations based on domestic and overseas anti-corruption laws and social norms. Our in-house rules and regulations not only prohibit bribery from and to domestic and overseas public officials and business partners, but also specify the rules and procedures regarding provision of property or profit by our officers or employees, and rules and procedures to prevent bribery via our business partners. In addition, under the circumstance that some countries even impose restraints on the transfer of property or profit between private companies, we have established rules and procedures for the receipt of property or profit in order to prevent bribery by our officers and employees, to thoroughly ensure the conduct of fair trade, and to prevent our officers and employees from engaging in conflicts of interest. Furthermore, we have made it a policy to refuse to receive gifts and entertainment from our business partners in principle. We conduct in-house training and e-learning programs to raise awareness of the contents of our in-house rules and regulations, and conduct self-audits once a year to ensure thorough awareness of the anti-corruption rules and regulations. Domestic subsidiaries have also established and have been applying their own internal regulations that are consistent with the Company's policies.

Overseas initiatives

Our overseas subsidiaries have developed and have been operating in-house rules and regulations that are localized to reflect relevant laws, regulations, and generally accepted standards and practices in each country. They also conduct audit activities related to these rules and regulations as needed. The Legal Department is regularly sharing information and exchanging views with the Administration & Internal Control Department at the Office of General Manager in each region on related initiatives, and maintaining and managing a structure in which the Group unites as one to prevent bribery.

Helpline (whistle-blower system) and educational activities

In Japan, the whistle-blower system called Helpline has been established within and outside the Company and has been operated as a contact point for providing consultation regarding violations of laws, Business Code of Conduct, and in-house regulations. Helpline provides consultation for cases such as suspected violations of labor-related laws, including harassment, as well as violations of in-house regulations, and conducts investigation in accordance with Helpline Management Rules that stipulate ensuring the confidentiality and

prohibition of detrimental treatment against the whistle-blower and collaborators of the investigation. Through provision of information in various compliance training sessions and in the Code of Conduct Guidebook, we have established a structure where all employees can utilize Helpline, not only as a tool to report misconduct, but also as a means of raising questions and expressing opinions and complaints regarding the Business Code of Conduct, and maintaining satisfactory relationships between the company, officers, employees, and business partners. In 2022, we revised our Helpline Management Rules in line with the implementation of the amended Whistleblower Protection Act. According to the purpose of the act, we are performing proper operations, such as increasing persons eligible for protection and strengthening protection. Whistle-blower systems are being progressively created and operated also in overseas regions, where they are tailored to local needs and circumstances.



Antimonopoly law compliance initiatives

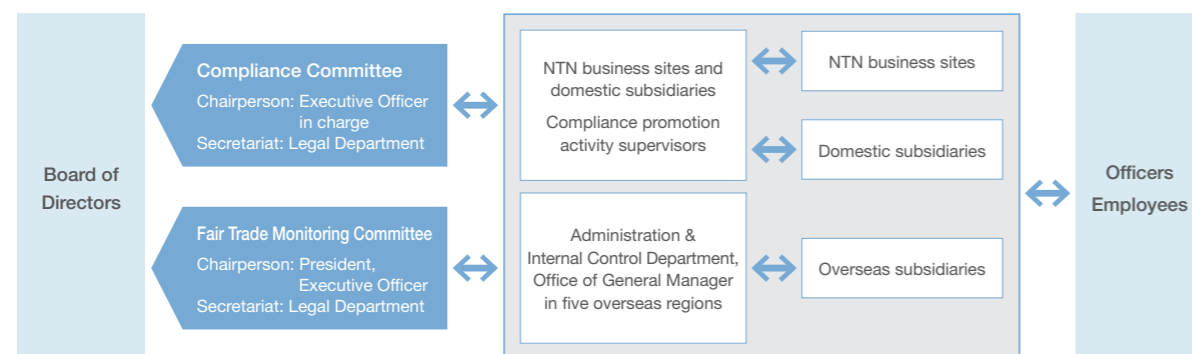
We regard any antimonopoly violations represent a potential risk for the whole NTN Group. To ensure thorough antimonopoly compliance, the Legal Department and the Administration & Internal Control Department in each region conduct training and awareness-raising activities related to antimonopoly law compliance in accordance with local laws and circumstances in each region.

In addition, any officer or employee who might potentially contact competitors at an exhibition or meeting or any other event is obligated to apply for permission in advance and/or report it subsequently. This means we have in place a system with which we can identify the status of contact by officers and employees with competitors. Furthermore, we strengthen the compliance system by conducting annual self-audits and internal audits. Based on those results, each department proactively plans and implements improvement measures.

We work to put fair and free competition into practice by continuing to upgrade our educational activities and raising the awareness of officers and employees.

Please refer to our website for other initiatives related to "Thorough compliance."
<https://www.ntnglobal.com/en/csr/governance/compliance.html>

■ Structure




Officers (As of June 27, 2023)

Internal Directors

■ Members of Nominating Committee ■ Members of Compensation Committee
■ Members of Audit Committee ★ Chairperson of each committee

Eiichi Ukai



■ ■
 Number of years as Director **6 years**
 Number of shares of the Company held **93,900 shares**

Hideaki Miyazawa



Number of years as Director **9 years**
 Number of shares of the Company held **97,100 shares**

Masaki Egami



Number of years as Director **2 years and 11 months**
 Number of shares of the Company held **30,700 shares**

Masaaki Yamamoto




■
 Number of years as Director **1 year**
 Number of shares of the Company held **38,700 shares**

Shumpei Kinoshita



Number of years as Director **New**
 Number of shares of the Company held **33,800 shares**


Isao Ozako



■ ■
 Number of years as Director **1 year**
 Number of shares of the Company held **37,100 shares**

Outside Directors

Ryo Kawakami



■ ■
 Number of years as Director **4 years**
 Number of shares of the Company held **0 shares**
 (Significant concurrent positions)
 Attorney at law (Osaka Nishi Law Office, Legal Professional Corporation)

Tomonori Nishimura




★ ■
 Number of years as Director **2 years and 11 months**
 Number of shares of the Company held **6,300 shares**
 (Significant concurrent positions)
 Business Owner, NT Consul Biz.

Yuriya Komatsu




■
 Number of years as Director **2 years and 11 months**
 Number of shares of the Company held **10,000 shares**
 (Significant concurrent positions)
 Outside Director, Dream Incubator Inc.
 Outside Director, Daicel Corporation
 Director, IA Partners Inc.
 Advisor, Otsuka Chemical Co., Ltd.

Akira Murakoshi



★ ■
 Number of years as Director **1 year**
 Number of shares of the Company held **1,200 shares**

Yasuo Kitani



■ ★
 Number of years as Director **New**
 Number of shares of the Company held **0 shares**

Please see our website for past experience.
<https://www.ntnglobal.com/en/csr/governance/structure.html>

■ Skill matrix representing the main areas of experience of the Director candidates

Name	Main areas of experience required of Directors									
	Corporate management	Manufacturing	Technology, R&D	Sales	Corporate and business planning	Finance and administration	Legal affairs, internal controls, compliance	Global experience	Experience of other industries, diversity	
Eiichi Ukai	●	●		●				●		
Hideaki Miyazawa	●	●		●	●			●		
Masaki Egami			●							
Masaaki Yamamoto					●	●	●	●		
Shumpei Kinoshita					●	●		●		
Isao Ozako	●	●						●		
Ryo Kawakami							●		●	
Tomonori Nishimura	●		●	●					●	
Yuriya Komatsu					●	●	●	●	●	
Akira Murakoshi	●			●	●	●	●	●	●	
Yasuo Kitani	●			●	●	●		●	●	

Directors	Number of Board of Directors and Committee attended	Reasons for selection
Internal Directors	Eiichi Ukai 100%	Board of Directors 15/15 Nominating Committee 5/5 Compensation Committee 7/7 Mr. Eiichi Ukai possesses operational experience in areas such as the Quality Assurance Division and Overseas Division, and broad knowledge of the management of the Company promoting business globally based on these achievements, among others, and has served as President, Executive Officer of the Company since April 2021. The Company selects him with an aim to continuously improve corporate value, utilizing his experience and knowledge, etc. for management.
	Hideaki Miyazawa 100%	Board of Directors 15/15 Mr. Hideaki Miyazawa possesses operational experience in areas such as the Business Division for the automotive market and Overseas Division, and broad knowledge based on these achievements, among others. The Company selects him with an aim to continuously improve corporate value, utilizing his experience and knowledge, etc. for management.
	Masaki Egami 100%	Board of Directors 15/15 Mr. Masaki Egami possesses operational experience in areas such as the Engineering Division and Research and Development Division, and broad knowledge based on these achievements, among others. The Company selects him with an aim to continuously improve corporate value, utilizing his experience and knowledge, etc. for management.
	Masaaki Yamamoto 100%	Board of Directors 11/11 Compensation Committee 6/6 Mr. Masaaki Yamamoto possesses operational experience in areas such as the Finance Division and Overseas Division, and broad knowledge based on these achievements, among others. The Company selects him with an aim to continuously improve corporate value, utilizing his experience and knowledge, etc. for management.
	Shumpei Kinoshita	Mr. Shumpei Kinoshita possesses operational experience in areas such as the Overseas Division and Finance Division, and broad knowledge based on these achievements, among others. The Company newly selects him with an aim to continuously improve corporate value, utilizing his experience and knowledge, etc., for management.
	Isao Ozako 100%	Board of Directors 11/11 Nominating Committee 5/5 Audit Committee 11/11 Mr. Isao Ozako possesses operational experience in areas such as the Manufacturing Division and Quality Assurance Division, and broad knowledge based on these achievements, among others. The Company selects him with an aim to continuously improve corporate value, utilizing his experience and knowledge, etc. for management.
	Ryo Kawakami 100%	Board of Directors 15/15 Audit Committee 15/15 Compensation Committee 7/7 Although Mr. Ryo Kawakami has not been directly involved in corporate management, he possesses broad knowledge, etc. based on extensive experience as a lawyer familiar with corporate legal affairs. The Company selects him with an expectation to continuously improve corporate value by conducting supervision from the viewpoint to increase transparency and fairness of management through his duties such as providing appropriate opinions on the independent standpoint from business executors.
	Tomonori Nishimura 100%	Board of Directors 15/15 Audit Committee 15/15 Compensation Committee 6/6 Mr. Tomonori Nishimura possesses broad knowledge, etc. based on extensive experience in the management of other companies. The Company selects him with an expectation to continuously improve corporate value by conducting supervision from the viewpoint to increase transparency and fairness of management through his duties such as providing appropriate opinions on the independent standpoint from business executors.
	Yuriya Komatsu 100%	Board of Directors 15/15 Compensation Committee 7/7 Ms. Yuriya Komatsu possesses broad knowledge, etc. based on extensive experience in the management of other companies. The Company selects him with an expectation to continuously improve corporate value by conducting supervision from the viewpoint to increase transparency and fairness of management through her duties such as providing appropriate opinions on the independent standpoint from business executors.
	Akira Murakoshi 100%	Board of Directors 11/11 Nominating Committee 5/5 Mr. Akira Murakoshi possesses broad knowledge, etc. based on extensive experience in the management of other companies. The Company selects him with an expectation to continuously improve corporate value by conducting supervision from the viewpoint to increase transparency and fairness of management through his duties such as providing appropriate opinions on the independent standpoint from business executors.
Yasuo Kitani	Mr. Yasuo Kitani possesses extensive experience in banking over many years and broad knowledge including finance, among others. The Company newly selects him with an expectation to continuously improve corporate value by conducting supervision from the viewpoint to increase transparency and fairness of management through his duties such as providing appropriate opinions on the independent standpoint from business executors.	

Responsibilities of Executive Officers (as of April 1, 2023)

	Eiichi Ukai* Representative Executive Officer, President, Executive Officer CEO (Chief Executive Officer) Corporate General Manager, Group Management HQ.		Hideaki Miyazawa* Representative Executive Officer, Executive Officer Corporate General Manager, Automotive Business HQ.
	Hiroyuki Ichikawa Executive Officer Deputy Corporate General Manager, Automotive Business HQ. Composite Material Product Division		Masaki Egami* Executive Officer CTO (Chief Technology Officer) Research Division New Product & Business Strategic Planning HQ.
	Takanobu Ozawa Executive Officer Americas Region Legal Dept. Internal Control Dept.		Masayuki Kaimi Executive Officer Corporate General Manager, SCM Strategy HQ. China Region Production Engineering Development HQ.
	Yasuhiro Kawabata Executive Officer Deputy Corporate General Manager, Group Management HQ. Human Resources Strategy Dept. Personnel Dept. General Affairs Dept.		Shumpei Kinoshita* Executive Officer Deputy Corporate General Manager, Group Management HQ. Corporate Strategy Dept. ESG Promotion Dept. Carbon Neutrality Strategy Promotion Dept.
	Koji Takahashi Executive Officer Green Energy Products Division ICT Strategy Dept.		Etsu Harima Executive Officer Aftermarket Business HQ. Industrial Business HQ. Quality Assurance HQ. NTN KOREA CO., LTD. ASEAN, Oceania, and West Asia Region India Region
	Masaaki Yamamoto* Executive Officer CFO (Chief Financial Officer) Deputy Corporate General Manager, Group Management HQ. Financial Strategy Dept. Accounting Dept. Europe & Africa Region		

*Executive Officers concurrently serving as Directors



Outside Director
Yuriya Komatsu

Outside Director
Akira Murakoshi

Every year, the NTN Report provides an opportunity for Outside Directors to discuss NTN's management and sustainability issues. The contents of discussion is published as "Outside Director Dialog." This year, Director Komatsu and Director Murakoshi, who took office June last year, held a frank and honest talk.

Topic 1 Achievements of our efforts for revitalization of NTN over the past year

The second year of the Medium-term Management Plan "DRIVE NTN100" Phase 2 for revitalization of NTN has ended. Please look back over the year in which we tackled our revitalization with firm resolve.

Komatsu: Essentially, any Medium-term Management Plan should first draw a big picture of how to convert the business portfolio and then discuss which businesses to focus. However, under our current Medium-term Management Plan, we have proceeded with the reform from the beginning by positioning the three years as the period of "in-house arrangement" for the next leap forward, by getting out of the red, increasing the profit ratio, and improving our cash flow and financial structure.

In that regard, compared to the fiscal year ended March 31, 2021, our operating margin, cash flow, and

financial structure have been improved. I think this can be highly evaluated as the results of efforts of all employees. On the other hand, I recognize that there are issues in the content and speed of improvements, including the operating margin and the cash conversion cycle. Rapid changes in the external environment such as soaring material and transportation costs may be one of the causes, but that also posed an opportunity for price increase negotiation, so I think the results may have been better if there had been a little clearer intention.

President Ukai has repeatedly delivered in-house messages saying that employees are allowed to negotiate, with a strong will, for any business not profitable enough, with possible discontinuation of the business in mind, and the entire company has been engaged in price increase and reduction of unprofitable businesses. As a result, the profit ratio has been improved smoothly in the industrial machinery business and the aftermarket business, while the automotive business was hit by an operating loss again in the previous year. By taking into account that the employees in the automotive business have made equivalent efforts

to those in the other businesses, I assume that the management of the Automotive Business Headquarters failed to share the road map and KPIs for profitability improvement and communicate their clear intention. I am also concerned that employees unconsciously take orders that will lead to an operating loss to cover the fixed cost. First, it is necessary to stop bleeding by changing the criteria for judging businesses to a cash flow that will lead to the operating margin and better inventory level, not to sales and gross profit. At the same time, I expect that a plan for converting the business structure to enable a proper profit to be recorded in a sustainable manner will be finalized promptly and shared inside and outside the company.

Murakoshi: I was just appointed as an Outside Director last year, so I'll talk about what I have felt while watching NTN over the past year. As Director Komatsu said, any business has a certain lifecycle, and I think that we must consider how to change the business portfolio at each point of the cycle. With this viewpoint, I think our biggest challenge is how to do with the automotive business, our biggest business division. Most of our automotive business is for OEMs, but the business has not necessarily contributed to profits due to recent high raw material cost and unstable automotive production. Each business site has been dedicated to cost reduction and reflection of high raw material cost in product prices, but in reality, it is not always easy to reflect our added values such as products and technologies in product prices. Regarding whether this is a problem that can be solved in the short term or a structural problem, I feel it necessary to watch carefully as for how our management should be in the future.

President Ukai and other Executive Officers have a strong will to transform NTN. An agreement has also been reached on what our main axis should be. For example, when changing the direction of a large ship, even if you turn the steering wheel fully, the ship changes its direction only slightly. Before the direction is changed completely, it will take a while even if you keep full steering. Likewise, I think it requires determination and patience to transform a large company. Reform of a large organization also brings strain and pain to the organization. I think the President and other Executive Officers, who are in control of the steering, understand it, but I wonder if it has been known throughout the company. I feel that a challenge lies in whether people other than managers are able to commit themselves to the fact that we are in the middle of such a large reform.

Komatsu: In this dialog last year, I said that "we are motivated, the direction is not wrong, the only concern is speed." As for this "speed," I appreciate our success in raising sales prices faster than expected. Probably, that is partly due to the general trend for price increase and strong messages from President Ukai. On the other

hand, progress has not been made as expected for what I have been saying for the three years after being appointed as an Outside Director, including inventory reduction and how to plan elimination and integration of plants. These are still issues, I think.

Murakoshi: With regard to plants, I have visited plants in Iwata and Kuwana after being appointed as a Director. These plants are old and have been extended again and again. I think these plants have issues in terms of the efficiency. At present, our capital expenditures are restricted, so the reality is that there are limitations on investments for efficiency improvement, manpower saving, and no-man operation. Nonetheless, it is still indispensable for us, as a company in the manufacturing industry, to refine manufacturing facilities and technologies and maintain our competitiveness in terms of high productivity and product quality. From now on, the trend of decreasing birthrate and aging population will continue, as well as labor shortage, I think. Under these circumstances, it is time for us to consider seriously what to do with plants and where to invest toward our new Medium-term Management Plan.

Komatsu: The current Medium-term Management Plan will end in one year. Discussion has started for the next Medium-term Management Plan, including organizational restructuring. Rather than setting numerical targets achievable in three years, I hope that the Medium-term Management Plan will present medium- to long-term numerical targets, for example, ROE and ROIC of 10% or higher, and serve to achieve those challenging targets. I also want each Executive Officer to show, regarding the action plans for each year, how much the ROE and ROIC will be improved if the plans are met, together with what backup plans have been prepared in case they are not met.

Topic 2 NTN's governance structure

NTN transitioned to a Company with a Nominating Committee, etc., which is chaired by an independent Outside Director. Could you share your impression about this major reform in our governance?

Murakoshi: As a result of becoming a Company with a Nominating Committee, etc., we are certainly on the forefront in terms of a "structure." But I have an impression that our substantive reform is still halfway. Personally, the design of a Company with a Nominating Committee, etc. will work well in a system in which there is a market of professional corporate managers with mobility and optimal managers are selected from the market, like those in Western countries. On the other

hand, in a social environment in which new graduates are employed en masse and move up the corporate ladder to become managers, as in Japan, I have an impression that we have a long way to go in terms of whether a Company with a Nominating Committee, etc. can really function.

I don't know how NTN had been like before the reform, so I cannot make a comparison, but I think Outside Directors actively express their opinions. However, that is because Executive Officers reach an agreement at the management meeting before the Board of Directors, which naturally leads to many opinions from Outside Directors, so I feel there is an asymmetry of information here. Anyway, I am very interested in NTN's initiatives, as a Japanese-style Company with a Nominating Committee, etc., and I feel it necessary for me, as a member of the company, to further search for the best solution.

Komatsu: As Director Murakoshi mentioned, I also feel the difficulty of a Company with a Nominating Committee, etc. I was appointed as the chairperson of the Board of Directors last year, and regarding whether the chairperson has overwhelming power or not, I don't feel being granted so much power.

But I think this is a "better" choice than before. The major reason why I think so is related, in the first place, to an increased number of Outside Directors. We, Outside Directors, are required to play a role of monitoring the company's execution so that the company can grow and improve its corporate value in a sustainable manner. As a result of an increased number of people who monitor corporate management with such recognition, we receive many critical opinions, unlike at the Board of Directors consisting of internal members only. Also, as a chairperson, I am able to ask revision of the business administration structure based on Outside Directors' opinions, and reporting to monitor the progress. In addition, there are many cases in which internal Directors and Executive Officers consider requests and opinions from Outside Directors, so I think this means the governance has improved.

Murakoshi: I have also served as a Director at a Company with a Board of Company Auditors, and I think what matters, irrespective of the organizational design, is the recognition and the amount of information each Director has. For example, at the company I previously worked for, people at the corporate general manager or manager class explain the details of relevant projects about three days before the Board of Directors, and enough discussion is held there. So the difference in the amount of information on the executive side is reduced to a certain degree also at the Board of Directors. I have attended NTN's Audit Committee as much as possible and was briefed about the contents of discussions at the Executive Officers Meeting and the Management Meeting

from full-time Directors, but I feel an asymmetry of information, partly due to a time constraint. I think the key point for making the Board of Directors function is whether there is a system in place to enable external officers to obtain information sufficiently, rather than transitioning to a Company with a Nominating Committee, etc. as a "structure."

Komatsu: I have been talking about similar things for some time. I think this will be improved gradually in the future. Now, the recognition of Outside Directors is increasingly being enhanced. By keeping our current active encouragement, I expect NTN to function well as a Company with a Nominating Committee, etc.

Topic 3 Strengthening the management foundation

How do you evaluate NTN's initiatives for strengthening the management foundations, including establishment of the Carbon Neutrality Strategy Promotion Department and reform of the personnel system?

Komatsu: I highly evaluate the establishment of the Carbon Neutrality Strategy Promotion Department to succeed the Carbon Neutrality Promotion Project, which had been promoted across divisions until last year. For a project promoted across divisions, a problem may occur later because it is often less visible and overlooked which division is responsible for solution. This concern does not exist anymore. In this regard, however, again as with the Medium-term Management Plan, I want action plans to be prepared and the PDCA cycle to be implemented, rather than just responding to issues and tasks at hand. In doing so, it is necessary to make it known to business divisions, including deciding who will be in charge of each plan.

Murakoshi: In my understanding, strengthening the management foundation means strengthening the corporate functions. I feel that NTN has necessary divisions in place, but some of them are still weak as functions. This may be a characteristic of manufacturers, but I think a certain independence exists at each manufacturing site, or each plant, which inevitably causes a tendency to increase the centrifugal force as an organization. Conversely, the corporate division at the head office is not used to having a centripetal force. To ensure the total optimization, it is necessary for the President and Executive Officers to strengthen and utilize the divisions at the head office with a company-wide viewpoint. A challenge in management is to prevent a situation where the head office organization exists, but nobody listens to it. It is important for us, Outside Directors, to monitor this carefully.

Komatsu: In terms of strengthening the management foundation, reform of the personnel system is also required. Earlier, Director Murakoshi mentioned that employees may not understand that a large reform is being underway. Every company has a difference in a sense of crisis between top management and frontline staff. I think the shortcut is to make realistic KPIs, including personnel evaluation, known to frontline staff and change the company using a system, rather than to blindly share a sense of crisis. For example, we may even set the operating margin as a KPI for personnel evaluation and say that it will be reflected in evaluation of promotion and bonus. At first, everyone may first blame others, the head office or the production division for example, but eventually, they will start to think how to improve and take actions by themselves.

Murakoshi: As for the personnel system, I have heard that review of the personnel system for managers is in progress. I think a structure is in place but the system design alone does not suffice to make the personnel system function smoothly. The Personnel Department itself is required to actually know each site and evaluate whether personnel at each position work properly. For achievement-based evaluation, a harder part comes after a structure is established.

By the way, I think that employee awareness survey can be used as one of indicators. I have heard that the survey was conducted also at NTN, but only in the corporate divisions. I think expanding the scope to all employees would help the management understand the actual conditions of the company. Based on the result, we may be able to extract and solve issues for respective departments, or extract company-wide issues in some cases. As for the latter, it is one way for

improving employee engagement to organize a task force across all generations and divisions and discuss how to interpret the results and what to change. The true significance of employee awareness survey is to have each department think for themselves, instead of merely checking the result.

Komatsu: Also in previous dialog, I expressed my opinion on the issue of diversity at NTN. After having opportunity to talk with female managers, I had an impression that not so many women are motivated so much for career advancement. Of course, it is natural that some women do not want to be promoted considering the balance between work and life. However, there should be women who want to get promoted, and I think a system should be in place that evaluates those women fairly. I think it is acceptable that there is a female manager working for reduced hours and all members in the department finish work early and go home. Including appointment of foreign employees, I want to speak up for these issues this year as the COVID-19 pandemic has calmed down.

Murakoshi: I am concerned that the age group of executive candidates at NTN is pretty high. NTN is implementing an initiative to foster candidates for next-generation management called NNLP (NTN Next Leader Program), but the age group of participating employees is also high. Unless starting selection and fostering at around mid-40s, we will face a crisis of insufficient management at a critical moment.

Komatsu: I completely agree with you. We have talked about variety of issues, and I strongly feel responsibility that we, Outside Directors, have to monitor management and continue encouragement for purposes such as revitalizing NTN.

Message from a new Director









Yasuo Kitani

As an Outside Director, I will do my best to contribute to the sustainable growth of NTN by making the most of the knowledge I have gained through my many years of business experience in Japan and overseas as a banker and my experience as an executive.

First of all, I will value communication with as many executives and employees as possible, and speedily learn about the Company as it is, along with its history. And then, I will appreciate what I see from a bystander's vantage point, and while correctly understanding the changes in the environment surrounding the Company, I will make proposals in line with my responsibilities to help the Company grow in a healthy manner.

Although I am an Outside Director, I am appointed to work on a full-time basis, so I will work hard together with executives and employees to earn the support of many stakeholders and contribute to the development of NTN.

Stakeholders	Stance to Stakeholders	Main Activities
Employees 	NTN Group respects diversity, individuality and a safe and healthy workplace environment where employees can work successfully.	<ul style="list-style-type: none"> ■ “NTN PROUD AWARD” as ESG Corporate Award “NTN PROUD AWARD” is a system that encourages employees’ ESG activities and commends outstanding initiatives linked to 13 items of materiality responding to SDGs identified by the Group. The system aims to promote understanding and awareness of SDGs among employees and fosters their motivation and engagement. ■ Employee engagement survey Based on the survey result, we conduct activities to improve workplace issues, activate workplace communication and work to develop an environment in which each employee has a good reliable relationship with each other. ■ Global QC Circle Convention We strive to improve safety, quality, and productivity on a global basis, and with the convention as a forum for international exchange, we exchange information on a variety of activities.
Customers 	NTN Group seeks to maximize customer satisfaction and trust by providing products and services of superior quality, safety and reliability.	<ul style="list-style-type: none"> ■ Nationwide Distributors’ Meeting We invite distributors from across Japan to briefing sessions on account settlement overview and aftermarket business measures to strengthen our bond with distributors. ■ Technical service units We run completely-tailored, multi-functional technical service units worldwide, equipped with teaching materials and exhibits to introduce our products, and hold bearing technical seminars for our customers.
Business partners 	NTN Group, in a fair and free environment, builds good partnership with its business partners and works together for mutual growth and development.	<ul style="list-style-type: none"> ■ Briefing for suppliers We share information on our globalization initiatives and the business environment surrounding our company with our business partners and have external lecturers deliver lectures targeting the business partners. ■ Promotion of CSR procurement Through CSR questionnaires based on the CSR Procurement Guidelines, we promote activities with our business partners to help them understand the importance of CSR procurement.
Local communities 	NTN Group respects cultures and customs in the local communities and builds long-term trust relationships by meeting their expectations through its business activities.	<ul style="list-style-type: none"> ■ Activities that contribute to the local community (family tours, summer festivals, etc.) We hold family tours and summer festivals at each business site as an opportunity to interact with employees’ families and neighboring residents. ■ NTN Rotating School As an environmental education program for children who will lead the next generation, mobile-type schools have been opened in various places to deepen friendships with the local community. ■ Conservation of biodiversity In cooperation with local residents and NPOs, we are working to protect the environment of Satoyama (village forest) areas around our business sites and to protect endangered species.
Shareholders 	NTN Group focuses on return for shareholders by sustainable profitable growth and builds long-term trust relationships with shareholders through active communications.	<ul style="list-style-type: none"> ■ Shareholders’ Meeting The Shareholders’ Meeting is a forum for communication to build long-term relationships of trust with shareholders. ■ ESG briefing In addition to holding results briefings for investors, we also hold ESG briefings to promote understanding of our ESG initiatives. The opinions we receive at the briefings are used to strengthen our activities and information disclosure.
Environment 	NTN Group harmonizes its business activities with nature and contributes to preserve the global environment by providing its technologies, products and services.	<ul style="list-style-type: none"> ■ Reducing environmental impact in business activities We are working to minimize harmful environmental impacts by monitoring and reducing emissions of CO₂ and regulated chemicals in our business activities. ■ Sustainable use of resources We are striving for sustainable resource utilization by reducing the use of resources such as raw materials and water, and by thoroughly implementing the 3Rs (reduce, reuse, and recycle) of waste. ■ Developing environment-contributing product We are contributing to the realization of a carbon-free society by developing products that help reduce energy loss in finished products and natural energy-related products.

New NTN being created through NTN PROUD AWARD

To commemorate our 100th anniversary, we established “NTN PROUD AWARD” for all global employees in the Group to encourage practicing our corporate philosophy, but no convention has been held since 2019 due to COVID-19. This time, “NTN PROUD AWARD” has been newly started as an in-house award system to encourage and promote ESG activities for our sustainable growth in medium to long term and solution of social issues. Through this system, we aim to realize a “NAMERAKA Society” by improving the employees’ understanding and awareness of ESG and enhancing their motivation and engagement, which will lead to improvement of our social value and solution of social issues.



Basic approach to NTN PROUD AWARD

Basically, we aim to develop it into an award system that will lead to improved employee engagement, which in turn will lead to the further improvement of our organizational strength and corporate value, through ESG activities practiced by employees working in the Group in their daily jobs and awarding their activities. The Group’s materiality is closely linked to our corporate philosophy. We will aim to realize our vision with our employees doing daily jobs in connection with 13 items of materiality identified by the company.

Overview of the system

Teams of several members from any group companies can apply for the award. Activities that have connected daily jobs to the materiality, identified their own values, and produced certain outcomes are to be awarded, with the period from January to the end of December each year. Application is made directly by each team on the “NTN PROUD AWARD” page on our intranet. After the application period, the excellent awards, special awards, and materiality awards are selected first in each global region. Then, the top two teams selected for the excellent awards and special awards in each region make their presentations at a global convention. Out of them, the projects recognized as the most excellent activities are granted with the president awards in the three divisions of “E: Environment,” “S: Society,” and “G: Governance.”

Holding of a global convention

On June 14, 2023, the first global convention for the new system was held on the Web. This time, 69 teams made applications from Japan and abroad, and 12 teams awarded through local screening participated in the global convention. At the beginning of the convention, President Ukai greeted by saying ‘Please gain a new insight at this global convention. I hope that aggregation of your growing powers will enable us to address our big challenge of revitalizing NTN and realize a “NAMERAKA Society.”’ The convention was started with the president’s praise for the award winners from each region and expectation for this convention.

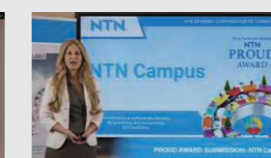


Each team presented their project activities and as a result of consideration, the president awards were granted to Xiangyang NTN-Yulon Drivetrain Co., Ltd. in the environment division and NTN BEARING CORP.OF CANADA LTD. in the society division. In addition, to express appreciation for a joint European team supporting Ukrainian refugees, a president special award was set up and presented to the team.

Teams winning the president awards	Environment division	“Environment improvement and promotion team” (Xiangyang NTN-Yulon Drivetrain Co., Ltd.)
	Society division	“Team CANADA” (NTN BEARING CORP. OF CANADA LTD.)
Team winning the president special award		“NTN Europe team” (NTN Europe S.A., NTN Wälzlager (Europa) G.m.b.H., NTN-SNR RULMENTI S.R.L.)



Environment improvement and promotion team



Team CANADA



NTN Europe team

To reflect the opinions of our stakeholders in our corporate activities, we have annually held dialog with academics and experts in various fields of sustainability since 2015. For this fiscal year, the 9th dialog was held in May.

In last year's stakeholder dialog, while we listened to how sustainability has actually been promoted in companies, important viewpoints of "not making it a task for disclosure" and "making sure that employees can personalize sustainability" were proposed. It was also recommended that we should confirm individual purposes while promoting activities because the company's purpose is an aggregation of purposes of each employee.

By referring to these recommendations we had received, NTN started a "Carbon Neutrality Promotion Project" in last July to set targets and strategies toward achievement of carbon neutrality. In addition, to promote this project from a location closer to management, the organization was changed in April 2023 to the "Carbon Neutrality Strategy Promotion Department" and turned to a department in the Group Management Headquarters.

Also, "NTN PROUD AWARD," originally started in 2018, was revised into an ESG activity award system and newly restarted on a full scale last year. Through these activities, we are steadily getting closer to achievement of our materiality targets.

In this dialog, we exchanged opinions with experts about the status of our activities and how to proceed in the future. Based on the recommendations we received, we will promote company-wide initiatives for realization of a "NAMERAKA Society."

Topics of the dialog

Topic 1 How to proceed with ESG management

Topic 2 Carbon neutrality


Experts




Katsuhiko Kokubu
Professor, Kobe University Graduate School of Business Administration



Akira Yamada
Senior Consultant JMA Consultants Inc.



Toshiya Chikada
Executive Officer Chief Manager Global Warming Prevention Promotion Office Environment Improving Department Sekisui House, Ltd.



Michitaka Shimizu
Senior Director ESG Management Promotion Headquarters Sekisui House, Ltd.



Eriko Nashioka
(Facilitator) Representative Director of Institute for Environmental Management Accounting, CPA.

NTN

Executive Officer
Deputy Corporate General Manager, Group Management Headquarters/Corporate Strategy Department/ESG Promotion Department/Carbon Neutrality Strategy Promotion Department

Shumpei Kinoshita

Executive Officer
Deputy Corporate General Manager, Group Management Headquarters/Human Resources Strategy Department/Personnel Department/General Affairs Department

Yasuhiro Kawabata

Deputy Corporate General Manager, SCM Strategy Headquarters

Yasuaki Takahashi

Manager, Corporate Strategy Department, Group Management Headquarters

Takashi Nishigaito

Manager, Carbon Neutrality Strategy Promotion Department, Group Management Headquarters

Masayuki Yamazaki

Manager, ESG Promotion Department, Group Management Headquarters

Tetsuya Ishimoto

(*Assignment and title of participants are as of the dialog held.)

Topic 1

How to proceed with ESG management

NTN: Based on the various recommendations we received in last year's dialog, we are now promoting activities for ESG management through not only bottom-up but also top-down approaches to communicate messages on risks and opportunities specifically linked to management strategies with the timeline fixed in the medium to long term in an easy-to-understand manner. Establishment of the "Carbon Neutrality Strategy Promotion Department" was also part of it. Besides, we think "NTN PROUD AWARD" was successful as the first convention after system renewal, with participation of 69 teams from all over the world.

With regard to materiality, NTN is considering incorporating the current materiality for achieving SDGs into the next Medium-term Management Plan as the materiality for achieving the company's purpose, while proceeding with establishment of a system that enables each employee to "personalize" sustainability activities.

We hope to obtain tips on our ESG management promotion in the future in reference to initiatives promoted by Sekisui House, Ltd. (hereafter, Sekisui House), a company going ahead of us, though in an industry different from ours, and opinions from experts.

Kokubu: I see that NTN has set specific strategies and is going ahead along them. In your industry, the external pressure toward sustainability is strong, but I don't think there are any deficiencies or issues in your target setting for carbon neutrality, identification of materiality, disclosure of related information, and initiatives. In other words, I can say that there are no problems in the "foundation." However, as I also said last year, the foundation is easy to build because it is a "form." What is important is to link it to the creation of actual corporate value. It is necessary to focus on ESG activities because a framework for evaluating them has already been established and a low evaluation may affect investment, but too much alignment with evaluation may make it mere a formality. Therefore, it is necessary to figure out how not to make it mere a formality. In that point, I strongly hope that "NTN PROUD AWARD" will be successful as one of your systems for value creation. It would be a good idea to bring out and deploy new businesses from it. But it will not work out if you try to earn quick profit. Instead, you need to think it as investment for the future, even if certain time and cost are required. The difficulty in creating value through ESG management lies in not being able to set a goal soon because you cannot tell what you can do. However, even while you are uncertain, it is important to continue to think what you can do by utilizing your bearings and related technologies and know-how, and to establish a system that enables you to invest currently available resources for that purpose. Otherwise, ESG

management will soon turn into a mere formality. In this regard, "personalization by managers," sited as one of your future issues, is an important aspect. It is recommended that managers will proceed with it as a task, with more specific targets.

Meanwhile, who will bear the cost is another very important issue. It is also related to the next topic, carbon neutrality, and I think there are two vectors for how to view the cost. One is to promote carbon neutrality strongly with advanced technologies, ask customers to understand the cost, and reflect the cost in product prices. The other is to pursue carbon neutrality at a level considered necessary and sufficient in the industry and control the cost within the scope. It depends on each company's level of technologies which strategy is reasonable, but it is necessary to refine strategies through validation. It is also unpredictable how fast and in which direction the external pressure will move on. The pressure also differs depending on the region, so it is necessary to set strategies by proactively considering where you are located in the move toward carbon neutrality.

Nashioka: The importance of strategies was just mentioned, so please share how ESG has been integrated into strategies at Sekisui House.

Shimizu: We announced our sixth Medium-term Management Plan in March this year. This project was started in June last year, and business divisions and corporate divisions have repeated discussions together for it. More specifically, regarding our global vision of "make home the happiest place in the world," we have considered our priority measures, or what we will achieve with the next Medium-term Management Plan.

With regard to ESG management, we have created the foundation through the fifth Medium-term Management Plan, and we think the key for it is to "personalize," as previously mentioned. "Participation of all employees" was one of the pillars of ESG management also in the fifth Medium-term Management Plan, but we determined to further enhance the initiative and promote the "ESG management through participation of all employees," unique to the Sekisui House Group. This was set as our ESG management strategy in the sixth Medium-term Management Plan. Besides, to "build an organizational culture that fosters innovation," we established an award system called "SHIP (Sekisui House Innovation & Performance Awards)" and have implemented initiatives to develop autonomous persons and organizations that will continue to produce innovations. We are also working to "set and implement ESG indicators" to utilize ESG indicators for ensuring the transparency and effectiveness, including setting ESG indicators easy to be understood by employees and establishing a system to link ESG indicators not only to compensation for directors but also to awarding for business sites. Our strategies also

include reduction of capital cost through further promotion of ESG management and improvement of our corporate value through the synergy of ROE improvement and ESG management promotion.

NTN: Thank you very much. “Cost” was mentioned earlier, and that is the very thing we are also concerned about. Our products reduce energetic load in themselves, which contributes to sustainability, but of course, their production process consumes water and electricity. It is difficult to reduce the environmental load to zero in production of all products, but we sometimes think that it would be easier to reflect cost increases in product prices by segmenting each product. For example, it may be effective to produce products using only natural energy such as wind and solar power and convince customers of the value. How do you regard the environmental cost at Sekisui House?

Shimizu: The cost is partly absorbed in-house, but basically, we ask the customer to understand the added value and reflect the cost in product prices.

Topic 2

Carbon neutrality

NTN: Through our Carbon Neutrality Promotion Project started in July last year, we have been considering how to materialize each initiative with the following three teams organized: “visualization of power consumption,” “planning and consideration of purchasing renewable energy power” and “consideration of internal carbon pricing (ICP).” The activity period ended on March 31 this year, and the initiatives were taken over to the Carbon Neutrality Strategy Promotion Department organized in April.

Through each initiative, a rough roadmap was prepared in Japan. In the future, we plan to establish a Carbon Neutrality Promotion Committee structure for global engagement in regional units. Could you give us advice on challenges such as setting intermediate annual targets and how to check a global CO₂ reduction roadmap once prepared.

Yamada: I feel that a structure has gradually been organized toward a challenging goal. In establishing a roadmap, it is better to estimate first how much energy consumption can be reduced. To do so, you need to accumulate expertise from in-house energy-saving specialists and set energy-saving control points and completeness evaluation standards for each equipment. This will roughly clarify how much more energy can be reduced at each plant. Once the portion of energy saving is made clear, you can see how much more reduction is required using renewable energy, which makes the related cost visible. With regard to energy saving, it can be said that the Energy Conservation Promotion Group

organized in the Carbon Neutrality Strategy Promotion Department has a large role to play. “Visualization of energy consumption” is listed as one of your measures, but is it clear how and what to “visualize”? One possible first step is to visualize how effectively energy has been utilized in each process. This will quantify the total loss and visualize the limit. Even if it is impossible to eliminate all losses, I think the seriousness in engagement will differ between energy-saving activities conducted blindly with the limit unknown and those conducted, for example, with knowledge that 80% of energy consumption in the process is loss. It is also necessary to think about fixed energies. Energy-saving should always be discussed in connection with production activities. By thinking that energies not contributing to production are all losses, it is better to proceed with initiatives for thoroughly reducing fixed energies. In QCD activities, the lead time, man-hours, quality standard, etc. are documented and monitored for each product and process. Controlling energies also at the same level will probably show the route toward achieving your goal more concretely.

Kokubu: Achievement of carbon neutrality is unavoidable, but if you don’t understand what carbon neutrality is, you may still be able to set a plan, but unable to understand its meaning. For example, you have a plan to reduce most of the emission by utilizing renewable energy, but NTN seems to cover a higher ratio by purchasing CO₂-free electricity at present. If going to extremes, you can achieve carbon neutrality if all electricity you purchase is renewable energy. However, that means you practically make no efforts. Rather, it is important to try to generate the source of green electricity as much as possible. When thinking of electricity self-sufficiency, carbon neutrality will probably take on new meaning.

Yamada: The most important thing in renewable energies is “energy creation.” The first thing you should consider after reaching complete energy saving is where you can create electricity. You should first look for on-site locations, and then off-site locations. This initiative should be given a high priority. If this is not enough, purchase CO₂-free electricity. I recommend this sequence.

Nashioka: In summary, I think true carbon neutrality is to ask each company to create electricity on-site. Could you share a related business case at Sekisui House?

Chikada: For the past one year, we have focused on net zero energy houses (ZEHs) for rent. While ZEHs for sale are gradually gaining popularity, those for rent are still far from becoming popular.

There are two types of ZEHs for rent: building-wise ZEHs and house-wise ZEHs. For our rental houses, we promote the latter, in other words, the type of ZEHs that aim at zero energy balance at each house. The former has a high energy-saving performance as the whole



building, but you can’t tell whether each house is ZEH or not, so we cannot convince residents of the advantages of ZEHs, such as the comfort and lower utility costs. But advantages of the latter are convincing, so we can even raise the rent. Anticipating an increased number of ethical consumers decades later, we are now proposing would-be owners to build house-wise ZEHs, which will require higher initial cost but remain competitive in the longer term, and this proposal is being accepted. Also, according to our survey on former residents of ZEHs for rent, 80% answered that they want to live in ZEHs again. That means we are increasing ZEH fans. We are trying to create a trend toward ZEHs for both sale and rent.

Nashioka: I heard that something had motivated your employees to personalize carbon neutrality.

Chikada: That’s right. In 2009, we commercialized houses with a pretty high energy-saving performance at the time, the predecessor to ZEH. At the same time, we changed our sales policy from “price-based” to “value-based.” We started our journey in the direction of presenting high value-added products to customers, making them understand the value, and selling our products at adequate prices. At first, some sales representatives felt uncomfortable, but once successful experiences started to emerge, an increasing number of representatives followed suit. All of us studied quite hard because we needed to learn to talk about product value in order to convince customers. I think this led to personalization of carbon neutrality.

NTN: We understand it’s a good business model in the food, clothing and housing industries, in that added value is recognized by customers, which in turn creates a positive chain reaction. Then, what initiatives should we implement in our industry, which is far away from food, clothing and housing.

Chikada: We also have suppliers. And we communicate to suppliers our expectation for them to use carbon-free building materials. In the construction industry, a trend toward using such materials even with higher costs has also emerged. Likewise, demands for carbon-free products may emerge at various bearing user companies. Still, I think this should not be tackled by a single company, but requires movement across industries.

Yamada: Recently, we are increasingly asked for advice also from the supplier side. For example, one of our customers asked us to show the result of LCA (Life Cycle Assessment) of their products. If products are produced completely with renewable energy, that would be a big differentiator. If you can launch initiatives ahead of other companies, I think that will become your strength in the future society.

Nashioka: Could each of you summarize today’s dialog?

Chikada/Shimizu: We have been engaged in ESG management for three years, and realized that success will be brought only through steady and diligent effort. At the beginning, it was mentioned that “a form can be created,” but we, having no form, were hit by the wave of ESG after launching our products. We now feel the difficulty of creating a form. We hope to continue our engagement while sharing information each other.

Yamada: NTN has declared reduction of energy loss. Bearings reduce energy loss caused by friction of rotating objects, etc., but certain loss still remains. I think you can increase the importance of and interest in bearings by clearly explaining, for example, how much impact automotive hub bearings have in global scale, or your current effort to reduce the loss as much as possible. I also feel it important to increase the sales of environment-contributing products.

Kokubu: I have an impression that we had many talks that lead to management during today’s dialog. This reflects the fact that, although environmental initiatives surely lead to management, each company has been confused with the gap. Carbon neutrality is not an issue that can be addressed through conventional methods of production and sales. I think it is important to view it as something you need to tackle strategically in a top-down approach.

NTN: Thank you very much for your precious recommendations. This is an opportunity for us to gain insights. We’d like to reflect recommendations we received today in our future initiatives. We will move forward step by step while sharing the significance of our initiatives within the company. We would highly appreciate your continued advice. Thank you very much for today.