

**NTN**

Make the world **NAMERAKA**

**FY2024 ESG briefing session**

**DRIVE**

*Digitalization Resources Innovation Variable cost reformation Efficiency improvement*

**NTN100**

**Final**

**December 20, 2024**

**NTN Corporation**



Representative Executive Officer, President,  
CEO (Chief Executive Officer)

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Outside Director, Chairperson of Board of Directors

Yuriya Komatsu

Executive Officer  
Human Resources Strategy Dept. and Personnel Dept.

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Executive Officer  
Corporate Strategy Dept., ESG Promotion Dept. and  
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Yoshiyasu Nakano

Manager, Carbon Neutrality Strategy Promotion Dept.

Masayuki Yamazaki

- I. ESG Management of NTN Group
- II. E (Environment)
- III. S (Social)
- IV. G (Governance)

## NTN Group Philosophy

### Corporate Philosophy

We shall contribute to international society through creating new technologies and developing new products

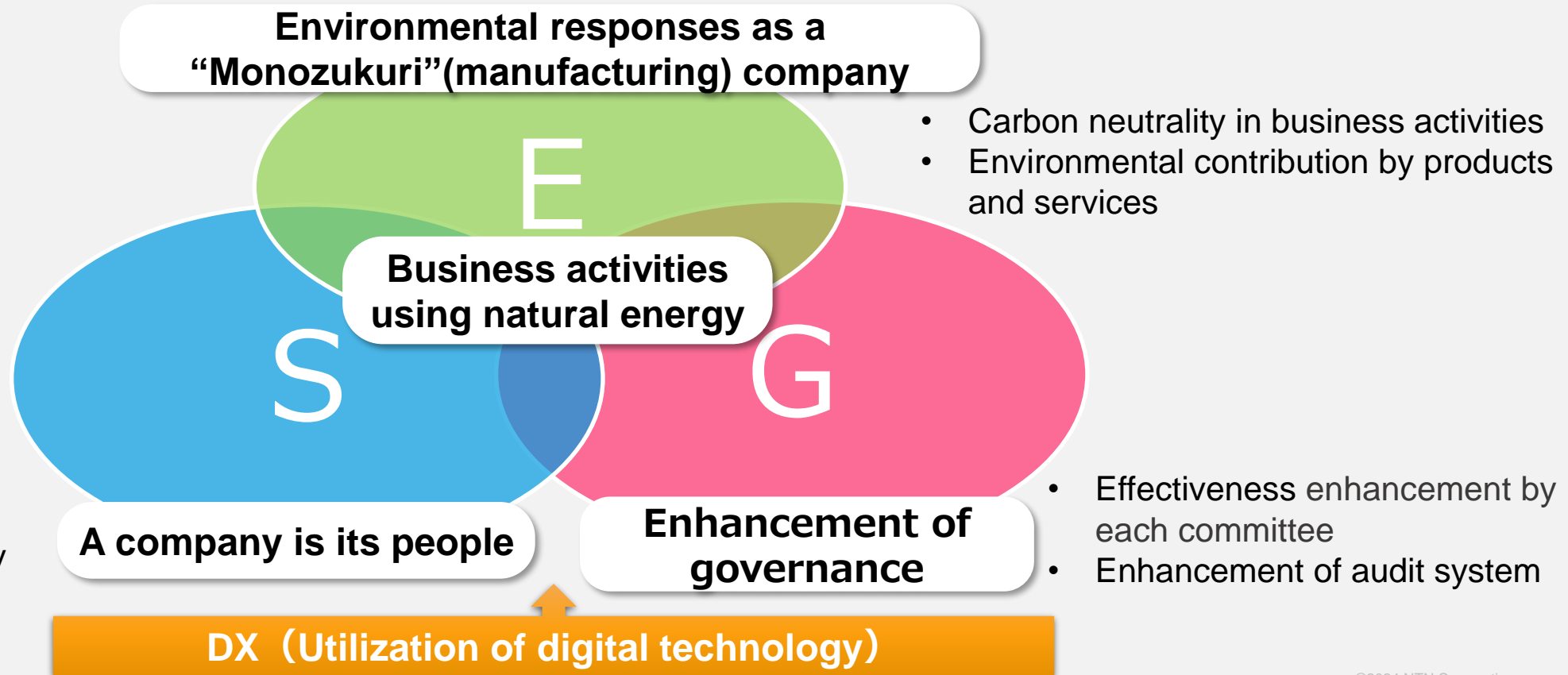
### What we aim to be

Realization of a “NAMERAKA Society”



## Our Sustainability Activity

Through the NTN Group's business activities,  
**we pass on to future generations a beautiful planet on which humanity can live safely and securely.**



# 1-3 Foundational Action Guidelines

## “SQCCD” and “NTN Driven”

### SQCCD : Pillar of business operation

- Reform the behavior and the way of thinking by all employees
- Share with all employees as the backbone of the "Monozukuri" company

### Vision for FY2035

**DRIVE NTN100** *Final*

### Transformation of business structure

Expand aftermarket business

Improve competitiveness of OEM business

Create and develop new businesses

### Strategies to support transformation

#### Value chain reform

- Design reform, prompt commercialization
- Procurement reform, production reform, logistic reform
- Defensive quality, proactive quality and profitable quality

#### Transformation of business foundation

- Strengthen portfolio with new organizational structure
- Promote measures and strengthen follow-up using KPIs
- Generate profits by utilizing digital technology

#### Evolution of ESG management

- Carbon neutral and sustainable response
- Human resource development and work styles respecting diversity
- Advancement of governance and strengthening risk management

### NTN Driven : Mindset

- Provide added value through NTN driven actions
- Challenge to transform business structure on our own initiative

### SQCCD

Safety Quality Compliance Cost & Cash Delivery & Development

### NTN Driven based on the premise of customer-first

The mindset to challenge the transformation of business structure


- I. ESG Management of NTN Group
- II. E (Environment)**
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## Carbon neutrality in business activities

Reduce environmental impact by CO<sub>2</sub> emission reductions

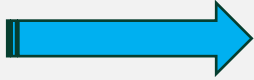


Direct emission from fuel consumption  
Indirect emission from electricity consumption  
Emission in the supply chain




## Environmental contribution by products and services

Contribute to a decarbonized and sustainable society



Technology not to stop operation  
Technology for longer operating life  
Reduce energy loss

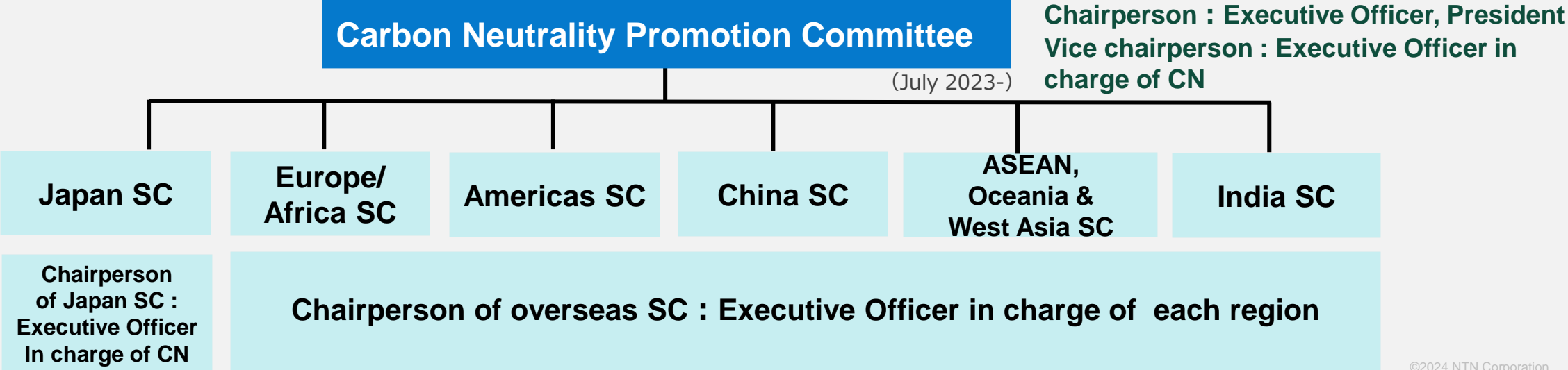


## NTN Group target for carbon neutrality

CO<sub>2</sub> emission reduction target (Scope 1 and Scope 2)  
50% reduction by FY2030 (compared to FY2018)  
Achieve carbon neutrality by FY2035

CO<sub>2</sub> emission reduction target (Scope 3)  
Achieve carbon neutrality by FY2050

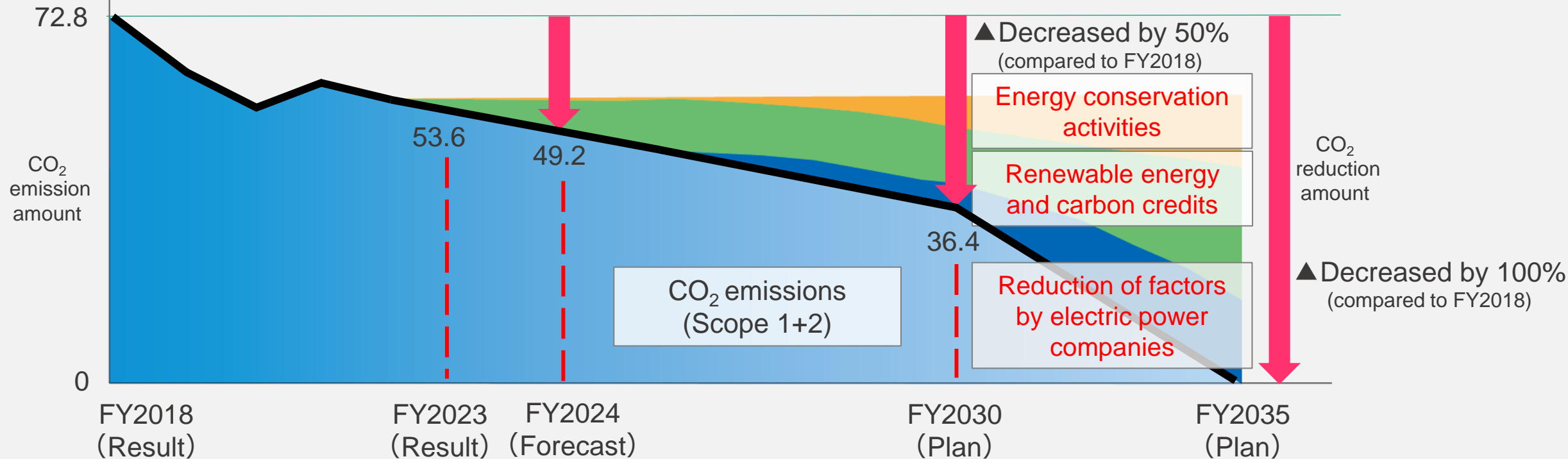
## Promotion system for carbon neutrality



## Promote activities based on the carbon neutrality roadmap

- Global roadmap that aggregates roadmaps for each region was shared at the Carbon Neutrality Promotion Committee in January 2024
- We will achieve global target through activities in each region

(Ten thousand tons-CO<sub>2</sub>)



Details on the next page

# 2-4 CO<sub>2</sub> Reductions in Business Activities

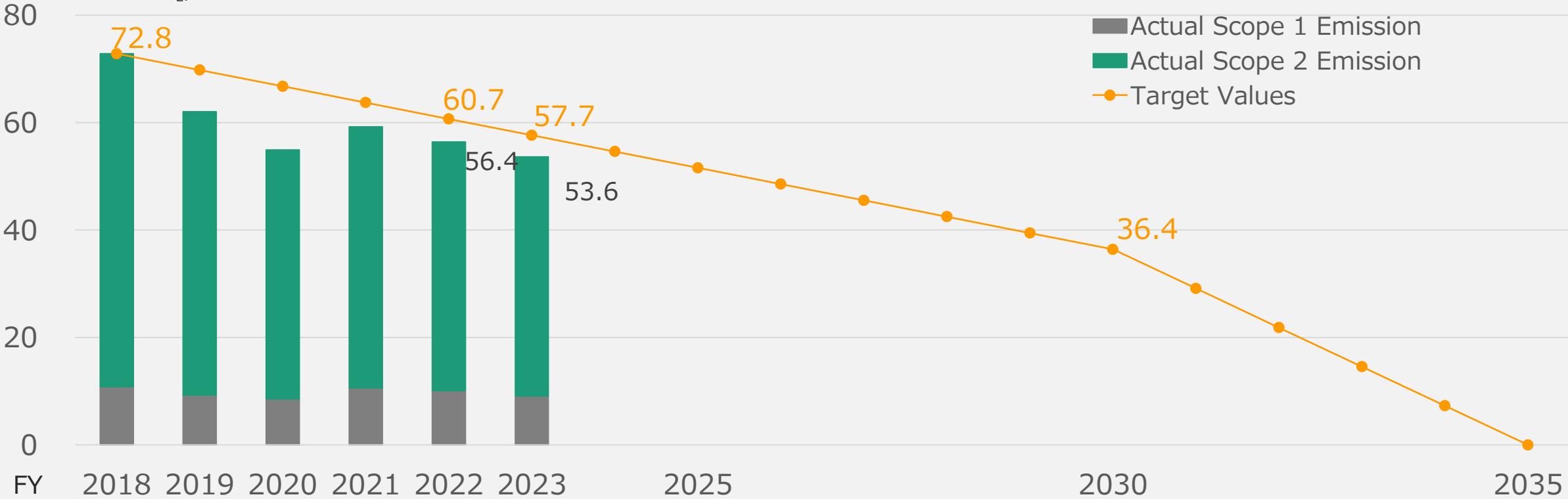
## Remained at a level that meets annual targets

**FY2023 Results**

Scope 1 (Direct emission) 90,943 tons (Japan:50,591 tons, Overseas:40,352 tons)

Scope2 (Indirect emission) 445,425 tons (Japan: 219,669 tons , Overseas: 225,756 tons )

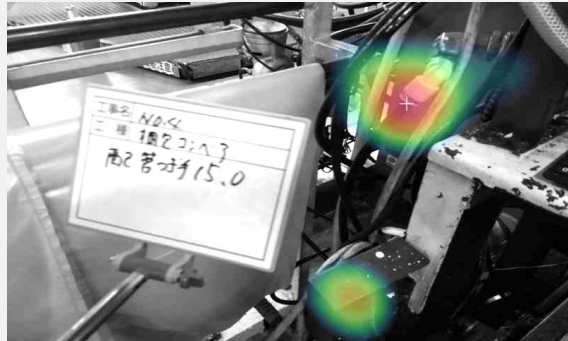
(Ten-thousand tons-CO<sub>2</sub>)



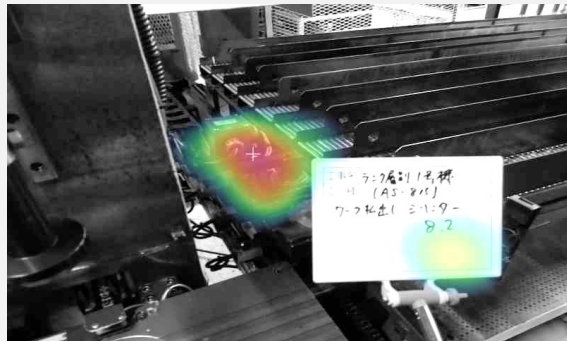
# 2-5 Reduction of Energy Used in Business Activities

## Visualize energy wastage and reduce energy use

- Effective energy-saving measures are being databased and deployed to overseas
- Internal carbon pricing has been introduced as an investment decision indicator for new capital investment (from FY2023)

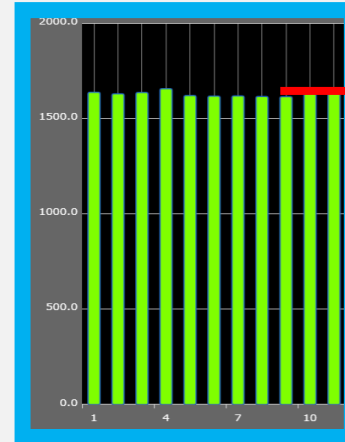


CO<sub>2</sub> reduction amount  
17,051kg-CO<sub>2</sub>/year  
(Implementation area:275)

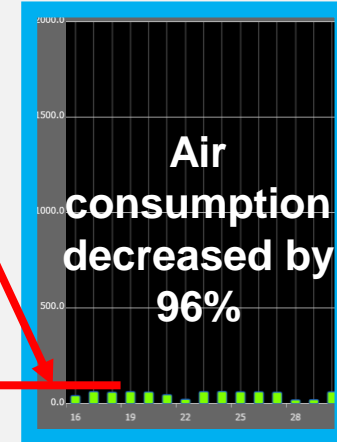


Example of identifying and repairing a target area using the “Air Leak Viewer,” which visually displays the location of air leaks (Iwata Works)

Before



After



CO<sub>2</sub> reduction amount  
27,141kg-CO<sub>2</sub>/year



Visualization of air consumption per process by installation of an air flow meter revealed an air leak in the pressure booster tank, and countermeasures were taken (Kuwana Works)

## Expand the use of solar power generation at domestic and overseas sites

### ■ On-site PPA model



Wakayama Works  
(from October 2024)



### ■ Self-investment through tax incentives



Solar Panel System Installation  
Ceremony at Manufacturing Site  
in Thailand (August 2024)

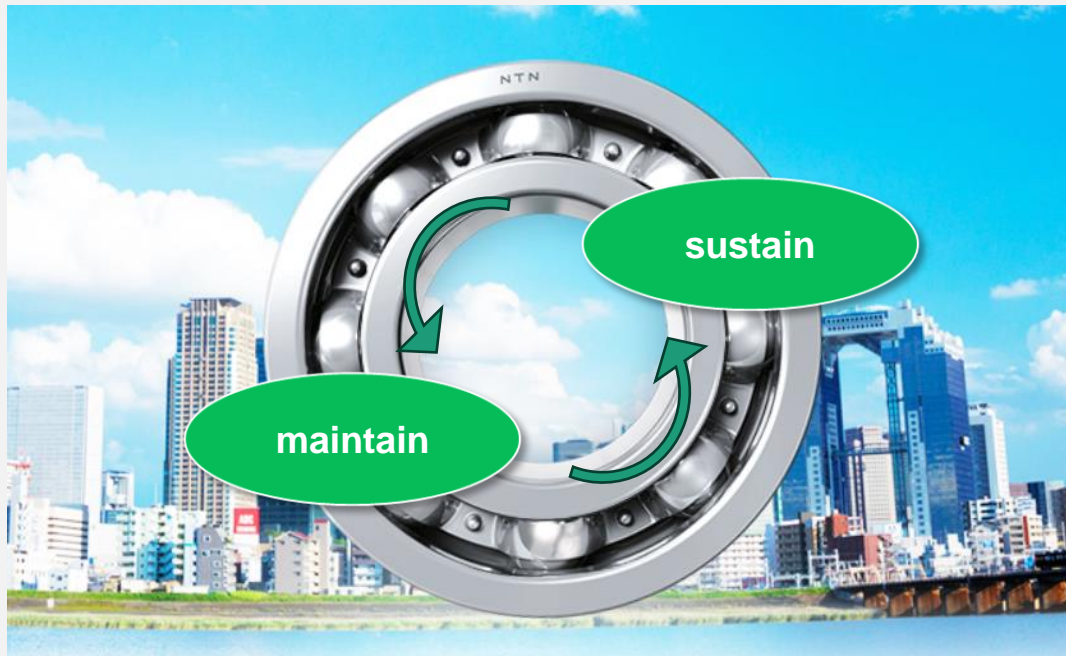
→ In addition to promoting carbon neutrality, reducing electricity procurement costs will lead to cost reductions

# 2-7 Environmental Contribution through Products and Services ( NTN's added value )

## Contribution to solving social issues

### NTN's added value for realizing a "NAMERAKA Society"

- 1) Technology not to stop operation
- 2) Technology for longer operating life
- 3) Reduce energy loss



Realization of a  
"NAMERAKA Society"



# 2-8 Environmental Contribution through Products and Services (Technology not to stop operation)

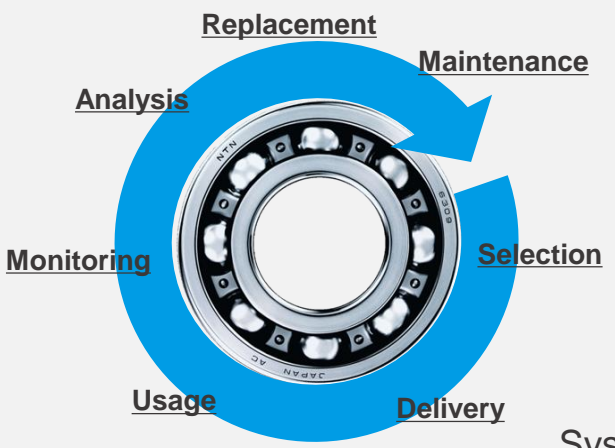


## 1) Technology not to stop operation

- Improve operating rate due to appropriate maintenance on a variety of services
- Contribute to reduce opportunity loss for customers whose equipment and machinery stops

[Examples of our services]

- Condition monitoring : Reduce equipment maintenance costs by detecting bearing abnormalities at an early stage
- Diagnostic Proposal : Provide report results after analyzing and diagnosing the monitored data
- Inspection and investigation : Inspection and damage condition investigation to determine bearing condition
- Bearing maintenance : Provide bearing maintenance services for stable operation



Condition Monitoring System "CMS" for Wind Turbines



NTN Portable Vibroscope



"Talking Bearing"

# 2-9 Technology Not to Stop Operation : Contribute to Utilize Natural Energy

Build a foundation for wind turbine through the introduction of our CMS

## ■ Condition Monitoring System "CMS" for Wind Turbines

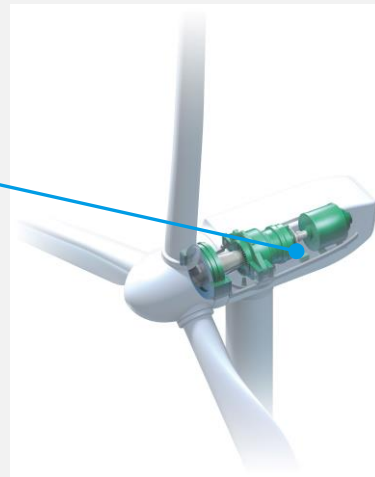
Monitoring wind power conditions → Anomaly detection → Appropriate maintenance → Not to stop operation of wind turbines → Creating a sustainable society

## ■ Expansion of sales opportunities

Installation of wind power PPA with our Condition Monitoring System "CMS" for Wind Turbines



Condition Monitoring System "CMS"  
for Wind Turbines



Nacelle



Wind turbines (image)

# 2-10 Environmental Contribution through Products and Services (Technology for longer operating life)

## 2) Technology for longer operating life

- Provide bearings with superior technology and quality, contributing to improved production efficiency and energy saving
- Contribute to energy saving by extending the operating life of bearings and making them to be used longer

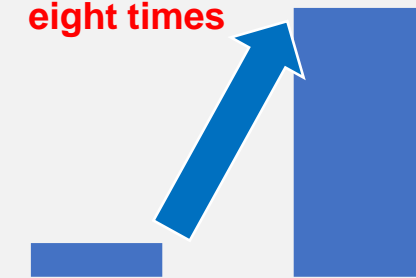
[Examples of products]

- High Speed and Long Operating Life Grease for Grease Lubricated Bearings for Machine Tool Spindles
- Lubricating Unit for Grease Lubricated Bearings
- Special Heat Treatment Technology “HA-C”



“High Speed and Long Operating Life Grease” for Grease Lubricated Bearings for Machine Tool Spindles

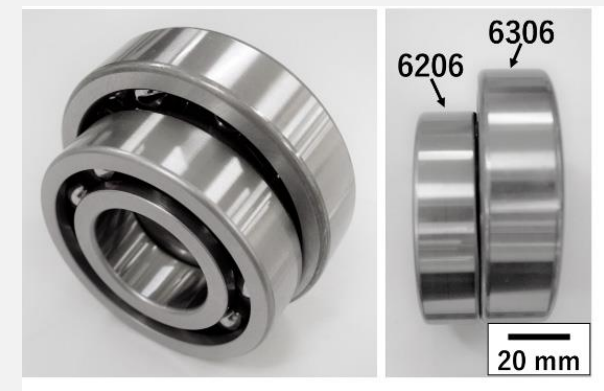
Operating life  
approximately  
eight times



Conventional Grease High Speed and Long Operating Life Grease



“Lubricating Unit for Grease Lubricated Bearings” for Machine Tools Spindles



Special Heat Treatment Technology “HA-C”

# 2-11 Environmental Contribution through Products and Services (Reduce Energy Loss)

## 3) Reduce energy loss

- Provide products with excellent rigidity and durability required for EV/HEV
- Expand development and sales of products that pursue environmental contribution

[Examples of products]

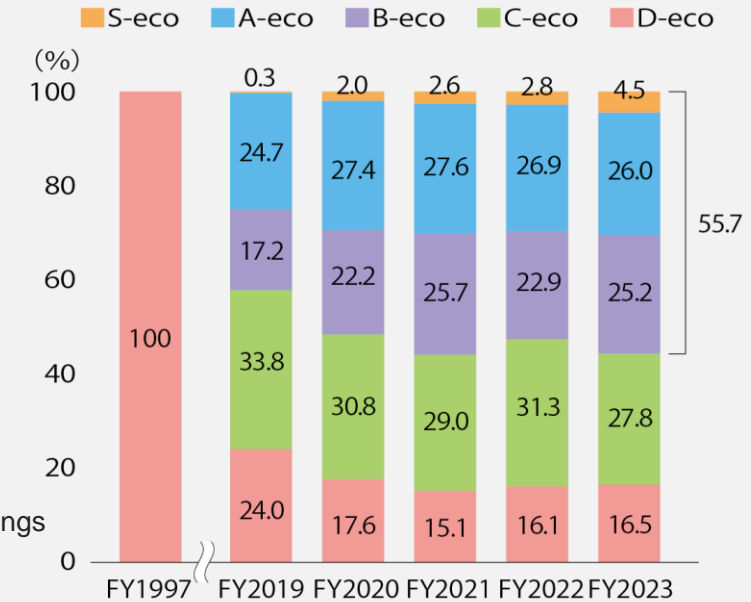
- High Efficiency/Shudderless Driveshaft for EVs
- Low Friction Hub Bearing series
- Large Diameter Deep Groove Ball Bearings for Coaxial e-Axles

[Definition of environment-contributing product]

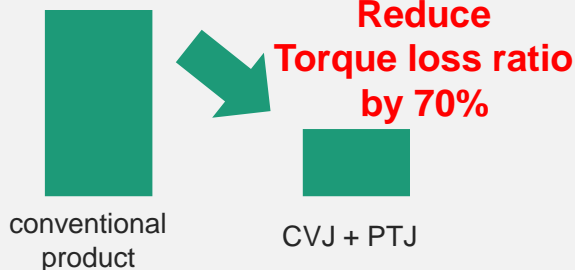
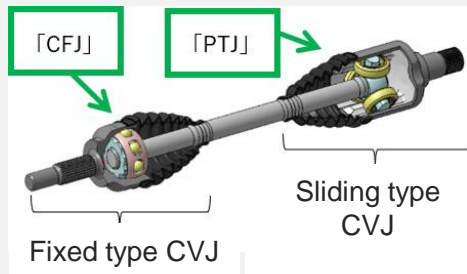
Using products with a performance level around the level in 1997 as our benchmark, NTN classifies environment-contributing products in five grades from S- to D-eco, based on environmental factor standards that are prescribed for each product

Grade	Definition
S-eco	Products are classified according to environmental factor standards for different products in line with technology standards across the world
A-eco	
B-eco	
C-eco	
D-eco	Products that help to reduce energy loss of finished products at the same performance level as that of around 1997

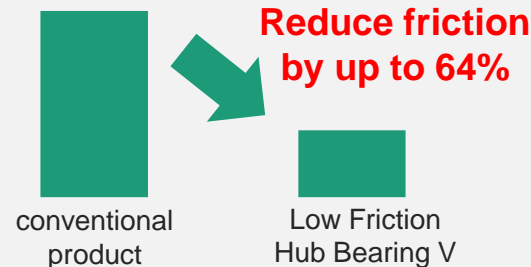
Trend in composition of environment-contributing products by grade



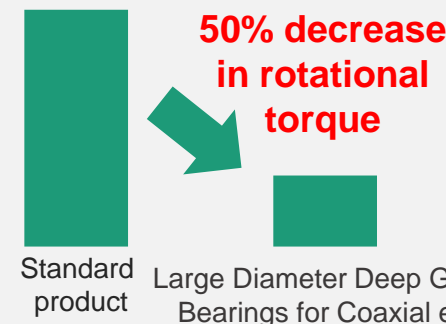
High Efficiency/Shudderless Driveshaft for EVs



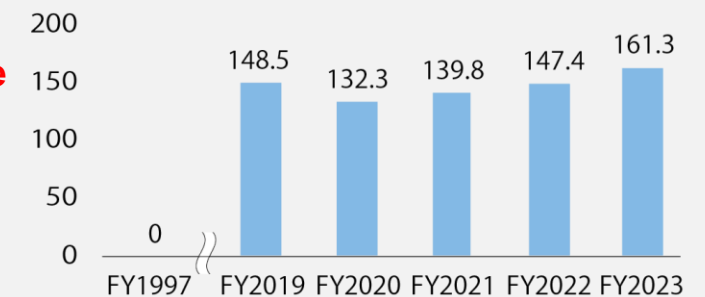
Low Friction Hub Bearing V



Large Diameter Deep Groove Ball Bearings for Coaxial e-Axles



(10,000 tons) Contribution to CO<sub>2</sub> reduction



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- III. S (Social)**
- IV. G (Governance)



# 3-2 NTN's Human Resources Strategy

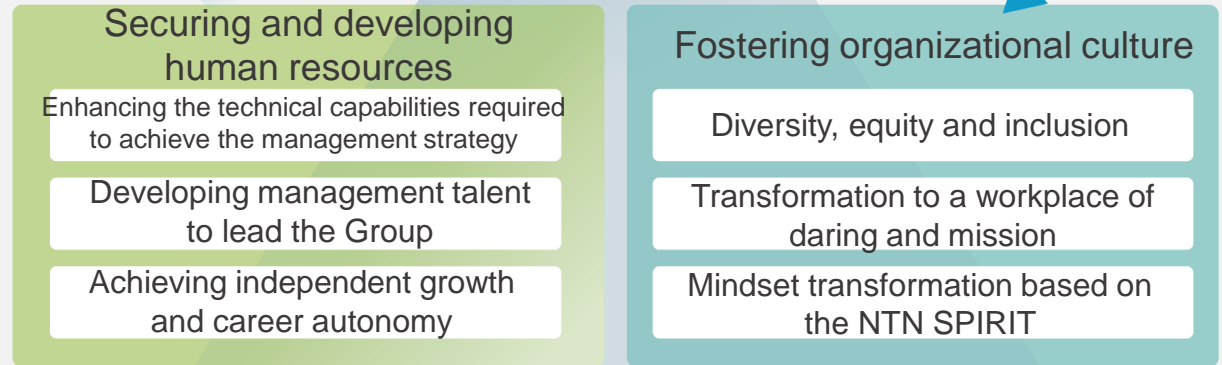
- Employee growth leads to company growth: **“the company is its people”**

- Strengthen technological competitiveness as a machine manufacturer
- Develop business using AI, data scientists, and other digital technologies
- Create an environment in which diverse employees can fully exercise their abilities autonomously

Sustained improvement in corporate value



Priority actions to achieve the Medium-term Management Plan



The thinking behind human capital management



- Five pillars of our human resources strategy**
- 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
  - Realizing a workplace where employees can work safely and healthily in an environment enabling innovative thinking
  - Fostering a culture of learning and development in the workplace
  - Respect for human rights

# 3-3 Human Resources Strategy (Human Resource Development to Support Competitiveness and Business Development)

Strengthen technological competitiveness as a machine manufacturer

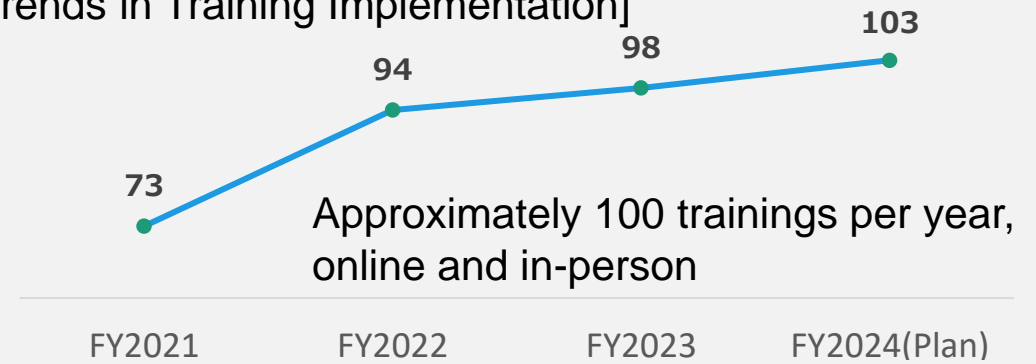
[Global QC Circle Convention]



[Specialty-based and rank-based training, etc.]

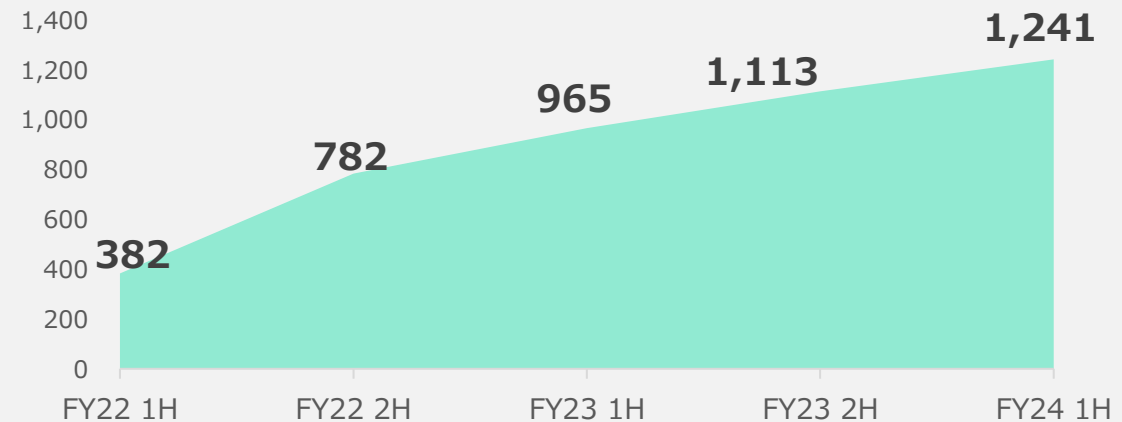


[Trends in Training Implementation]



Develop business using digital technologies

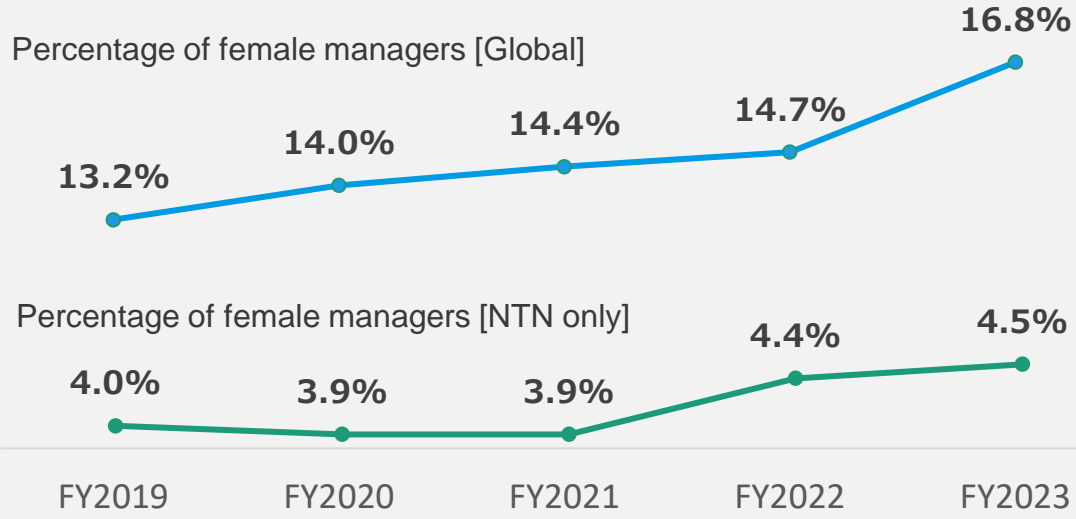
[Number of employees enrolled in data literacy and AI literacy courses] unit : Total attendance



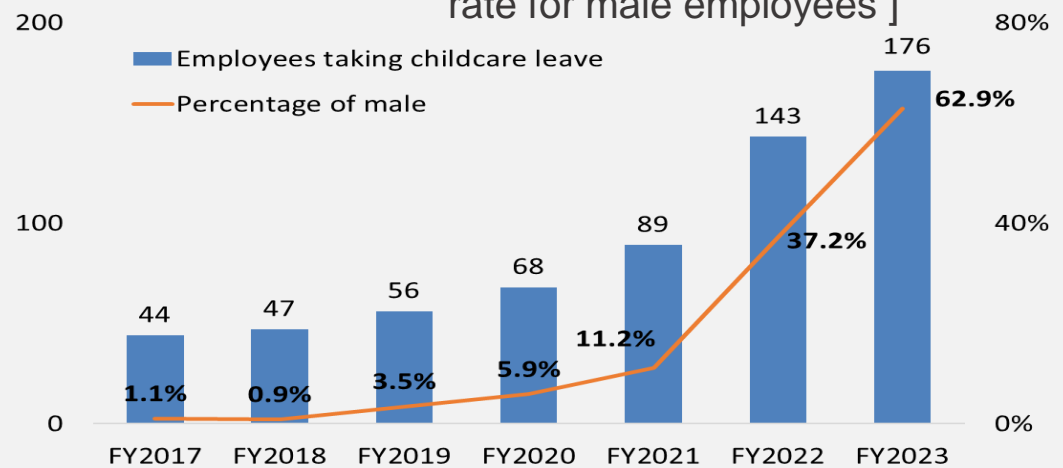
# 3-4 Human Resources Strategy (Creating Environment)

## Diversity & Inclusion

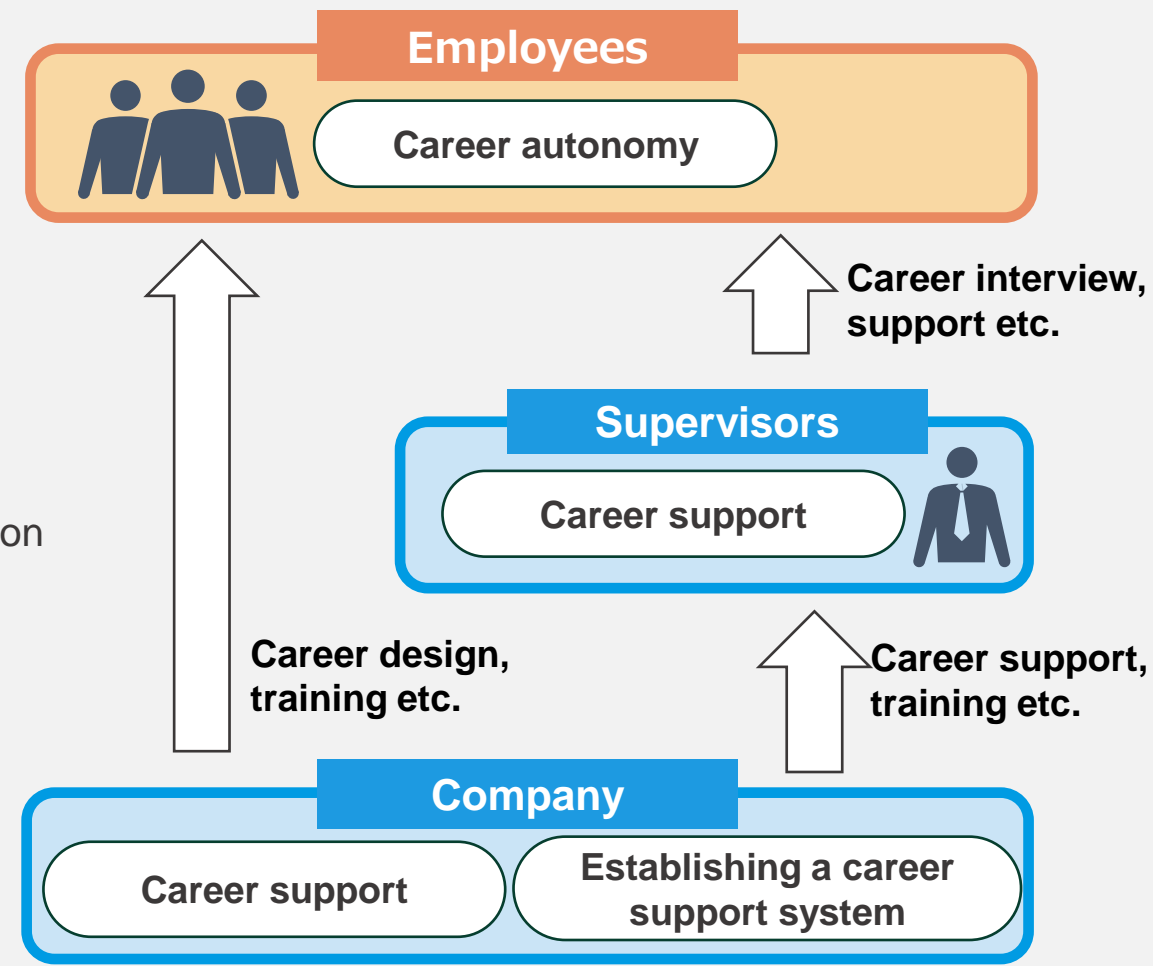
[Percentage of female managers Global 16.8% NTN only 4.5%]



[Numbers of employees taking childcare leave and childcare leave acquisition rate for male employees]



## Support for autonomous career formation



# 3-5 Contributing to People's Safe and Secure Lives

## Preparation for natural disasters by disaster prevention and mitigation

- Transportable Independent Power Supply “N<sup>3</sup> N-CUBE”



Adopted as independent power supply for flood prevention center in Yoshida Town, Shizuoka Prefecture (from 2022)



Demonstration test held at the roadside station “Itano” which is one of the “disaster prevention roadside stations” selected by the Ministry of Land, Infrastructure, Transport and Tourism (September 2024)

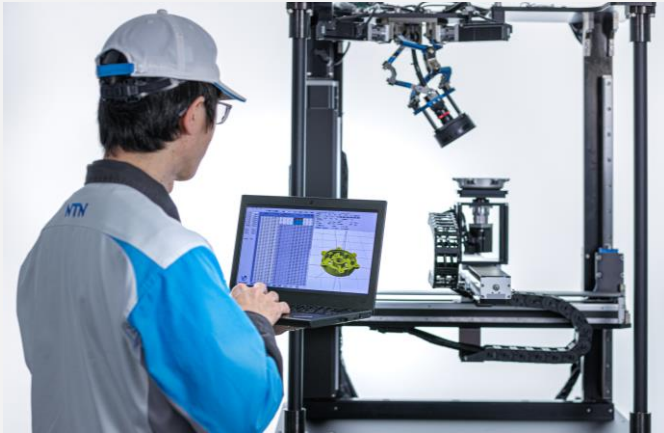
## Building an environmentally friendly living infrastructure

- Bike station in Europe



Bike station unveiling ceremony held outside Geneva (November 2024)

## Contribution to robotization



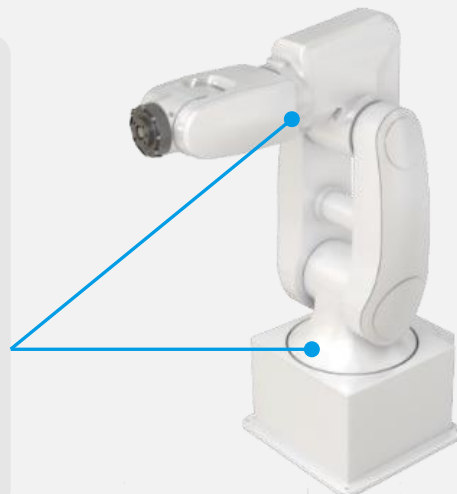
Automatic appearance inspection



Wrist Joint Module "i-WRIST"

High precision angle detection "Multi Track Magnetic Ring"

Enable downsizing and higher power output of servo motors "Low Dust Generation Bearing for Servo Motors"



Robot

## Life Science Field



Microscopic Coating Applicator



(Ex) iPS-derived Cardiomyocyte



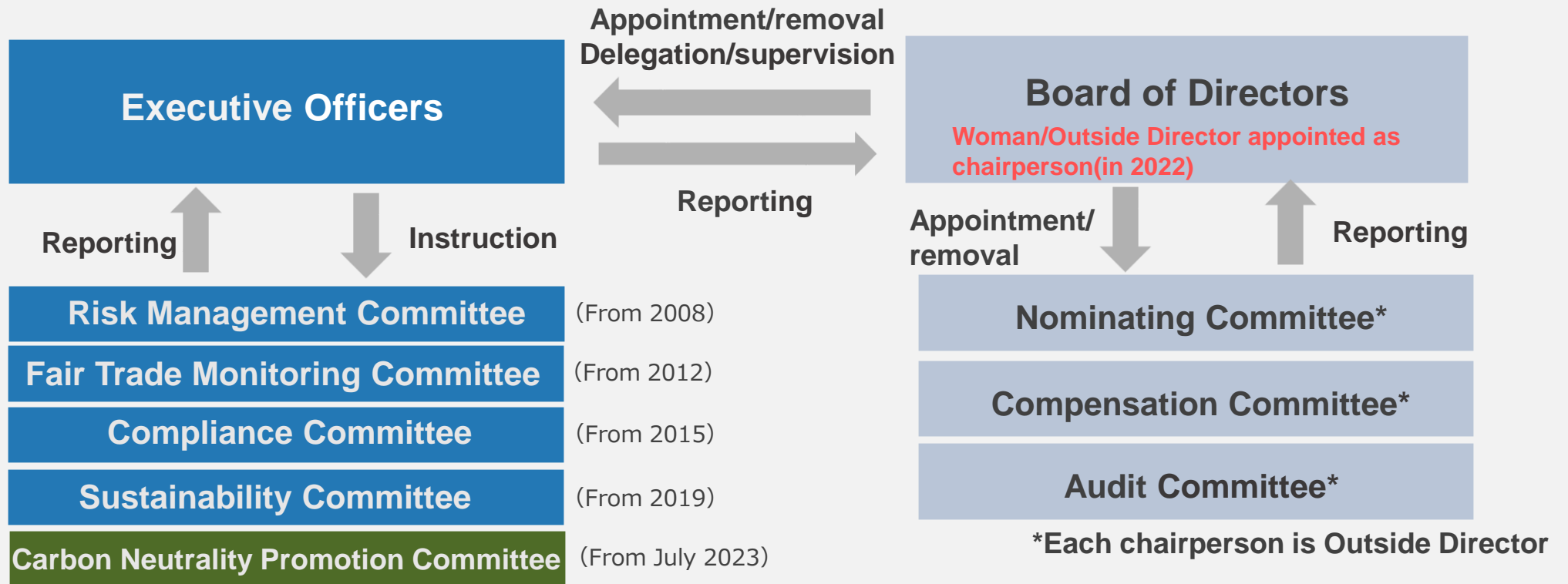
(Ex) Portable medical test kit

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# 4-1 Corporate Governance Structure

## Strengthen governance structure

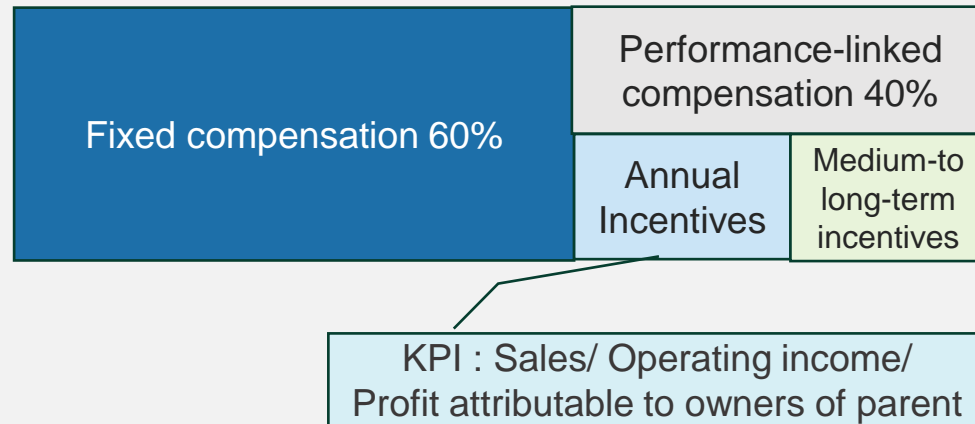
Established “Carbon Neutrality Promotion Committee” to improve the effectiveness of carbon neutrality



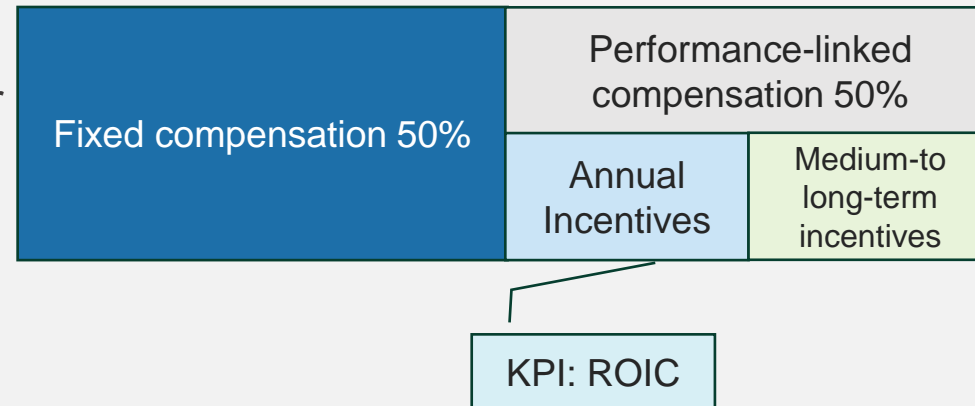
## Activities of Compensation Committee

### Review of compensation for Executive Officers

Past



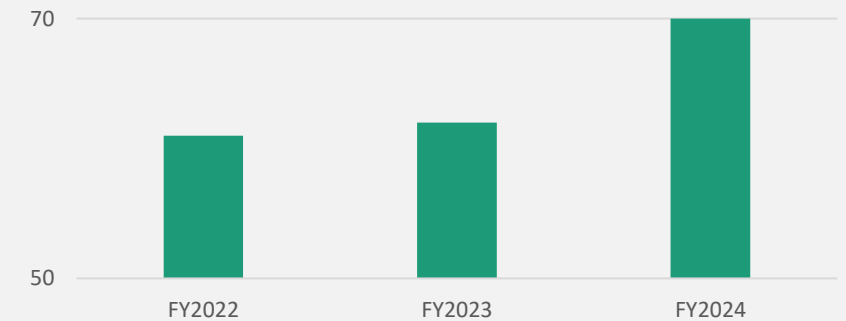
From September 2024



## Activities of Audit Committee

### Enhancement of the Audit Committee structure and actual operation under the established system

(times) Number of domestic and overseas audits conducted



### Promotion of employees understanding through internal communication





- This presentation and comments made in this conference or during the following Q&A session include forward-looking statements about future performance and future business strategies, all of which are based on decisions of the management of the Company currently available.
- These statements represent the best judgment of the management of the Company based on the information currently available. However, there can be no assurance that future results will meet any expectation, estimate or projection conveyed by these statements or comments. Actual results may differ materially from Management projections depending on various factors such as changes in product demand, exchange rates and interest rates, and contingent liabilities.