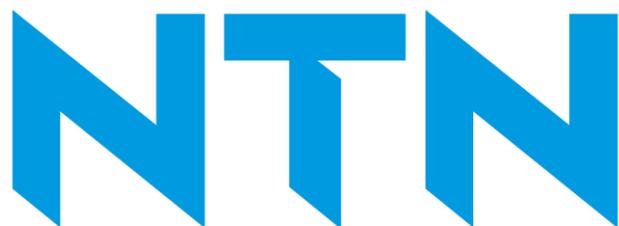
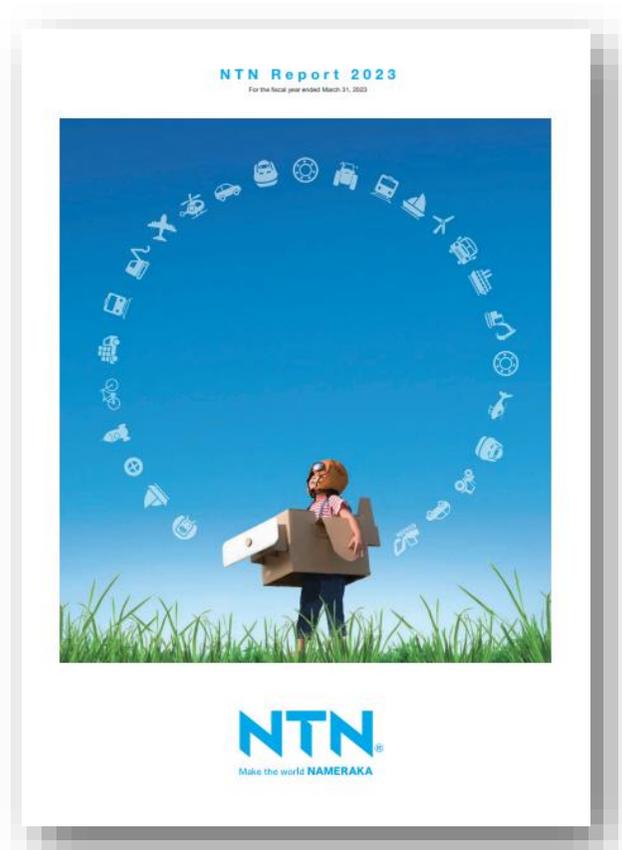


NTN CORPORATION ESG Meeting



Make the world **NAMERAKA**

December 18, 2023
NTN CORPORATION



Eiichi Ukai

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

Yuriya Komatsu

Outside Director

Masaki Egami

Executive Officer, CTO (Chief Technology Officer)

Research Division

New Product & Business Strategic Planning HQ.

Yasuhiro Kawabata

Executive Officer

Human Resources Strategy Dept. and Personnel Dept.

Shumpei Kinoshita

Executive Officer

Corporate Strategy Dept., ESG Promotion Dept. and

Carbon Neutrality Strategy Promotion Dept.

Masayuki Yamazaki

Manager, Carbon Neutrality Strategy Promotion Dept.

1. Overview of ESG Management

2. Environment (E)

3. Social (S)

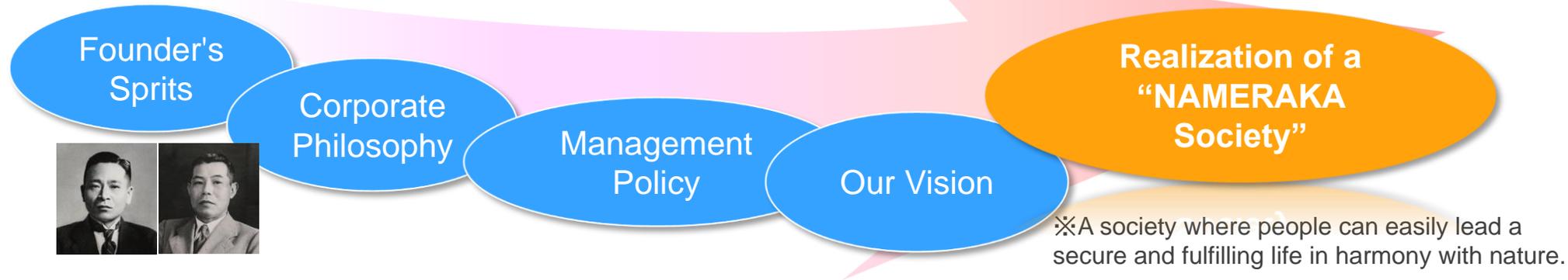
4. Governance (G)

NTN Group Vision



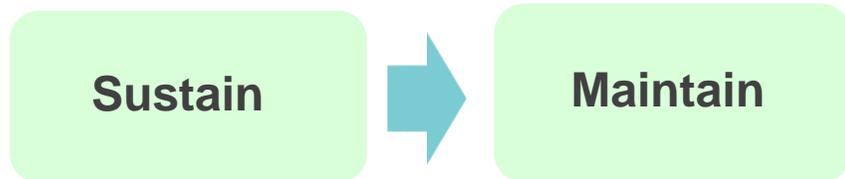
NTN Group Vision

Through the implementation of our corporate philosophy, **“We shall contribute to international society through creating new technologies and developing new products,”** we aim to contribute to solving social issues surrounding the world and realize a **“NAMERAKA Society”**, a society where people can easily lead a secure and fulfilling life in harmony with nature.



From sustainability perspective -Contribute to the future of the earth-

- Longer product operating life
- Technology not to stop operation



Toward the Realization of a “NAMERAKA Society”

Materiality

||

Issues requiring priority response toward the Realization of a “NAMERAKA Society”



Roadmap for Realizing a "NAMERAKA Society"

Aim to enhance NTN Group's corporate value and sustainable growth, and create environmental and social value

< Contribution to solving social issues toward the future we aim for >

ESG issues		Materiality
Environment	Realize carbon neutrality 	Respond to climate change
	Contribute to carbon-free society 	Realize a sustainable society using natural energy Reduce energy loss
Social	Contribute to prosperous lives 	Provide safety and comfort

FY2022 Results (excerpt)
Scope1,2 ⇒ -22.6% compared to FY2018 Scope3 ⇒ Develop and promote action plans
Launch of one-stop service that provides everything from bearing supply to abnormality detection and maintenance for wind turbines
Develop High Speed Deep Groove Ball Bearings for EVs and HEVs
"N ³ N-CUBE" was adopted by several municipalities

Realization of a "NAMERAKA Society"

Please refer to NTN Report 2023([Link](#)) for all KPIs and targets for the year ending March 2023.

< 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 	Improve the reliability of products and services (quality assurance and stable supply) 	Promote safety and health 	Thorough compliance
		Procurement activities with an emphasis on environment and society 	Human resource development 	Promotion of diversity

1. Overview of ESG Management

2. Environment (E)

3. Social (S)

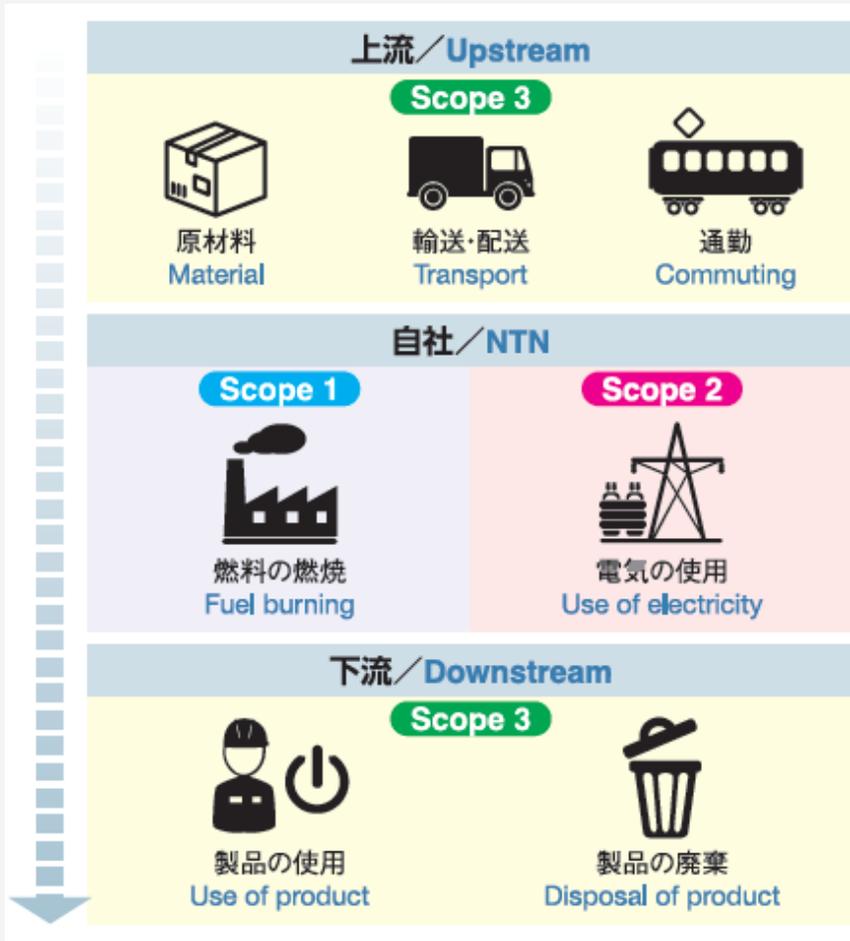
4. Governance (G)

(1) Realize carbon neutrality

Respond to climate change

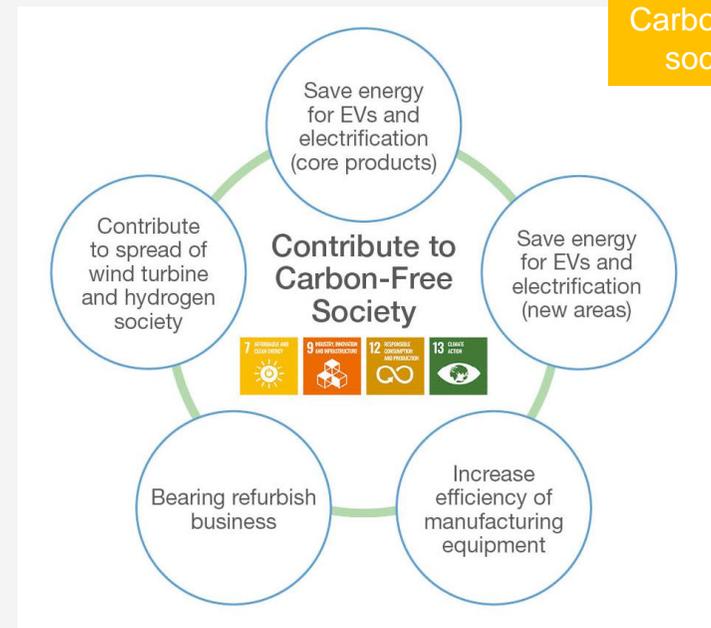


Carbon neutrality



(2) Contribute to carbon-free society

Carbon-free society



(3) Environmental protection

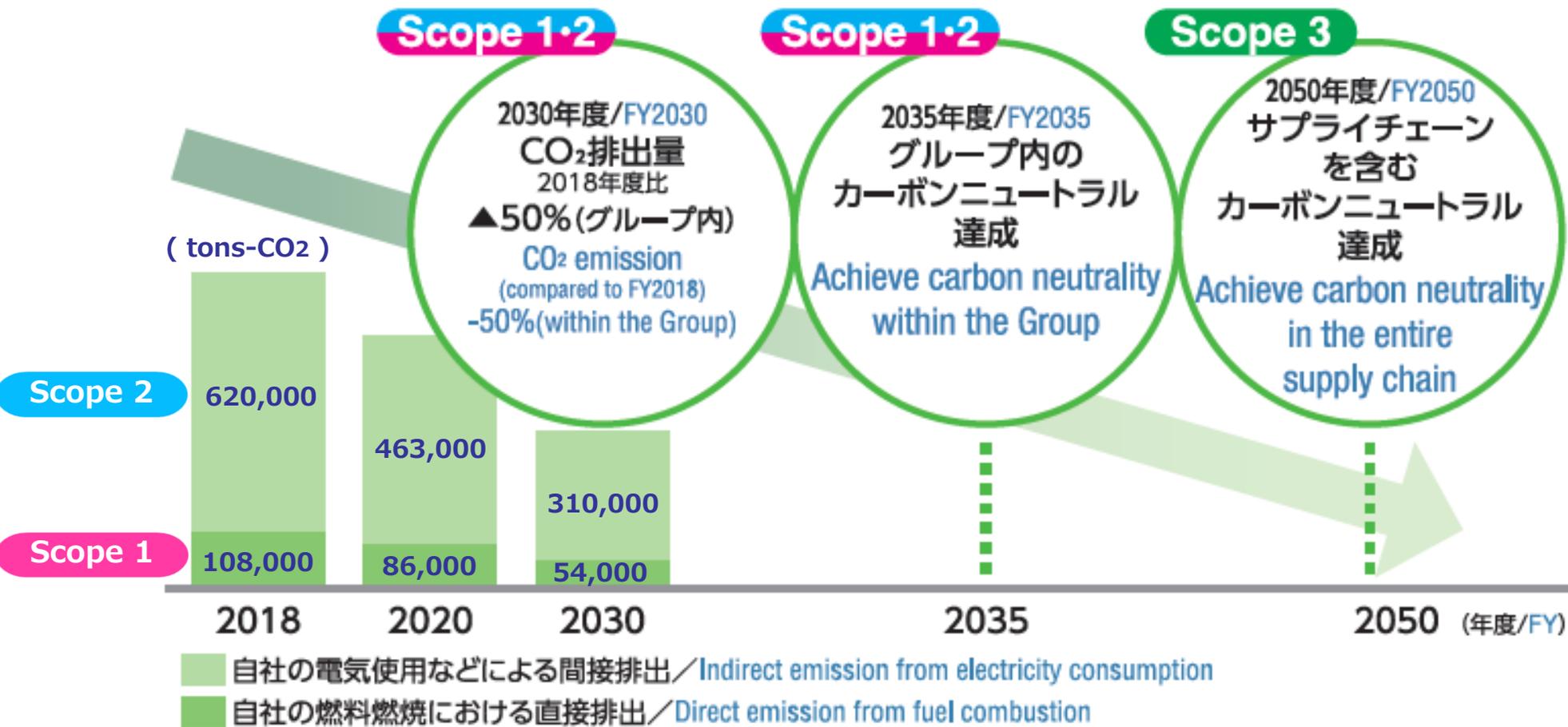
Resource recycling and pollution prevention

Environmental protection



(1)-1 Target for Carbon Neutrality

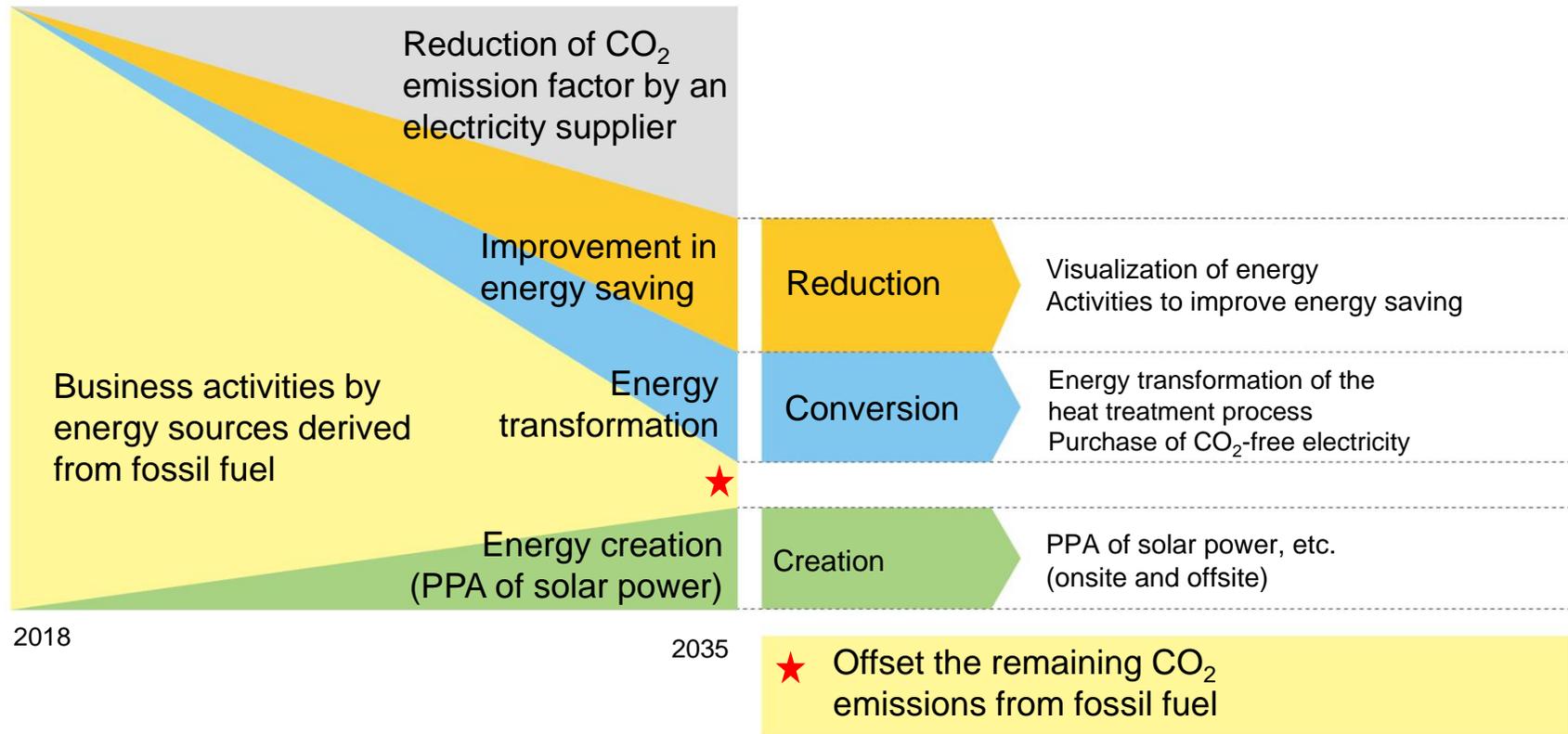
Set target year for achievement for each scope



(1)-2 Carbon Neutrality Realization Image

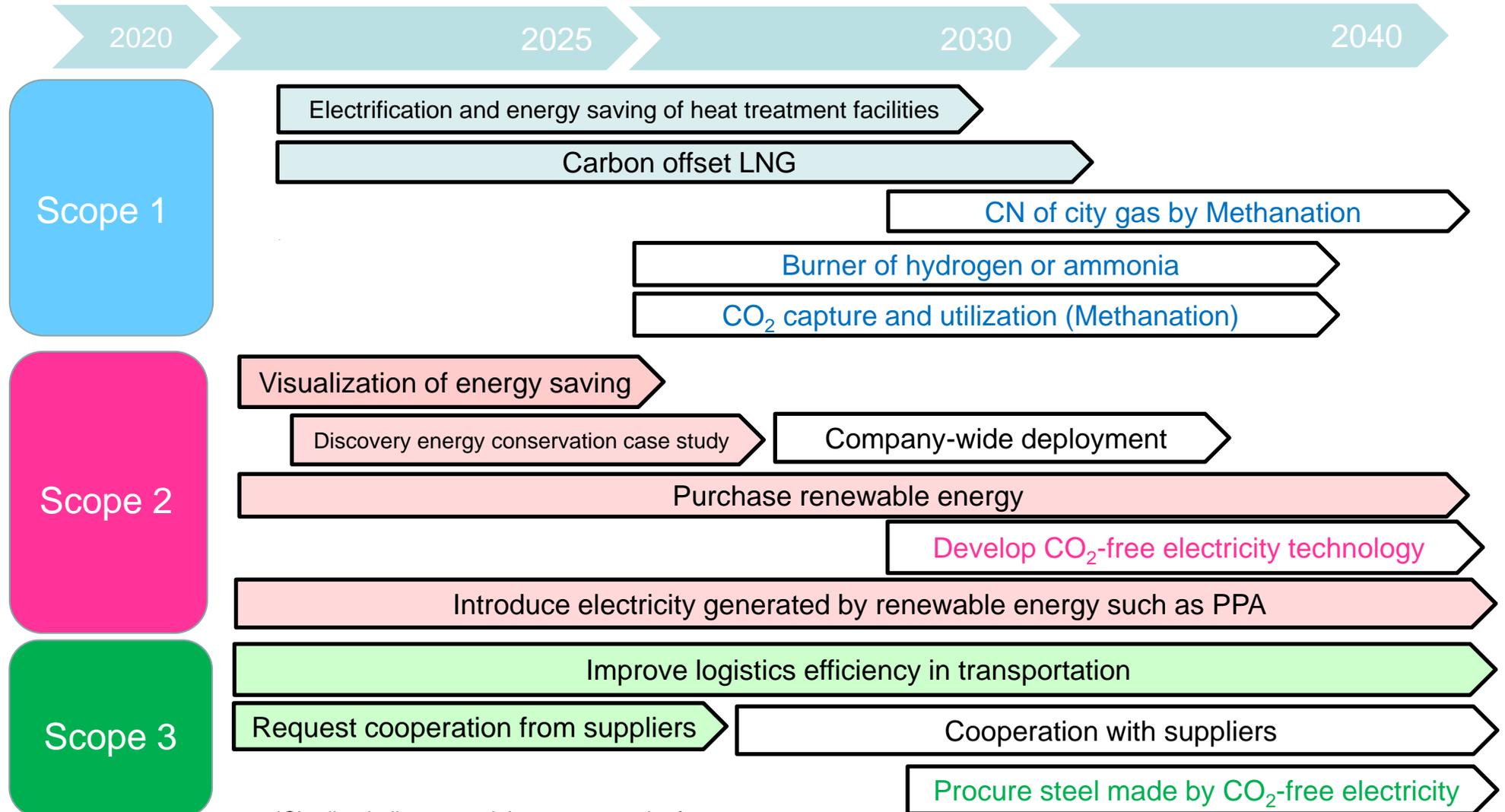
Steadily promote action plan for achieving carbon neutral targets

<Main measures>



(1)-3 Initiatives for Each Scope

Accelerate activities by promoting our own initiatives and collaborating with external parties

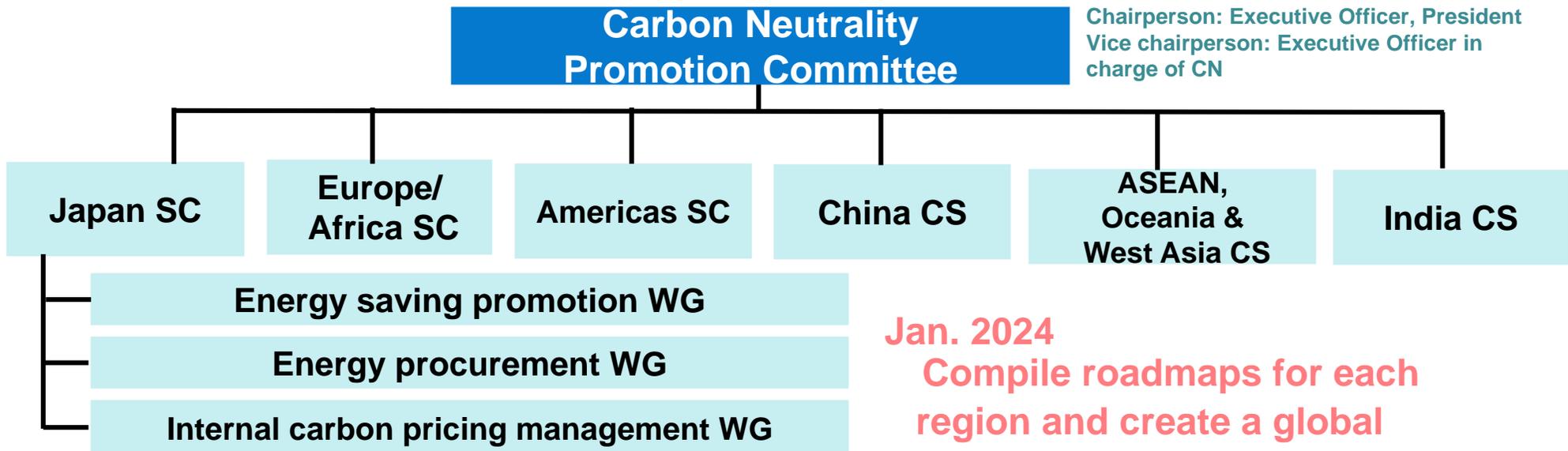


*Shading indicates work in progress; color fonts indicate efforts by external organizations

(1)-4 Promote Activities Globally

Global promotion system for achieving carbon neutral targets

- Dec. 2021 Creation of the roadmap for realizing a “NAMERAKA Society” (Carbon neutral targets for Scope1,2: 2040)
- Jun. 2022 Moving the target forward (Scope1,2: 2035)
- Jul. 2022 Carbon Neutrality Promotion Project launched
- Apr. 2023 **Carbon Neutrality Strategy Promotion Dept.** newly established
- Jul. 2023 **Carbon Neutrality Promotion Committee** and subcommittee newly established
- Oct. 2023 Sign Sustainability Linked Loan Agreement with The Norinchukin Bank



Jan. 2024
Compile roadmaps for each region and create a global roadmap

(1)-5 Initiative for Scope 1

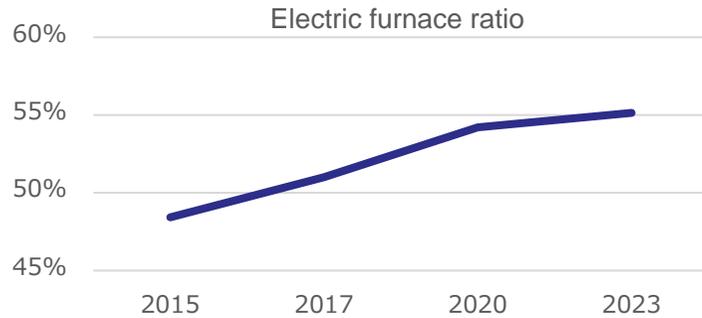
Energy saving and electrification measures for heat treatment equipment

Scope 1

Electrification

Introduce electric furnace

Introduce 100% electric furnace after 2017



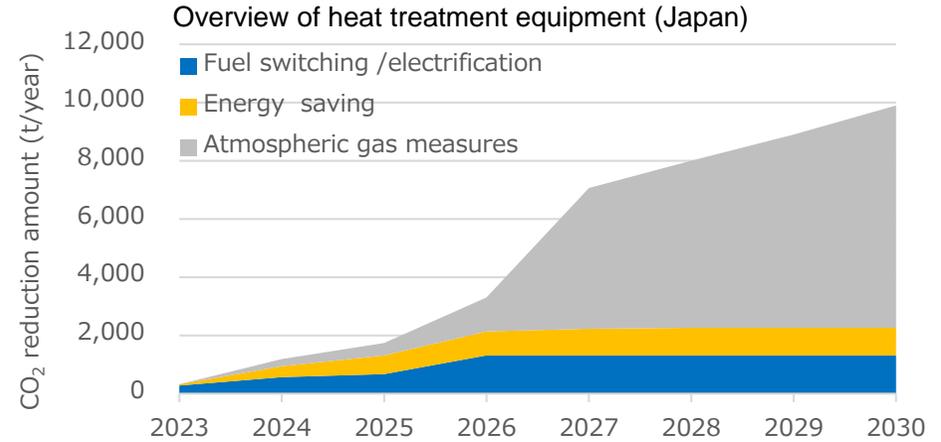
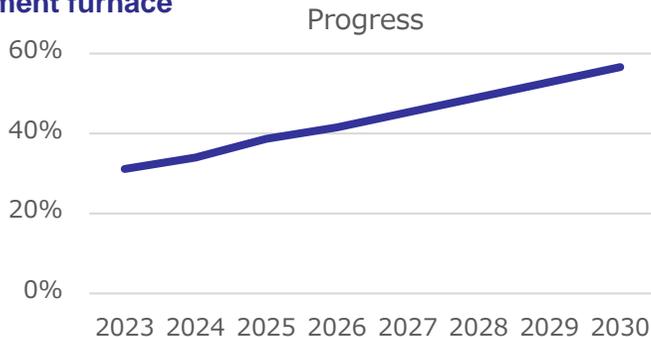
Energy saving

Introduce high-efficiency heat-insulating materials

Switch to insulation materials with low thermal conductivity

Minimize heat loss from the outer wall of the heat treatment furnace

Reduce fuel usage by 10%

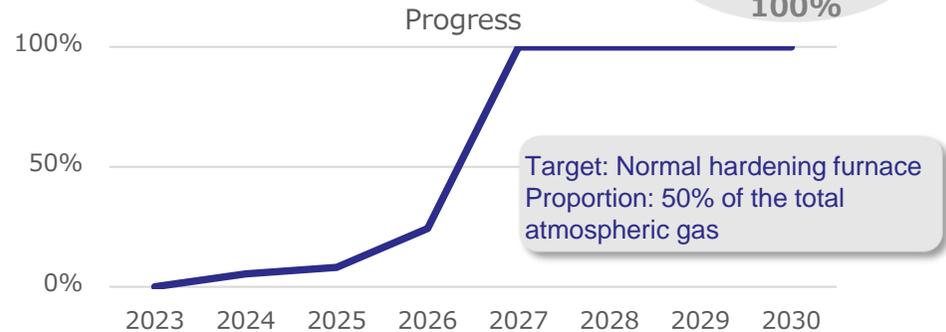


Atmospheric gas

Switch to N₂ atmospheric gas

Switch from hydrocarbon raw material gas to N₂ gas

Reduce CO₂ emission by 100%



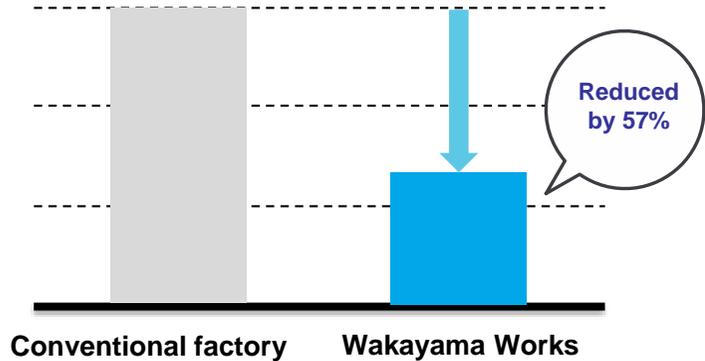
Target: Normal hardening furnace Proportion: 50% of the total atmospheric gas

(1)-6 Initiative for Scope 1, 2

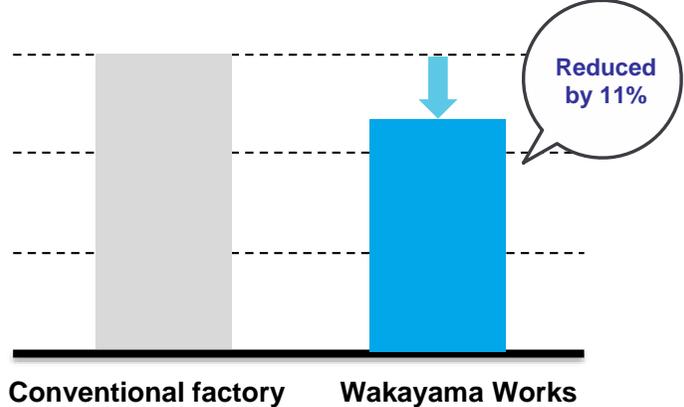
Case of Wakayama Works that completion ceremony was held in October 2023

- Energy saving and electrification of heat treatment equipment

Reduced liquefied petroleum gas (LPG) consumption by adopting an electric heat treatment furnace



Reduced power consumption by using high-efficiency insulation material on the outer wall of the heat treatment furnace



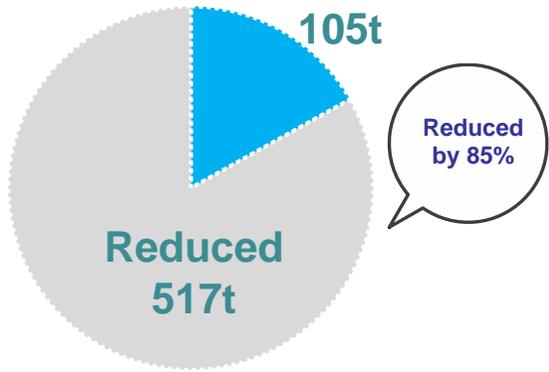
Scope 1

Scope 2



Wakayama Works

- Introduce CO₂-free electricity



Monthly CO₂ emissions

- Utilize natural energy power generation



N³ N-CUBE



NTN Green Power Station



Solar panel (plan)

(1)-7 Initiative for Scope 2

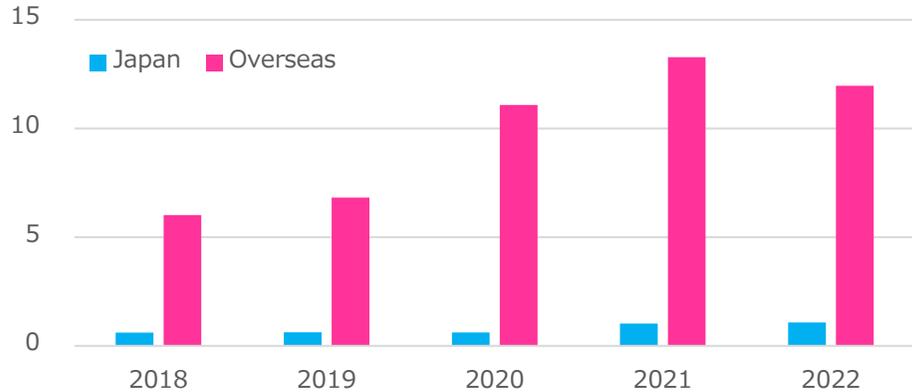
Introduce natural energy power generation and promote CO₂-free electricity purchase

Scope 2

● Accelerate introduction in Japan and overseas

(million kWh)

Trends in natural energy generation



<Examples of sites introducing solar panels>



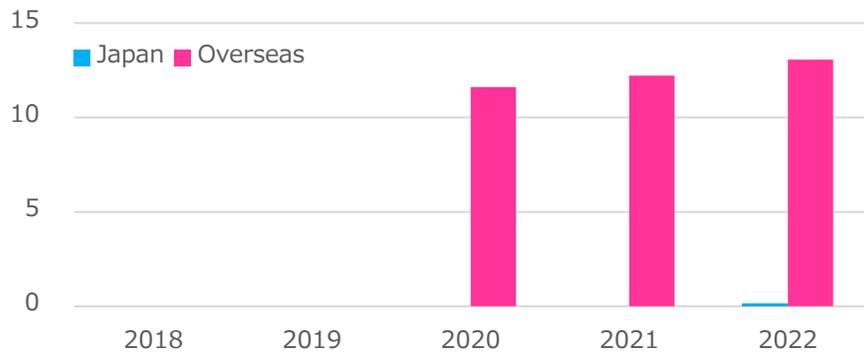
NTN Mie Corp.
(from Apr. 2023)



NTN BEARING-SINGAPORE (PTE)LTD.
(from May. 2023)

(million kWh)

Trends in CO₂-free electricity purchase



NTN MANUFACTURING DE MEXICO,S.A.DE C.V.
(from Aug. 2023)



NTN BEARING-MALAYSIA SDN.BHD.
(from Jun. 2023)

(1)-8 Initiative for Scope 3

Carbon
neutrality



Collaboration with suppliers and others
Improve logistics efficiency

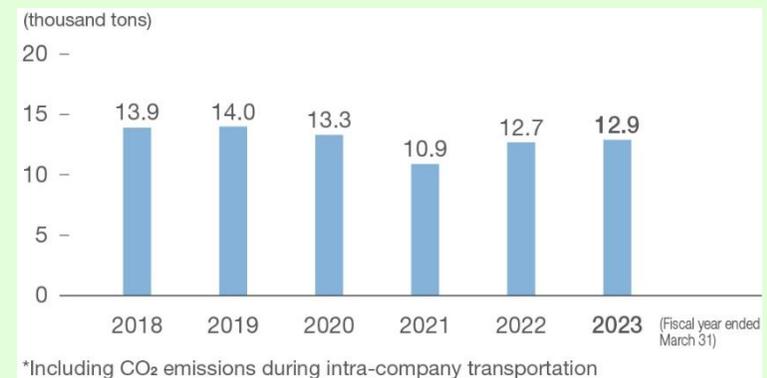
Scope 3

- **Procure steel materials made by CO₂-free electricity**
 - Promote information collection and investigation
- **Require suppliers to commit to carbon neutrality**
 - Share background and targets of carbon neutrality
 - Introduce examples of energy saving
 - Plan to periodically survey CO₂ emission data and status of energy saving efforts



- **Improve efficiency during transportation**
 - Shorten transportation distance by optimizing distribution routes
 - Increase the loading ratio by expanding the use of module outer boxes
 - Reduce the number of containers by increasing the loading ratio of export containers
 - Reuse and recycle (repair) of wooden pallets

<CO₂ emissions in logistics (Japan)>



(2)-1 Energy Conservation through Products

Carbon-free society



Provide products that minimize energy loss

Low Torque



モノづくり
部品大賞
2018 'CHO' MONODZUKURI Innovative Parts and Components Awards, Mobility Components Award

“Ultra-low Friction Sealed Ball Bearing”
Reduce rotation torque by 80% compared to conventional product



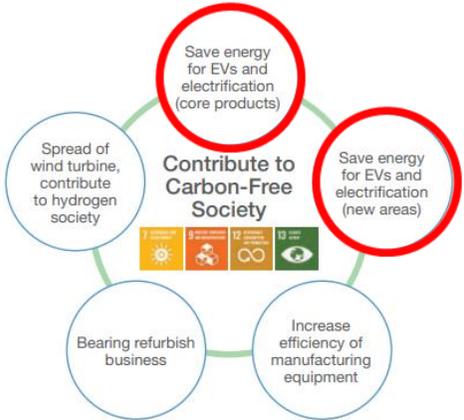
モノづくり
部品大賞
2020 'CHO' MONODZUKURI Innovative Parts and Components Awards, Mobility Components Award

“Low Friction Hub Bearing III”
Reduce rotational friction during driving by 62%



モノづくり
部品大賞
2022 'CHO' MONODZUKURI Innovative Parts and Components Awards, Grand Award

High Efficiency Fixed Type CVJ “CFJ”
Reduce torque loss rate by 50%



Compact & lightweight



Compact Lightweight Rear Driveshaft “R Series”

- **World’s smallest and lightest rear CVJ product**
Reduce weight by 30% compared to conventional product
Reduce outer ring outer diameter by 3~5%
- **Expanding sales since the start of mass production in 2018**
Adopted for BEVs for European premium brands

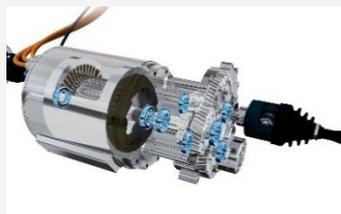
⇒ **Contributing to a sustainable society through energy conservation by automotive axle and power/drive train products**

(2)-2 Contributing to Expansion of Next-generation Mobility

Shift to value-added product creation

EV & Electrification

● Respond to various technology trends of e-Axle



e-Axle, increasing speed of drive motors due to demand for high output and downsizing



High speed

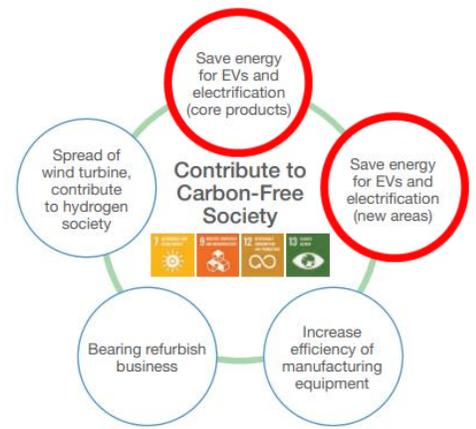
High Speed Deep Groove Ball Bearing for EVs and HEVs

モノづくり
部品大賞
2021 'CHO'
MONODZUKURI
Innovative Parts and
Components Award,
Nippon Brand Award



Compact & lightweight

CreepLess Bearing



● Energy saving for EVs by module products with multi-functions

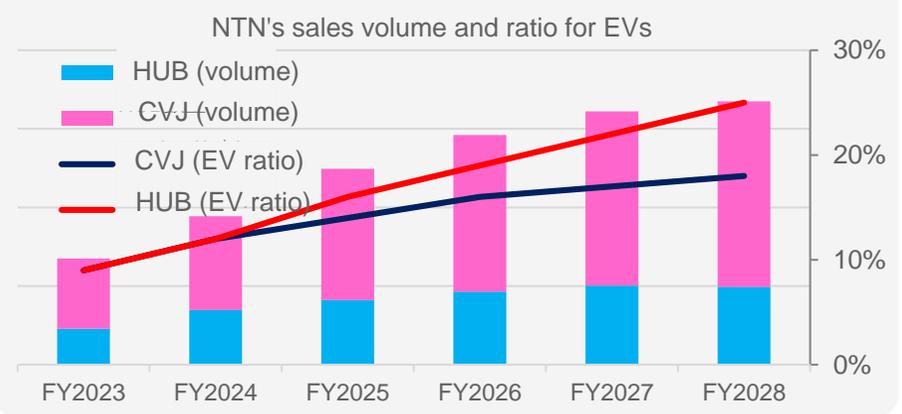


eHUB

sHUB

Ra-sHUB

● HUB and CVJ are increasingly adopted for BEVs



⇒ Lead to sustainable growth for NTN

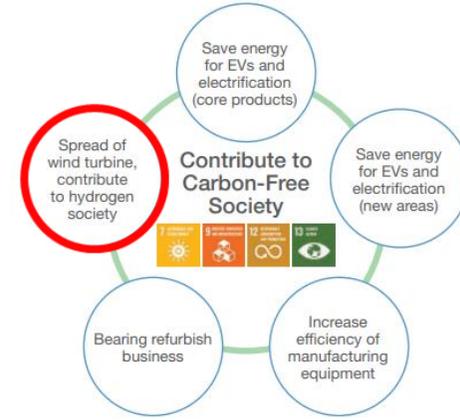
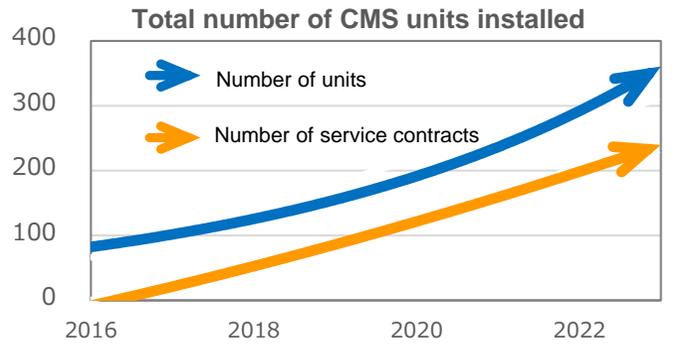
Promote the use of alternative energy sources that do not emit CO₂

● Wind turbine

Provide products that support the rotation of power generation equipment and services through condition monitoring



Condition monitoring system

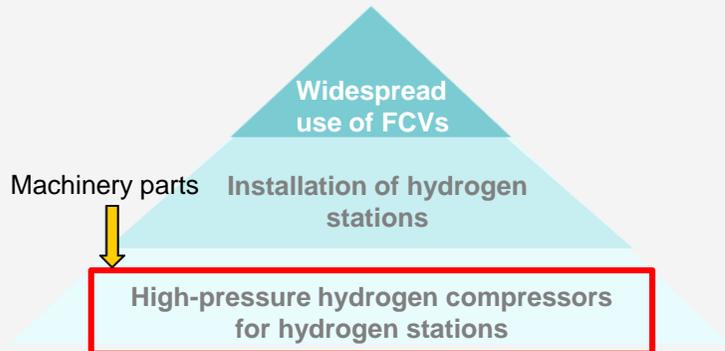


● Hydrogen

Supporting technology development to “produce”, “transport”, “storage” and “use”

【Example 1】

Development of product for application



【Example 2】

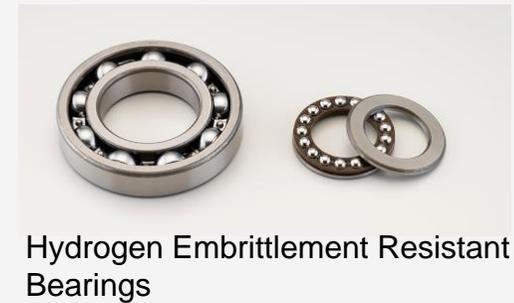
Starting sample prototyping and delivery of Hydrogen Embrittlement Resistant Bearings

【Example 3】

Resin products have been adapted as sealing components for hydrogen environment

【Example 4】

Project for development of basic technology for low-cost and advanced hydrogen stations that NTN participates in adopted as NEDO public offering project (Collaboration with industry and academia)



Hydrogen Embrittlement Resistant Bearings

(2)-4 Improve Utilization of Manufacturing Equipment

Carbon-free society



Contribute to further long operating life by the technology that makes products last longer and maintenance through condition monitoring

Sustain



Maintain

● Longer product operating life

Contribute to further long operating life by special heat treatment, low-torque lubricants and other technologies



"ETFA Bearing" realizing more than 6 times longer operating life (comparing to conventional product)



● Technology not to stop operation

Contribute to appropriate maintenance by CMS and services for each use

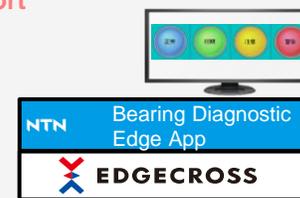


"Wind Doctor™" for wind turbine



"NTN Portable Vibroscope"

Started diagnostic report business (from Mar. 2023)



Bearing Diagnostic Edge Application



"Talking Bearing™"



2023 'CHO' MONODZUKURI Innovative Parts and Components Awards, Machinery & Robot Component Award

(2)-5 Contributing to Realize Recycling Society

Carbon-free society



Reduce environmental impact through bearing refurbish

Sustain



Maintain

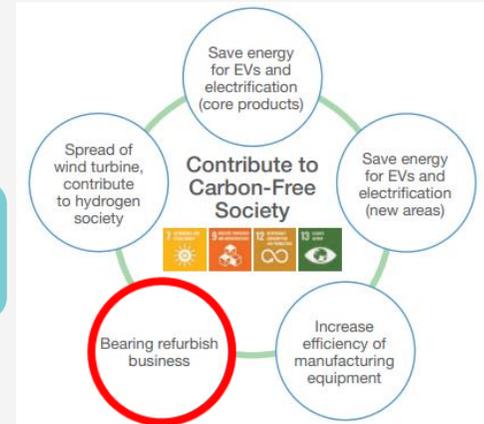
● Extension of bearing operating life

Reconditioning based on technical know-how before a failure occurs

Customer

Cost reduction

Shorter lead times for purchase



● Sustainable use of natural resources

Reduce environmental impact through efficient use of limited resources

Environment

Reduce CO₂ emission and manufacturing energy

Reduce use of steel material



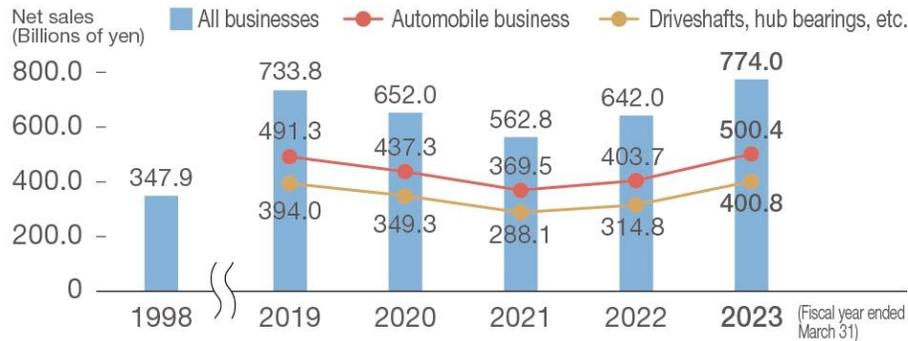
Extra-large sized spherical bearing for paper mill application

(2)-6 Indexing the Contribution to Decarbonization

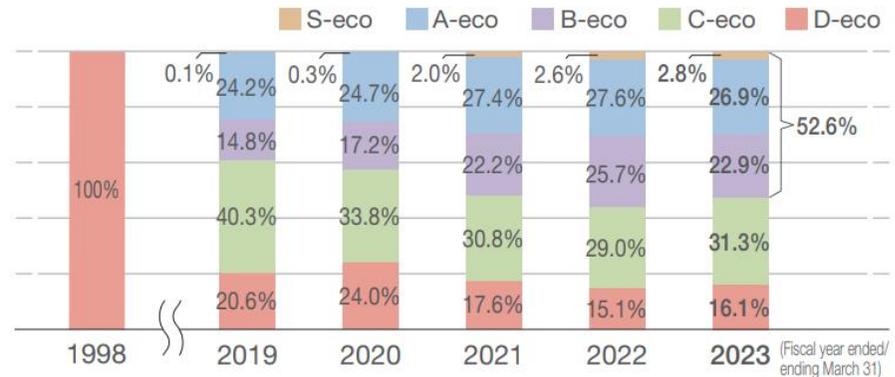
Promote development of products with higher grades of environmental contribution

● **Targets** Driveshafts, hub bearings, green energy products

● **Trend in net sales**

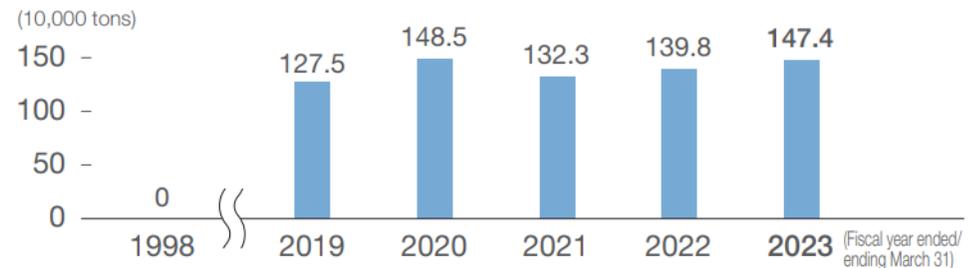


● **Trend in composition of environment-contributing products by grade**



● **Contribution to CO₂ reduction**

Contributes to annual reduction of approximately **1.5 million tons** (comparing to 1998)



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

(3) Biodiversity Preservation

Environmental contribution to the community



Explained about preservation activities at Mt. Tado as part of SDGs education of local junior high school



Nagano Works presented with "CO₂ Absorption Certificate"

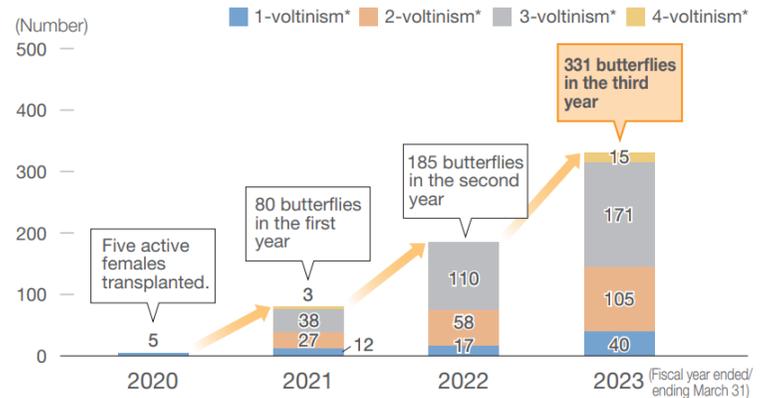


Clean activity by NTN BOWER located in USA

Conservation activities for the endangered Reverdin's Blue



Conduct protection activities in Nagano Works based on the partnership agreement signed with Nagano Prefecture



1. Overview of ESG Management

2. Environment (E)

3. Social (S)

4. Governance (G)

Build relationships of trust with business partners

- Promote green procurement (from Mar. 2007)
- Request active promotion of CSR activities (From Apr. 2016)
- Formulate a Procurement Policy corresponding to SDGs (Apr. 2021)
- Announcement of our Declaration of Partnership Building (Jun. 2022)

Strengthen information security

- Establish the Basic Policy of Information Security (Oct. 2022)
- Start a cross-department emergency system NTN-CSIRT* (Apr. 2023)
※Computer Security Incident Response Team
- Revision of information security management regulations, etc. (Apr. 2023)

Strengthen Resilience for Disaster

Independent power supply generated by 100% renewable energy
 Adoption increase as storage facilities in preparation for natural disasters and infrastructure equipment etc.



Waiting room at a bus stop



Disaster prevention warehouse



N³ N-CUBE



Independent power supply for flood prevention center

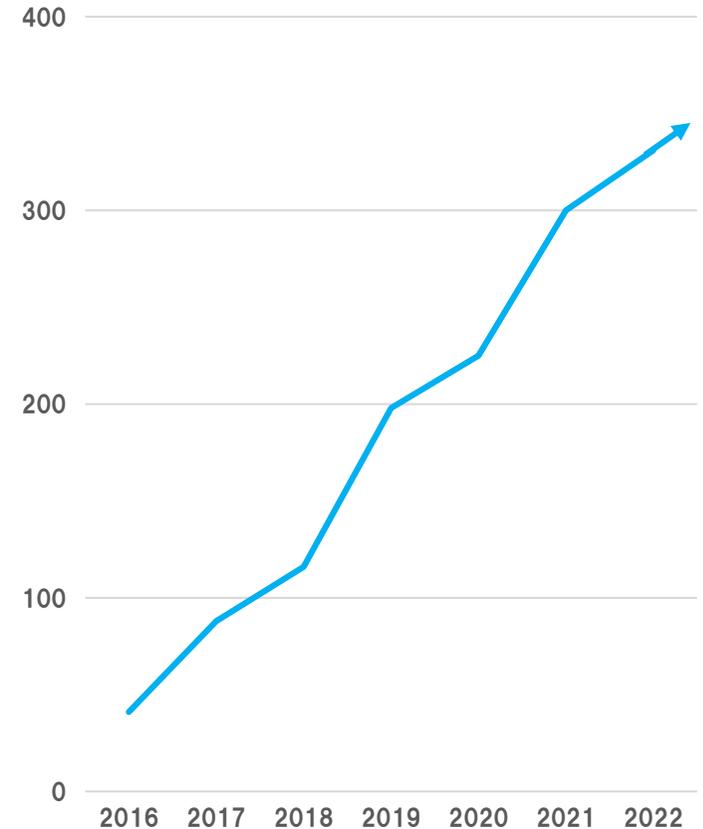


Eco toilets equipped with circulation type flush toilet



Model for exhibition that adds a vending machine to the charging station model

● Cumulative installed number of green energy products



Promote ESG Management across NTN Group

Prosperous
human
development



New system from 2022 to encourage ESG activities by employees “NTN PROUD AWARD” – the first global convention was held



Teams from around the world made presentations and shared their efforts online



Q&A session by judges including President Ukai

➔ Recognize the links between ESG and own works, and work to solve issues across the Group

Dialog through Town Hall Meetings

President and Executive Officers visit region/department in charge to explain company policy and exchange opinions face to face with employees



Osaka HQ. region



Americas region



Europe region



Iwata region



China region



ASEAN region

→ Lead the company policy to root globally, enhance employee engagement, and improve management

Develop the system and foster a corporate culture for utilization



Childcare leave system from 1992 (143 persons/FY2022)

Child nursing holiday since before 2000 (103 days/FY2022)

Shortened working hours for childcare from 2010 (49 persons/FY2022)

Child-raising support declaration from 2010 (49 persons/FY2022)

Mom-back system from 2006 (approx. 2 persons registered/year)

NTN job return system from 2018 (approx. 6 persons registered/year)

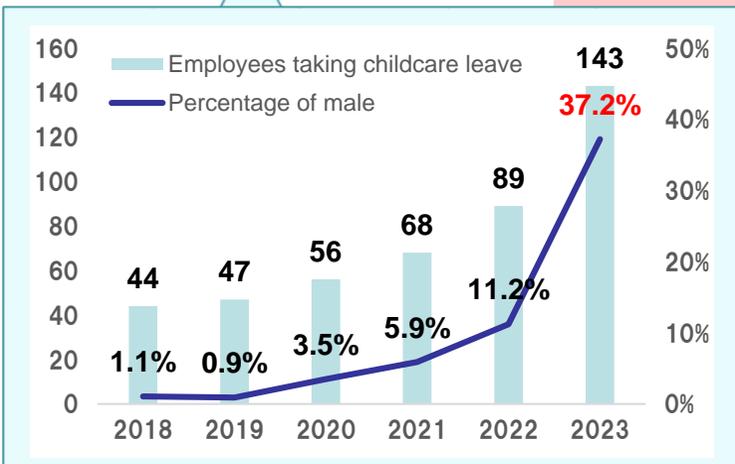
Babysitter childcare support system from 2008 (approx. 1 person/year)

Intra-company child daycare center from 2009 (approx. 30 persons/year)

Town hall meeting from 2021

Round-table discussion From 2023

[Issue] Promote childcare leave for men
[Measure] Papa seminars (from 2019)



→ **Recognize issues for promotion and take measures to resolve them**

Women's bib partner for World Athletics

Prosperous
human
development

NTN

Part of responding to diversity as a social contribution to improve corporate value



■ Our partnership with World Athletics

Event name	Event date	Location
World Athletics Championships	August 19-27, 2023	Budapest, Hungary
World Athletics Road Running Championships	October 1, 2023	Riga, Latvia
World Athletics Cross Country Championships	March 30, 2024	Belgrade, Serbia
World Athletics Indoor Championships	March 1-3, 2024	Glasgow, UK
World Athletics Race Walking Team Championships	April 21, 2024	Antalya, Turkey
World Athletics Relays	May 4-5, 2024	Bahamas
World Athletics U20 Championships	August 26 - 31, 2024	Lima, Peru

1. Overview of ESG Management

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Build a sense of unity to ensure achievement of the next Medium-term Management Plan



A total of approx. 220 of management executives including online participants gathered all at once



Discussion on key measures by team beyond the boundaries of regions and functions



Issues to achieve the measures were shared at overall presentation and discussion



Ceremony for ESG company award "NTN PROUD AWARD"

→ Lead to transform mindset/actions aimed at improving corporate value

Localization of Management Personnel

Global HQ. formulates management policy and local managements play an active role in overseas business operation

(as of end of Mar. 2023)

Region	Management personnel	Male	Female	Total
		%	%	%
Americas	Managers	85%	15%	
	of which local	83%	100%	85%
Europe	Managers	77%	23%	
	of which local	96%	99%	96%
ASEAN	Managers	79%	21%	
	of which local	83%	100%	86%
China	Managers	80%	20%	
	of which local	83%	100%	86%
Overseas	Managers	79%	21%	
	of which local	89.5%	99.7%	92%
Japan	Managers	96%	4%	
	of which foreign nationality	0.5%	0%	0.4%
Global	Managers	85.3%	14.7%	100%

* Percentage for "of which local" and "of which foreign nationality" shows ratio of local or foreign managers in all managers

Strengthen Corporate Governance

● Support system for Outside Directors

<Issue> Information gap between execution/supervision organization

<Measure> Strengthen information sharing with Outside Directors

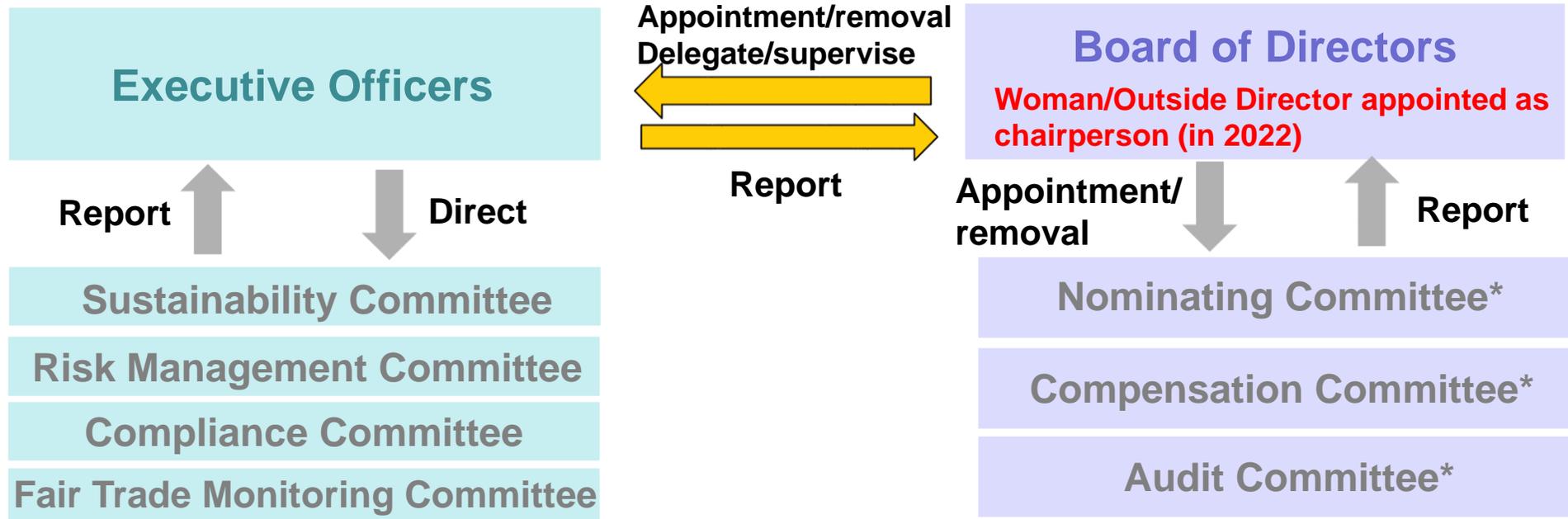
● Sustainability promotion system

Risks/opportunities and its initiatives are deliberated/confirmed by the Sustainability Committee and reported to the Board of Directors as necessary

● Human development

Selection of executive officer candidates

Enhancement of various training programs



* Each chairperson is Outside Director

DRIVE

Digitalization Resources Innovation Variable cost reformation Efficiency improvement

NTN 100 Phase 2



NTN

Make the world **NAMERAKA**

Digitalization, Resources, Innovation, Variable cost reformation, Efficiency improvement NTN Transformation for New 100years

- 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.