

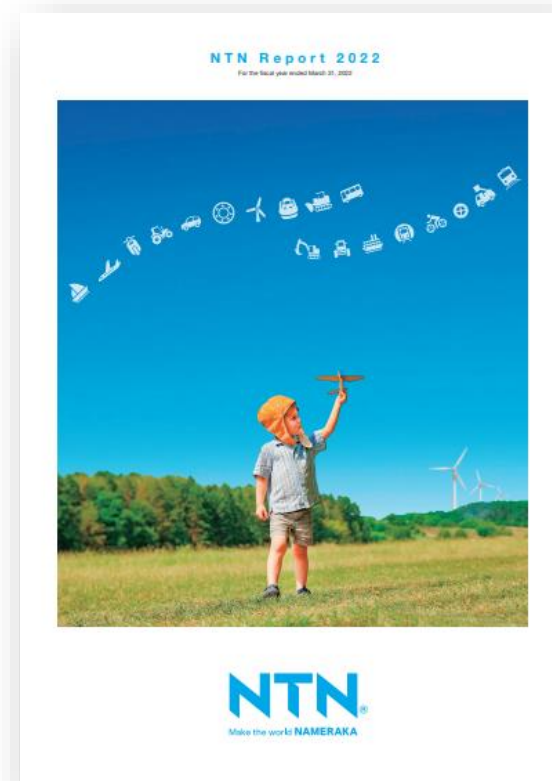
NTN CORPORATION ESG Meeting



Make the world **NAMERAKA**

December 14, 2022

NTN CORPORATION



Attendees

Eiichi Ukai

Representative Executive Officer, President, Executive Officer, CEO

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.

Masaaki Yamamoto

Executive Officer

ESG Promotion Dept.

Masayuki Yamazaki

Project Leader, Carbon Neutrality Promotion Project

1. Overview of ESG Management

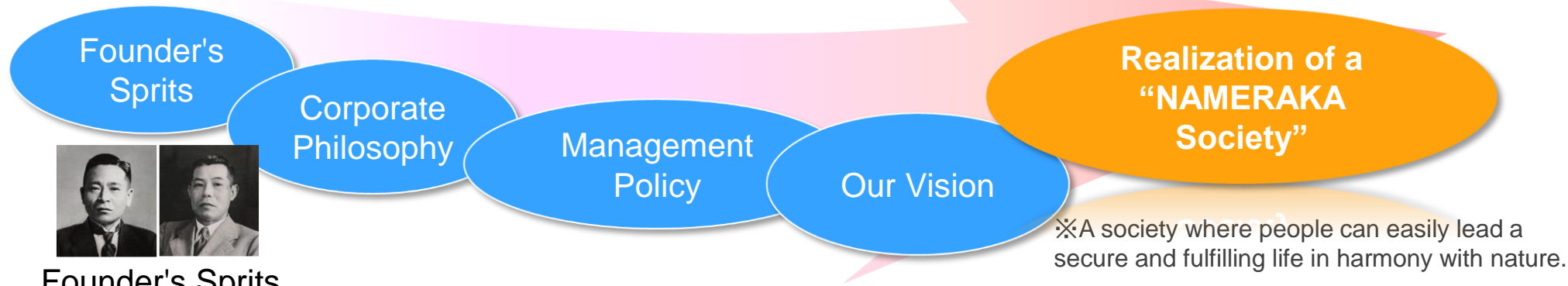
2. Environment (E)

3. Social (S)

4. Governance (G)

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.



Founder's Sprits

The Frontier Spirit

The Coexistence and Co-prosperity Sprits

Corporate Philosophy:

We shall contribute to international society (Frontier Spirit)

through creating new technologies and developing new products

(Coexistence and Co-prosperity Sprits)

Toward the Realization of a “NAMERAKA Society”

Identify materiality responding to SDGs

Promote ESG Management



Roadmap for Realizing a "NAMERAKA Society"

Prioritized issues and foundations, organized into two frameworks

Set KPI and targets for materiality items

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

| ESG issues | | Materiality | KPIs and Targets (excerpt) |
|-------------|---------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environment | Realize carbon neutrality | Respond to climate change | Scope1,2 ⇒ Carbon neutrality by FY2035 Scope3 ⇒ Carbon neutrality by FY2050 |
| | Contribute to carbon-free society | Realize a sustainable society using natural energy | Development related to products and services that contribute to the stable operation of wind turbines ⇒ Completion of development themes |
| | | Reduce energy loss | Development related to low friction, miniaturization and weight reduction of products for automobiles and industrial machinery ⇒ Completion of development themes |
| Social | Contribute to prosperous lives | Provide safety and comfort | Raise awareness of independent power supply units and implement proposal activities for disaster mitigation and disaster |

Please refer to NTN Report 2022 [\(Link\)](#) 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 | Human resource development | Thorough compliance |
| | | Procurement activities with an emphasis on environment and society | Respect for human rights | Promotion of diversity | Strengthen governance |

Realization of a "NAMERAKA Society"

1. Overview of ESG Management

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Basics as a manufacturer



Carbon neutrality

Reduce CO₂ emissions in procurement/production

- Reduce CO₂ emissions generated by heat treatment facilities
- Reduce CO₂ emissions associated with electricity usage
- Reduce CO₂ emissions generated by suppliers
- Introduce and utilize internal carbon pricing

Scope1

Scope2

Scope3

Scope1,2,3

Carbon-free society

- Automobiles
(EV, electrification)
- Various industries
Wind turbines
Manufacturing facilities
etc.

Establishment of system capable of performing

In 2021

May: Express our support of TCFD recommendations

December: Creation of the roadmap

In 2022

May: Decision on target year for achieving carbon neutrality



July: **Carbon Neutrality Promotion Project** launched

September: Working Team for Carbon Neutral Heat Treatment Process launched

November : Start of briefings for domestic and overseas NTN Group employees to achieve the targets

Planning and promotion of measures to reduce CO₂

Purpose

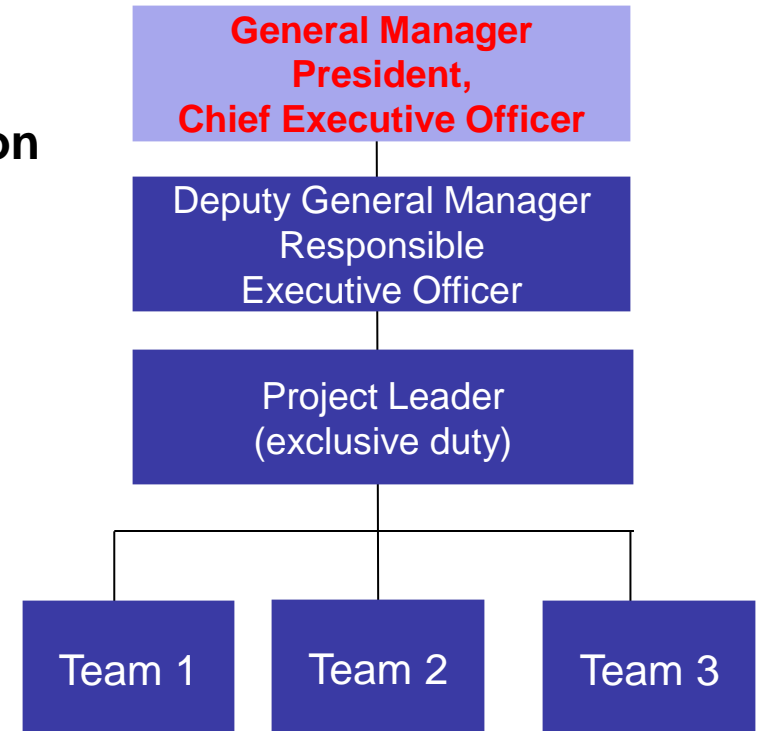
- ◆ Promote action plan for carbon neutrality
 - 1) Visualize electric power at production plants and improve energy conservation
 - 2) Promote introduction of natural energy generation and purchase of renewable electricity
 - 3) Introduce internal carbon pricing
- ◆ Establish a specialized organization

Activity period

From July 1, 2022 to March 31, 2023

System

A total of approximately 30 members from both domestic and overseas



Project Activities -2

Promote globally simultaneously

Action plan

| Item | Jul. 2022 | Aug. 2022 | Sep. 2022 | From Oct. 2022 to Mar. 2023 |
|--------------------------------------|-----------|-----------|-----------|-----------------------------|
| Visualize power consumption | | | | |
| Establish measuring methods | | | | |
| Actual measurement | | | | |
| Purchase renewable energy | | | | |
| Overseas business sites | | | | |
| Domestic business sites | | | | |
| Internal carbon pricing | | | | |
| Establish a specialized organization | | | | |

Basics as a manufacturer



Carbon neutrality

Reduce CO₂ emissions in procurement/production

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- Introduce and utilize internal carbon pricing

Scope1

Scope2

Scope3

Scope1,2,3

Carbon-free society

- Automobiles
(EV, electrification)
- Various industries
Wind turbines
Manufacturing facilities
etc.

Automotive Contribute to EVs and electrification

Impact on our business: Increase average sales price per car and improved profitability through higher functionality

Demand for engines and T/M disappears
High-performance motor bearings added

Achieved industry-leading high-speed rotation (dmn: 2.2 million)
 Deep groove ball bearings for EV · HEV
 Contributing to the enhancement of e-Axle functions



Higher functionality (lower torque loss, light weight, high rigidity and low vibration), upsizing and shifting to AWD (increase in the number of units used)

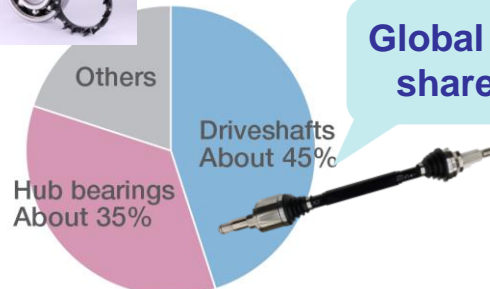
Global market share: No.2



Received the 2022 Grand Prize

Mass production start of high efficiency CFJ
 Contributing to response to fuel efficiency regulations

Global market share: No.1



Composition of automotive sales

No change in the number of units used (4 units)
High functionality (low friction, lighter weight, high speed)



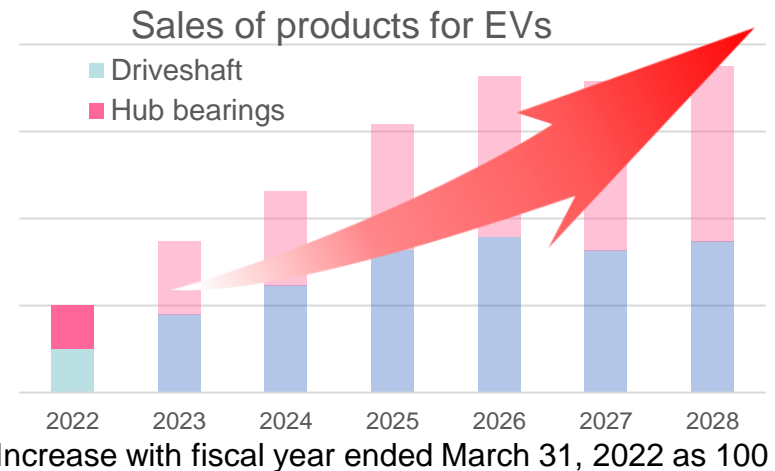
eHUB



sHUB



Ra-sHUB



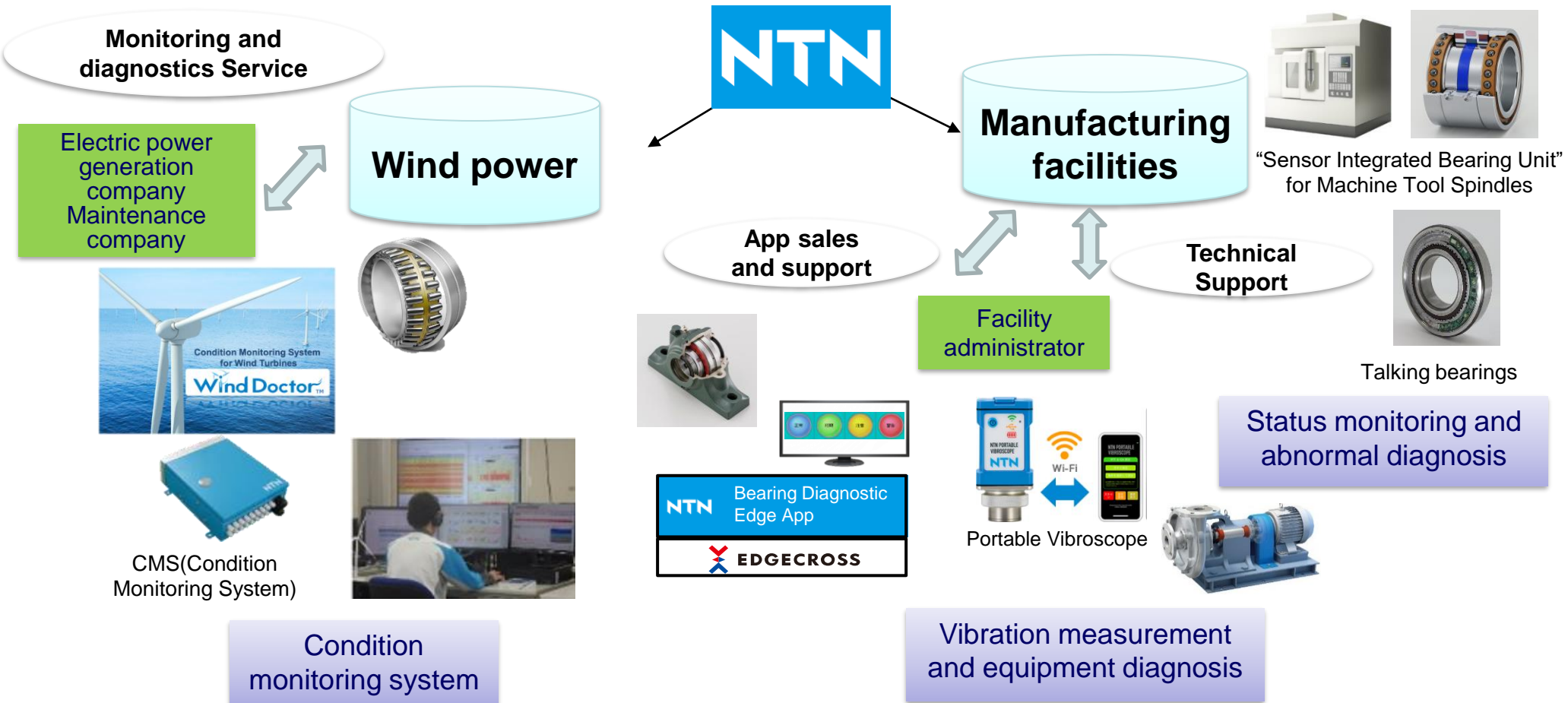
Expanded collaboration with automakers for commercialization

Various industries

Contribute to more efficient energy use

Energy loss occurs when the machine stops

⇒ Control facility downtime by detecting abnormal conditions through **condition monitoring** according to application



Various industries



For wind turbine

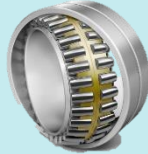
<Market Environment>

- Expansion of wind turbines in line with the switch to renewable energy
- Increasing the size to secure the amount of power generated per unit
- Introduction of large-scale offshore wind turbines in Japan

⇒ **Contribute to stable operation and widespread use of wind turbines with hardware and software**

Hardware

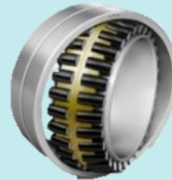
Improved service life under load distribution such as wind



Cross section

Asymmetrical Spherical Roller Bearings

Improved wear resistance by applying special coating



DLC Coating Spherical Roller Bearing

New Energy Foundation
Chairman Award of
New Energy Award
2021

Participation in NEDO Green Innovation Projects

Supporting national measures for next-generation wind turbine technology development

Software

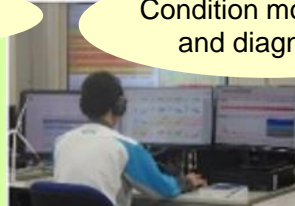
Provide service to monitor the condition of the area around bearings

Data collection and analysis



Status Monitoring System (CMS) Wind Doctor®

Condition monitoring and diagnostic



Equipped in about 300 units
The number of units monitoring: domestic No.1

Collaboration with wind turbine maintenance specialist, Hokutaku Co., Ltd.

Offering aftermarket bearings and maintenance services systematically

Various industries

Increase efficiency of manufacturing equipment

<Needs for decarbonization>

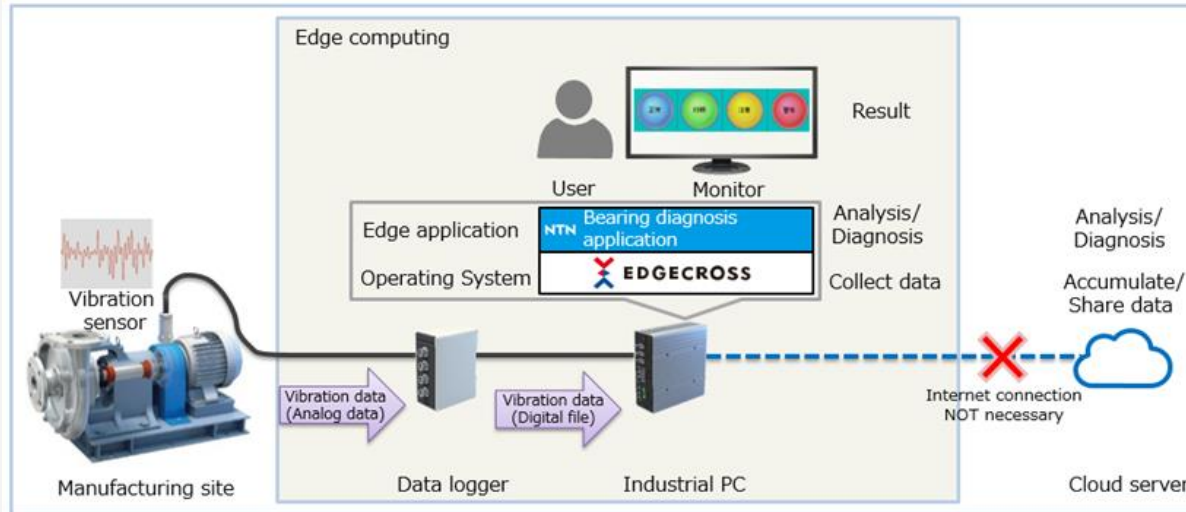
- Reduction of electricity consumption by improving the operating rate of equipments and minimizing downtime
- Reduction of power consumption through energy-saving equipment

⇒ Provide solutions that do not stop machine operation

Provide high-performance that help improve the performance of rotational parts such as motors

Contributing to preventive maintenance by monitoring changes in bearings in real time

■ Simple and quick diagnosis through constant monitoring



Compatible with Edgecross™ industrial IoT platforms
"Bearing Diagnostics Edge Application"

■ Easy diagnose each time



■ Bearing detects/transmits abnormality

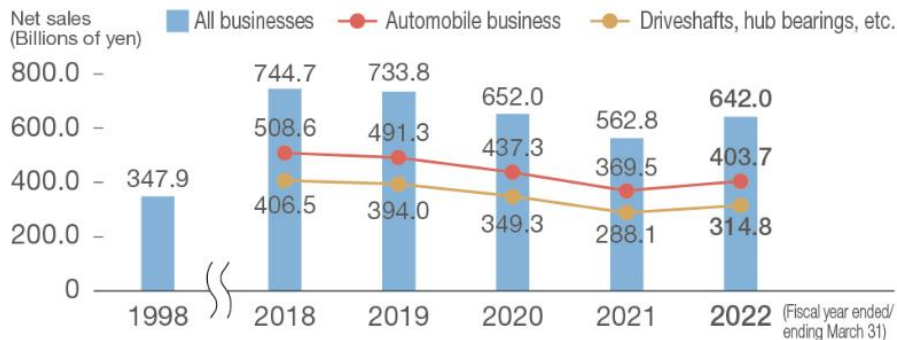


Contribution to decarbonisation

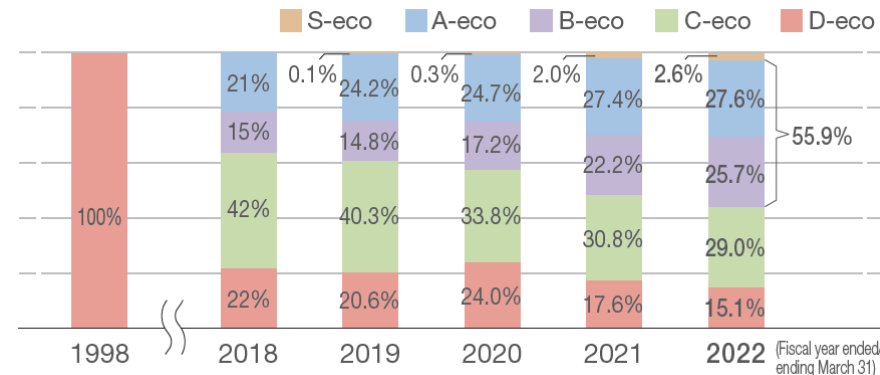
Contributing to environment through main products for automotive business

- The fiscal year ended March 31, 2022: Net sales was 642 billion yen. Sales for driveshafts and hub bearings, which are our main products, account for about 50%
- S to B-eco grade, which contribute significantly to environment, accounts for **55.9%** of total sales (+4.3 percentage points YoY)

<Trends in net sales>

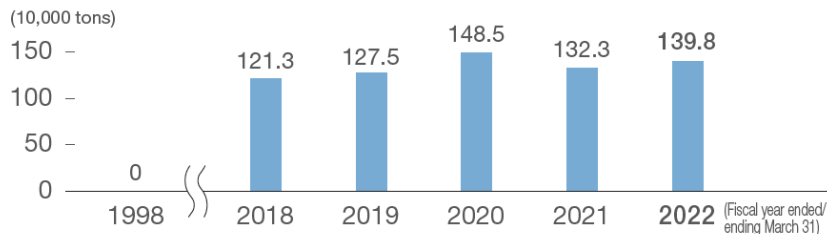


<Trends in composition of environment-contributing product by grade>



- Environment-contributing products help reduce CO₂ by about **1.4 million tons** per year (compared to 1998)

<Contributing to reduced CO₂>



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

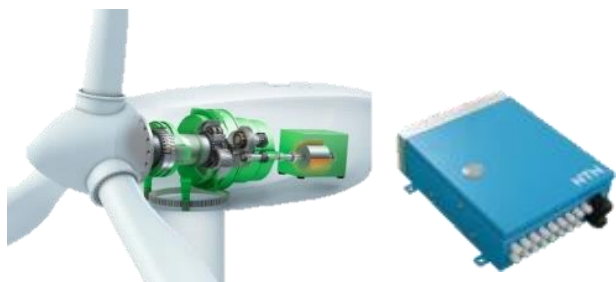
Reduction effect: 2.4 times
 of NTN Group's annual CO₂ emissions
 (Scope 1, 2) from its business activities
 in fiscal year ended March 31, 2022

Contribution to decarbonisation

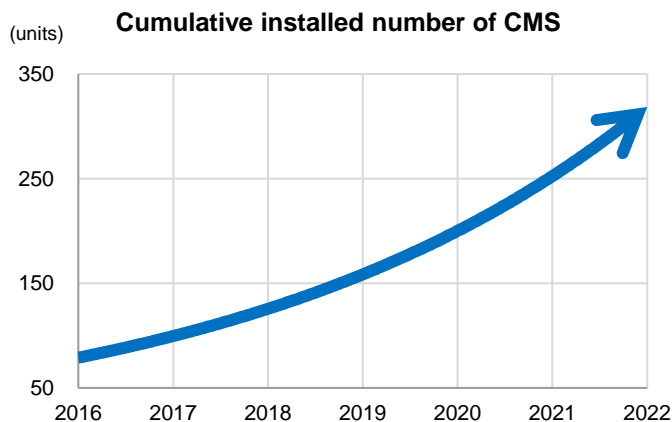
Contributing to environment through main products for industrial machinery

Supports stable wind turbines operation and reduces environmental impact by improving bearing performance

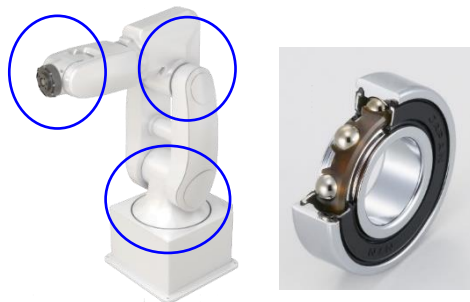
Wind turbines



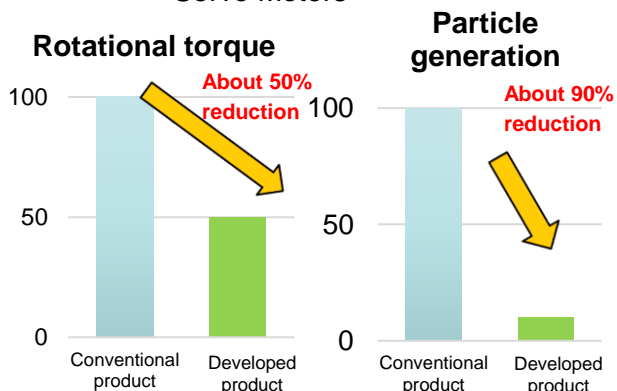
Condition Monitoring System (CMS) Wind Doctor™



Robot



Low Dust Generation Bearing for Servo Motors

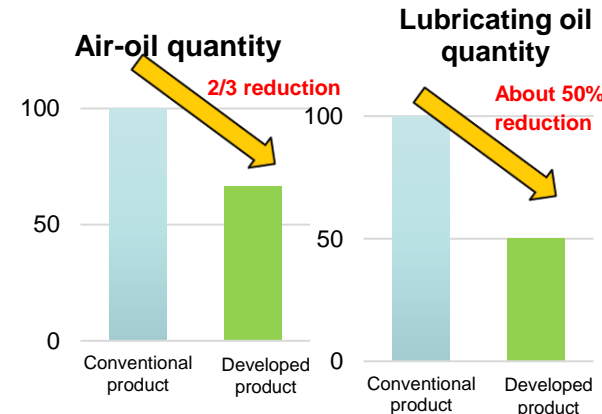


Comparison with conventional product before 2020 as 100

Machine tools



High-speed Angular Contact Ball Bearing with Outer Ring Refueling Hole



Comparison with standard air oil spacer type before 2011 as 100

As for indexing, we participate in GX League's GX Management Promotion Working Group and are currently studying it

1. Overview of ESG Management

2. Environment (E)

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Independent power supply that does not emit CO₂, power supply during power outages, disaster prevention warehouses, and lighting in evacuation centers



Adopted as an independent power supply for the Flood Prevention Center (Yoshida Town, Shizuoka Prefecture)

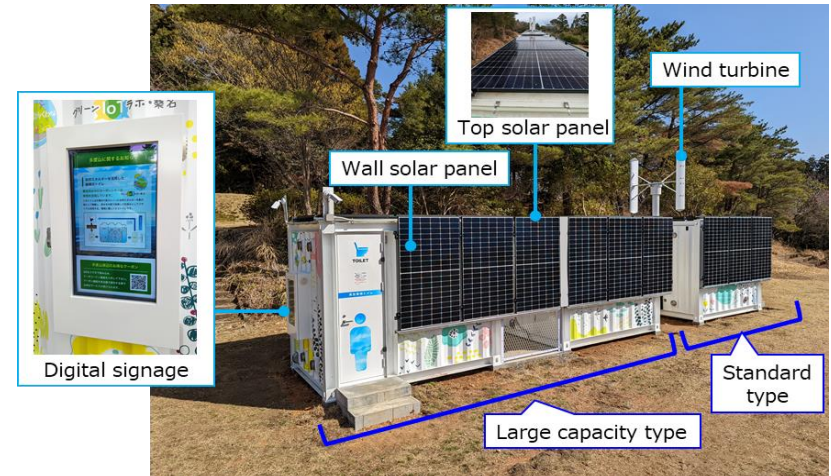


Functioned as an emergency power supply in the event of a large-scale power outage due to the earthquake in 2018 (Shiraoi-cho, Shiraoi-gun, Hokkaido)

Strengthen regional resilience in cooperation with local governments



Adopted as an emergency power supply and temperature-controlled storage for disaster prevention base facilities (Kuwana city, Mie Prefecture)



Adopted as eco toilet for Tado Sanjyo Park (Kuwana city, Mie Prefecture)

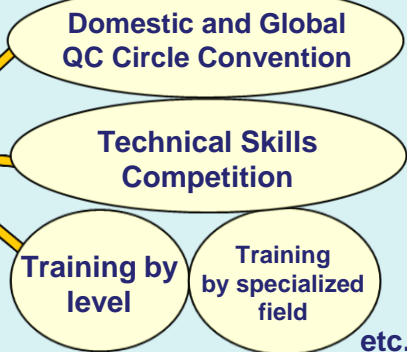
Emphasize public interest capitalism and human capital "company is its people"



- “Enriching human resources” aimed at realizing a “NAMERAKA Society”
- Development of human resources capable of achieving business objectives and quickly responding to changes in the business environment
- To foster a culture of learning and cultivation in the workplace
- Human resources who are competent in the international community
- Human resources who are independent as individuals
- Human resources with creativity

Activities

Human resource development program
(Prepared every fiscal year)



More than 80 on-line and face-to-face training sessions per year based on human resource development program



New NTN Next Leader Program (NNLP) for young managers to train management candidates



In the area of production reform, develop human resources who promote reform through level-based education and training

Maximize the capabilities of employees by improving “good working environment”

Diversity and inclusion

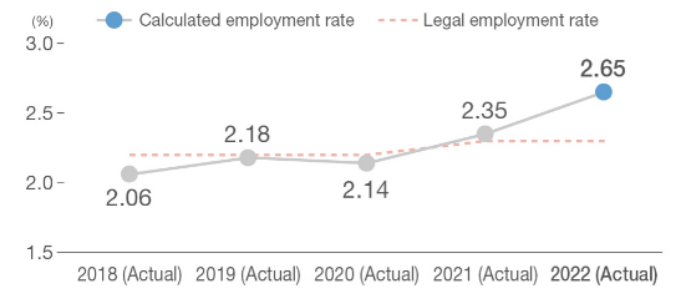
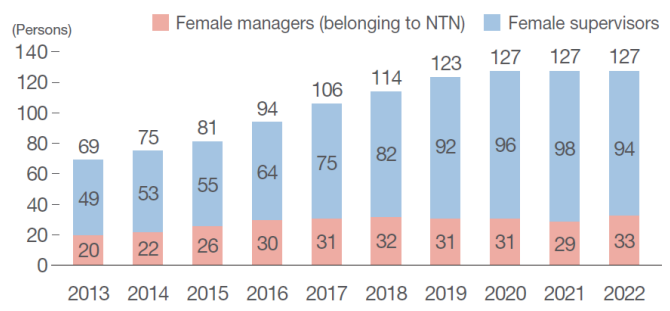
<Ratio of female managers>

Global 14.4%
Japan (NTN Corp.) 4.2%

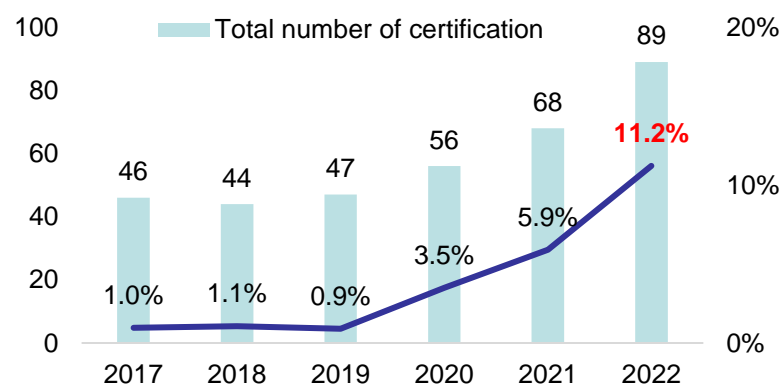
Develop an environment that enables women to take on challenges for manager in Japan

<Percentage of employees with disabilities>

Increased from the previous fiscal year due to aggressive recruitment and retention measures



<Total number of childcare leave and ratio of male childcare leave>



The ratio of male childcare leave improved by 10 points in three years due to the holding of papa seminars, etc.



Approval from the Ministry of Health, Labour and Welfare

Maximize the capabilities of employees by improving “good working environment”

Health management

Three Pillars of Initiatives

- Workplace health promotion
- Mental health promotion
- Physical health promotion

Ultimate targets

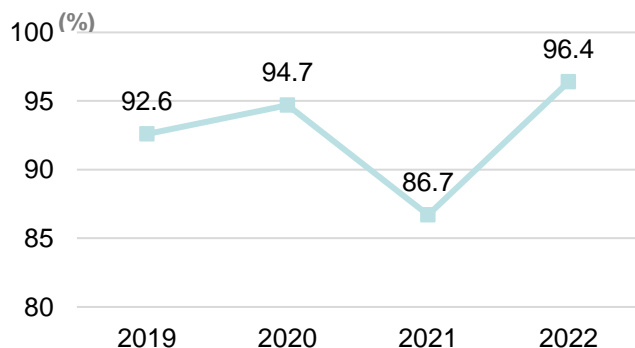
- Reduce absenteeism
- Reduce presenteeism
- Improve work engagement

Vision

Lively workplace environments which promote measures aimed at improving health and preventing disease so that every employee can work passionately, living up to their full potential

※For more information, please refer to NTN Health Report ([Link](#)) on WEB website.

<Average annual leave usage rate>



*The rate in FY2020 temporarily declined due to the impact of business suspension in the pandemic



Recognized as a best practice company by the Osaka Labor Bureau in 2018

<External Evaluation>



Certifications from the Ministry of Economy, Trade and Industry and the Sports Agency



Award system to encourage ESG activities Dialogs with employees

NTN PROUD AWARD (from July 2022)

Renewal of the global company award system to recognize outstanding initiatives in ESG

Dec. 2022 Application deadline
Apr. 2023 Global competition



A scene from a past competition

Employee engagement survey

●Oct. 2021: survey

<Target> Head Office and sales divisions
<Objective> Understanding of employees's thoughts and expectations for the company

●Nov. 2021: Introduced 1on1 meeting

<Target> Pairs between supervisors and subordinates
<Purpose> Support for growth of members

Dialogs with employees

President actively communicates with domestic and overseas business sites



Visit domestic and overseas offices and communicate with employees at local meetings



Opinion exchange meeting with young research engineers

Becoming a company that is attractive to employees

1. Overview of ESG Management

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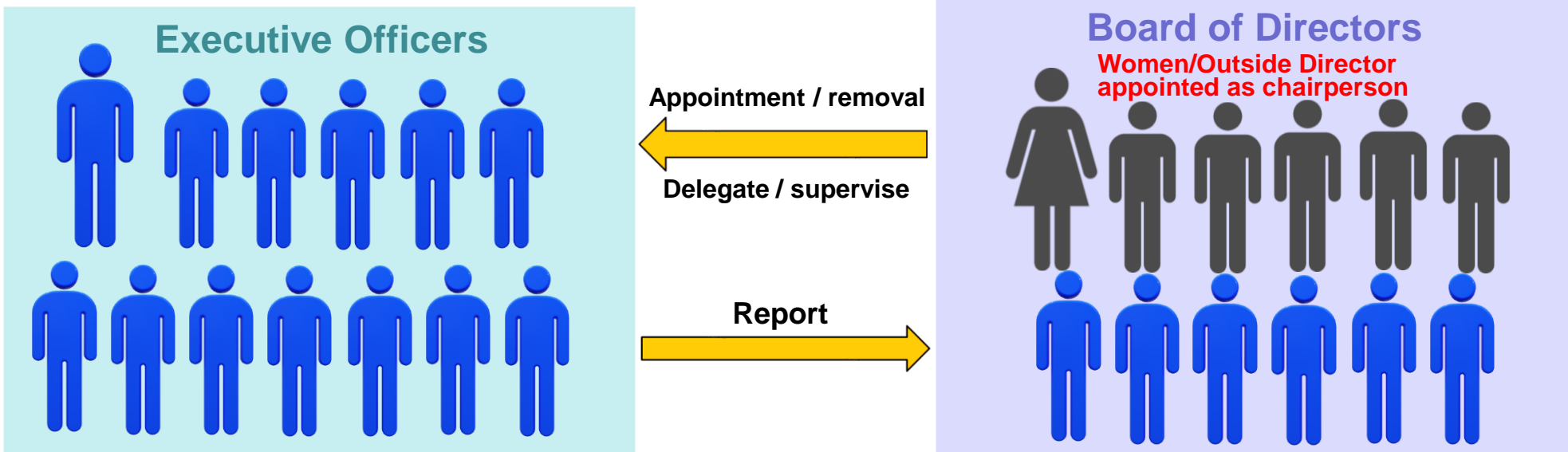
4. Governance (G)

Enhancement of Corporate Governance

Governance



System and operation to promote ESG management by strengthening fairness, transparency, and objectivity



June 2021

Flatten Executive Officer other than president

April 2022

Abolished the compensation system by position and shifted to a system based on the responsibilities

Introduced **ESG items** as an evaluation indicator for performance-linked compensation (annual incentives)

2022/12/14

Nominating Committee
 Determine the content of the proposal regarding appointment and removal of Directors to be submitted to Board of Directors

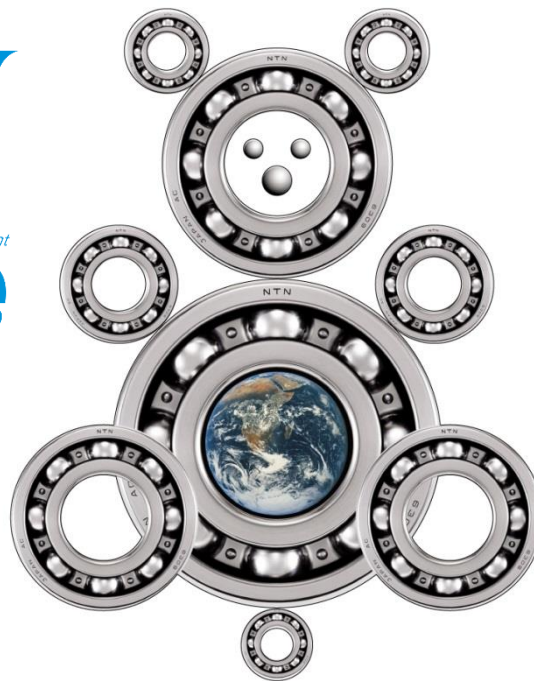
+

Candidates for Executive Officer, Representative Executive Officer, and President, Executive Officer can be recommended (February 2022)

Compensation Committee
 Determine Executive Officer compensation through **evaluation indicators including ESG** (April 2022)

Audit Committee
 Attend the **Sustainability Committee** to discuss ESG issues (September 2020)

DRIVE
Digitalization Resources Innovation Variable cost reformation Efficiency improvement
NTN100 *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.