

A photograph of a person wearing a bright yellow jacket and a hat, standing in a dense forest of tall, thin trees. Sunlight filters through the canopy, creating a dappled light effect on the forest floor. The person is looking towards the center of the forest.

# INTEGRATED REPORT 2023

A Prosperous Future  
of the Earth and People

**Hitz**

Hitachi Zosen Group

Integrated Report 2023

# INDEX

## What is Hitz?

- 1 The Source of Our Value Creation
- 2 Hitachi Zosen's Business Transformation and the Group Today
- 4 At a Glance
- 6 Expanding Value Provision
- 8 A History of Creating New Value

## Management Policies and Strategies

- 10 Message from the President
- 16 Sustainable Vision / Materiality / Risks and Opportunities
- 18 Long-Term Vision: The 2030 Vision
- 20 Value Creation Process
- 22 Medium-Term Management Plan
- 28 Financial Strategy
- 30 Environment Business
- 34 Machinery & Infrastructure Business
- 36 Carbon Neutral Solution Business
- 39 TOPICS
- 39 Utilization of Green Finance
- 40 Research and Development
- 42 DX Promotion
- 43 Global Expansion

## Sustainability

- 44 Promoting Sustainability
- 46 Human Capital and Human Resources Strategy
- 49 Safety and Health
- 50 Procurement
- 51 Quality
- 52 Environmental Management
- 54 Response to TCFD
- 56 Board of Directors and Corporate Auditors
- 58 Messages from Outside Directors
- 60 Corporate Governance
- 66 Compliance
- 68 Risk Management

## Data Section

- 70 Financial and Non-Financial Highlights
- 72 Environmental Data
- 74 Eleven-Year Financial Summary
- 76 Investor Information / Corporate Information

## Editorial policy

Since fiscal 2018, the Hitachi Zosen Group has been issuing an integrated report to explain even more clearly to our shareholders, investors, and other stakeholders the measures we are taking to realize value creation in line with the Group's long-term vision. In the editing of this report, we have consulted the framework promoted by the International Integrated Reporting Council (IIRC). Please visit the Group's website for financial information, details of measures taken by the Group for environmental conservation and protection, and further information and numerical data regarding our other corporate activities.

## Scope of this report

This report covers the Hitachi Zosen Group, comprising Hitachi Zosen Corporation, consolidated subsidiaries, and affiliated companies accounted for by the equity method. Unless otherwise stated in notes, performance data is given on a consolidated basis.

## Disclaimer

This integrated report contains forward-looking statements, including business performance forecasts, that are based on information our Company has currently obtained and on certain assumptions it considers reasonable. Actual results may vary depending on various factors.

## Our nickname—"Hitz"

In 2002, about 120 years after the founding, Hitachi Zosen divested its shipbuilding operations, finally disassociating itself from what had been its core business throughout its history. At that juncture, we decided not to change our corporate name, but we also adopted a nickname—"Hitz." Apart from being a portmanteau word combining the first elements of both "Hitachi" and "Zosen," this nickname also incorporates our determination to "hit" (as in "hit products") and "z" for "zenith," meaning the highest point, or peak, indicating that we aim to reach the peak of quality in our product manufacturing.

## Communication tools



**Integrated Report**  
Presents an integrated overview of the Hitachi Zosen Group's value creation.



**Website**  
Offers a comprehensive look at our business activities, including information on IR, ESG, technology, products, and services.

## Sustainability evaluation



FTSE Blossom Japan Sector Relative Index

2023 CONSTITUENT MSCI JAPAN ESG SELECT LEADERS INDEX

MSCI Japan ESG Select Leaders Index\*



S&P/JPX Carbon Efficient Index



Highest Rating in DBJ (Development Bank of Japan) Environmentally Rated Loan Program (13 consecutive years)



Digital Transformation Certified Company (Ministry of Economy, Trade and Industry)



New Diversity Management Selection 100 Winner (Ministry of Economy, Trade and Industry) (2019)



2023 Certified Health & Productivity Management Outstanding Organizations (Ministry of Economy, Trade and Industry)



ERUBOSHI (second stage) Certification (Ministry of Health, Labour and Welfare)



"Kurumin" Certification (Ministry of Health, Labour and Welfare) (2013, 2015, and 2019)

## Initiatives for sustainability



Task Force on Climate-related Financial Disclosures (TCFD)



GX League



United Nations Global Compact



100% Childcare Leave for Men Declaration

\* THE INCLUSION OF HITACHI ZOSEN CORPORATION IN ANY MSCI INDEX, AND THE USE OF MSCI LOGOS, TRADEMARKS, SERVICE MARKS OR INDEX NAMES HEREIN, DO NOT CONSTITUTE A SPONSORSHIP, ENDORSEMENT OR PROMOTION OF HITACHI ZOSEN CORPORATION BY MSCI OR ANY OF ITS AFFILIATES. THE MSCI INDEXES ARE THE EXCLUSIVE PROPERTY OF MSCI. MSCI AND THE MSCI INDEX NAMES AND LOGOS ARE TRADEMARKS OR SERVICE MARKS OF MSCI OR ITS AFFILIATES.

# The Source of Our Value Creation

Contributing to the prosperous future  
of the earth and people with our **“spirit of challenge”**  
and **“human resources”** as the wellspring of value creation

The Hitachi Zosen Group's long history of over 140 years began on April 1, 1881, with the founding of Osaka Iron Works by the British entrepreneur Edward Hazlett Hunter. Recognizing the growth potential of Japan's shipping industry, Hunter set up the new company to engage in shipbuilding. At that time, most of Japan's major shipyards had started up thanks to the provision of government surplus land and other materials. In contrast, Osaka Iron Works was a shipyard established solely by an individual foreign entrepreneur. It was, therefore, a huge challenge.

Even today, when Hitachi Zosen has shifted its core business from shipbuilding to decarbonization, resource circulation, and the creation of safe and prosperous communities, this spirit of challenge lives on. We advocate “strive boldly to achieve success” as one of our standards of business behavior, and each and every director and employee continues to face the challenges with the aim of turning our Company into a solution partner contributing to the realization of a sustainable, safe, and secure society.



**Our founder, Edward Hazlett Hunter (1843–1917)**

British entrepreneur; arrived in Japan in 1865; contributed to Japan's modernization through the development of industries, notably shipbuilding.

## Hitz Value

### Corporate philosophy

**We create value useful to society with technology and integrity to contribute to a prosperous future.**

### Our management stance

#### ■ Making safety the first priority

We give top priority to safety in all business activities.

#### ■ Thorough implementation of compliance

We comply with domestic and foreign laws and regulations, and respect social conventions and culture.

#### ■ Coexistence with society

We value coexistence with all stakeholders, including enhancing employee satisfaction, and live up to their trust.

#### ■ Always pursuing quality

We are always aware of the improvement of technology and pursue quality that satisfies our customers.

### Standards of business behavior

#### ■ Strive boldly to achieve success

#### ■ Communicate with sincerity

#### ■ Learn widely, think deeply

**With its move away from shipbuilding and on to the land, Hitachi Zosen will create value useful to society with technology and integrity to contribute to a prosperous future**

Over the long history of more than 140 years since its founding, the Hitachi Zosen Group has shifted its business locations to meet the social needs of each era. Today, moving away from our founding shipbuilding business, we are contributing to the realization of a sustainable society through our business fields of decarbonization, resource circulation, and the creation of safe and prosperous communities.

## World's Largest Waste to Energy Project in the Desert

*Dubai, UAE*

As environmental awareness grows around the world, the construction of Waste to Energy (WtE) plants, a core business of the Hitachi Zosen Group, is beginning to spread globally. We are currently building one of the world's largest plants in Dubai, United Arab Emirates. In addition, we will be entrusted with operating the plant for 35 years after its completion in 2024.



## Biogas Production for Bus Fuel

*Jönköping, Sweden*

The Hitachi Zosen Group owns a biogas plant in Sweden. Methane produced by fermenting organic waste is used as fuel for local buses. Going forward, we will expand our self-owned plant operations, a high-value-added business, primarily in Europe and North America.



## Onshore Wind Power Project

*Aomori, Japan*

In collaboration with ITOCHU Corporation, the Hitachi Zosen Group will launch a large onshore wind farm in Japan (15 wind turbines with an interconnection capacity of 57,000 kW). Hitachi Zosen is responsible for the engineering, procurement, construction, and operation of the project, which is currently under construction, and will be involved as a wind power generation operator once it is operational.



## Flap-Gate Type Seawall

*Iwate, Japan*

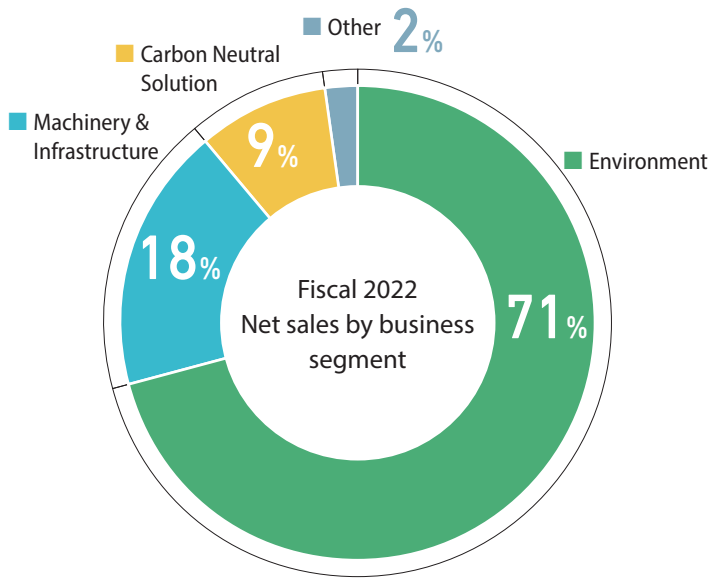
The movable flap-gate type seawall developed by Hitachi Zosen makes effective use of the power of nature itself (water power) to rotate and lift up a series of doors. Since the doors normally lie flat, they do not obstruct vehicle operation or ship navigation and have a negligible visual impact on the surrounding landscape. To date, we have delivered these to approximately 200 locations in Japan, including two seabed installations.



# At a Glance

Net sales (fiscal 2022)

**¥492.6 billion**



## Environment Business

Net sales (fiscal 2022)

**¥348.1 billion**

Our main businesses include EPC (engineering, procurement, and construction) and O&M/Service (operation, maintenance and services) of environmental facilities such as Waste to Energy (WtE) plants, biogas plants, sludge recycling centers, and desalination plants in Japan and overseas. We seek to differentiate ourselves by adding value in terms of power generation efficiency, treatment capacity, and environmental performance, and contribute to the realization of a resource-recycling society by meeting the increasing demand for waste treatment, energy, and water due to global population growth.

Global market share of Waste to Energy (WtE) plants

\*Order share (based on treatment capacity, including licensees)

**No.1** 2022 (calendar year) **49.7%**

## Machinery & Infrastructure Business

Net sales (fiscal 2022)

**¥88.2 billion**

In the machinery field, we address the challenges faced by customers in various industries. Our efforts include streamlining manufacturing processes for car body press machines and various types of precision machinery for the semiconductor, food, and medical sectors. We offer integrated support from development to after-sales service. We are also active in the infrastructure field. In addition to building structures like bridges, hydraulic gates, and flap gates, we work on monitoring and extending the useful life of existing facilities. We have developed a wide range of products that enable us to help create safe and prosperous communities.

Date of founding

**1881**

Number of employees, consolidated basis (March 2023)

**11,400**

Number of Group companies in Japan

**81**

Number of Group companies overseas

**73**

Major manufacturing bases in Japan

**7**

Total number of Group companies **154**

## Carbon Neutral Solution Business

Net sales (fiscal 2022)

**¥46.6 billion**

In order to further accelerate innovation in technologies to counter global warming, we established the Carbon Neutral Solution Business Headquarters in April 2022. We will contribute to the realization of a decarbonized society by providing CO<sub>2</sub> reduction technologies and clean energy, including fuel conversion for marine diesel engines, initiatives for marine LNG and ammonia fuel tanks and ammonia production-plant equipment, casks for spent nuclear fuel, hydrogen generation systems, methanation equipment, and wind power generation.



Waste to Energy plant



Biomass power plant



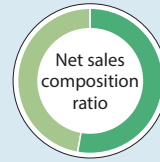
Methane fermentation facility (Biogas plants)



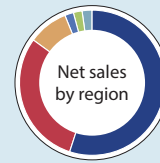
Sludge recycling center

**Main businesses**

- WtE plants and recycling facilities
- Biogas facilities
- Water and sludge treatment facilities
- Energy systems (power generation equipment)
- Biomass utilization systems
- Desalination plants and various other plants
- Electricity wholesale



EPC	53%
O&M/Service	47%



Japan	55%
Europe	31%
Middle East	8%
North America	2%
Asia	2%
Others	2%



Press machine for automobiles



Vacuum device



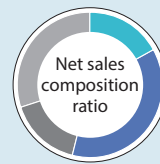
Seabed system flap-gate seawall to safeguard against flood disasters



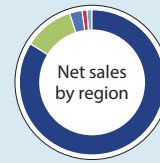
Space sterilizer ACSTERIA

**Main businesses**

- Press machines for automobiles
- Boilers
- Plastic machinery
- Food machinery
- Pharmaceutical machinery
- Precision machinery
- Electronics and control systems
- Bridges
- Hydraulic gates
- Stacks
- Marine civil engineering
- Shield tunneling machines
- Disaster-prevention systems



Press machines	18%
Precision machinery	36%
Other machinery	16%
Infrastructure	30%



Japan	84%
Asia	11%
North America	3%
Europe	1%
Others	1%



SCR system for marine engines



Process equipment



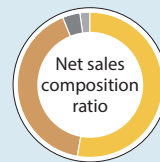
Power to Gas (PtG)



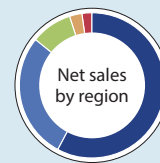
Wind power generation (NEDO Technology demonstration experiment of a next-generation floating offshore wind turbine system [barge type])

**Main businesses**

- Marine diesel engines
- NOx removal catalysts
- Various process equipment such as pressure vessels
- Nuclear power related equipment
- Electrolyzers / PtG
- Wind power generation



Engine	53%
Process equipment	41%
PtG	4%
Wind power	2%

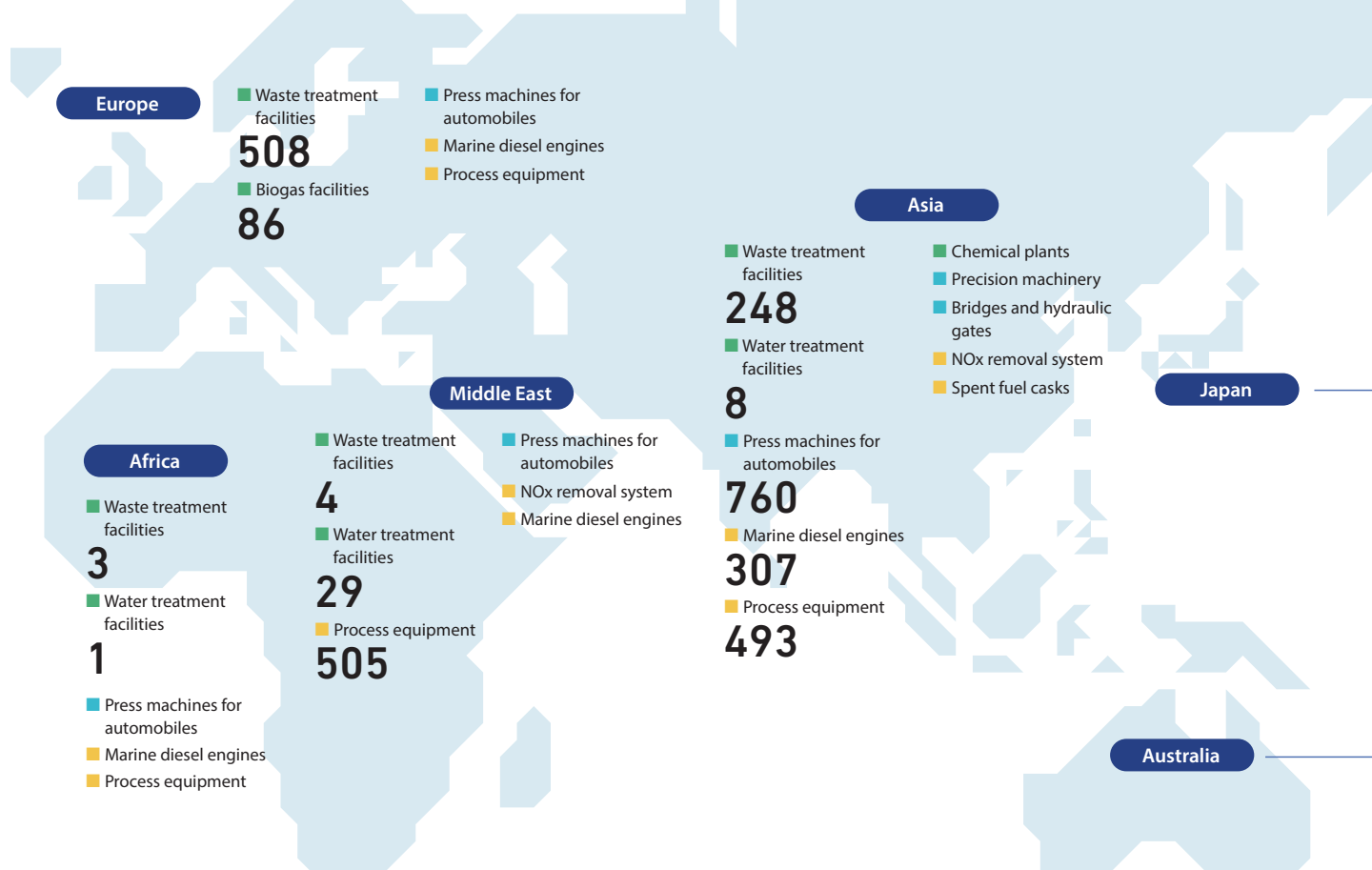


Japan	58%
North America	28%
Asia	9%
Middle East	3%
Europe	2%

# Expanding Value Provision

All over the world our technologies are facilitating affluent life and conservation of the global environment

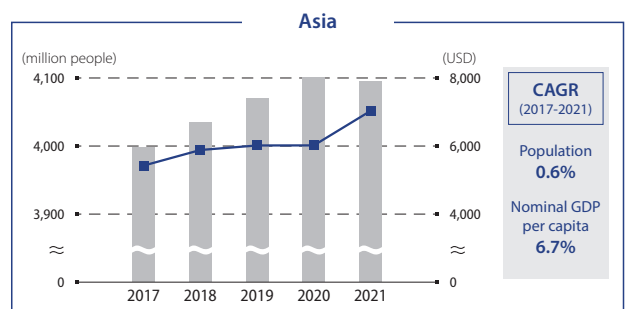
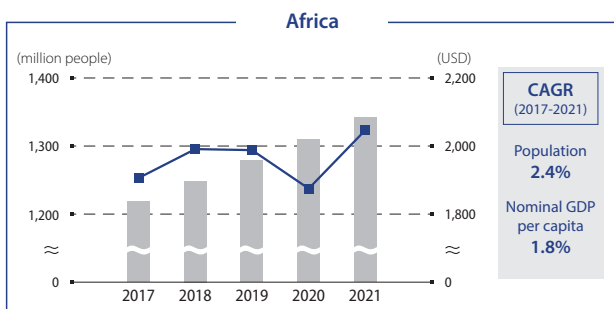
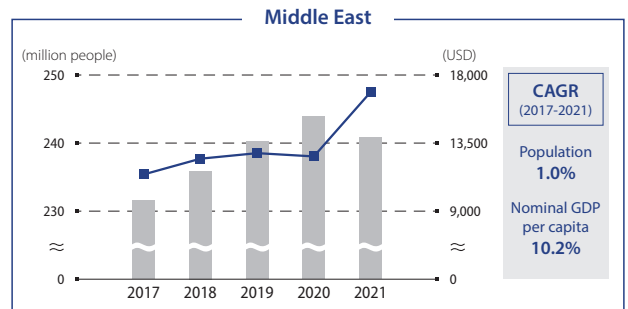
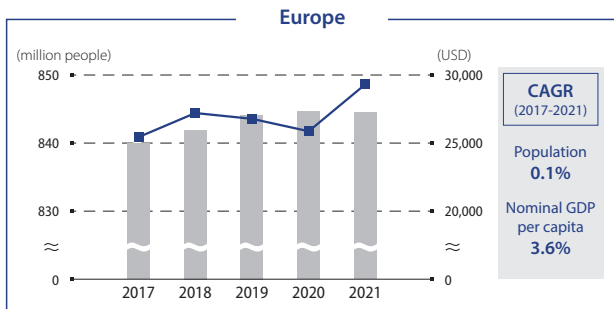
The Hitachi Zosen Group is developing businesses all over the world to contribute to solving global social issues.



Global population and economic growth

■ Population

■ Nominal GDP per capita

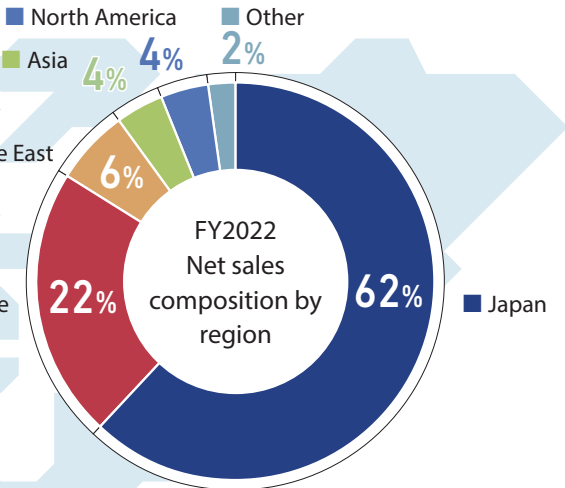




Track record (as of the end of March 2023)

Waste treatment facilities  
**1,400**  
(including licensees)

Water treatment facilities  
**261\***  
\*Including desalination, treatment of brackish water, and mine drainage.



Environment Machinery & Infrastructure Carbon Neutral Solution

Waste treatment facilities  
**532**  
Water treatment facilities  
**25**

- Biogas facilities
- Press machines for automobiles
- Precision machinery
- Bridges and hydraulic gates
- NOx removal system
- Marine diesel engines
- Process equipment

North America

Waste treatment facilities  
**101**  
Biogas facilities  
**2**  
Press machines for automobiles  
**212**  
Spent fuel casks  
**866**

- Waste treatment facilities
- NOx removal system
- Marine diesel engines
- Process equipment

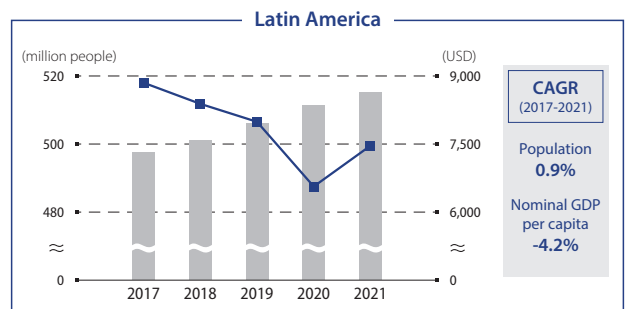
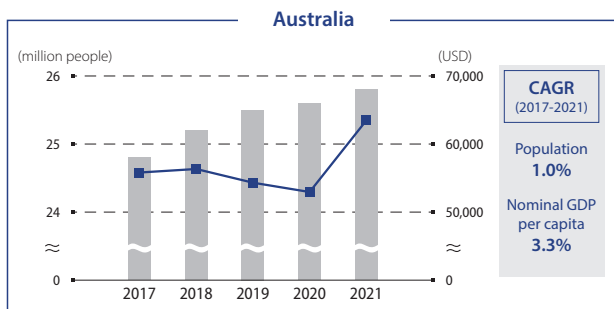
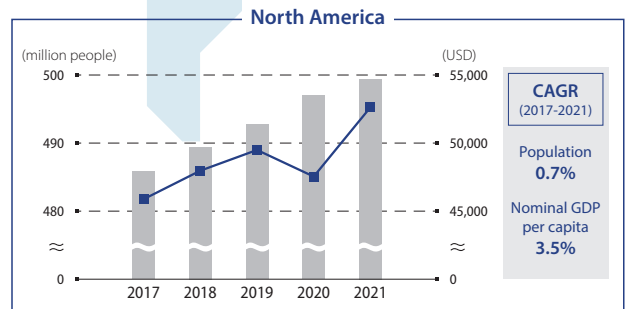
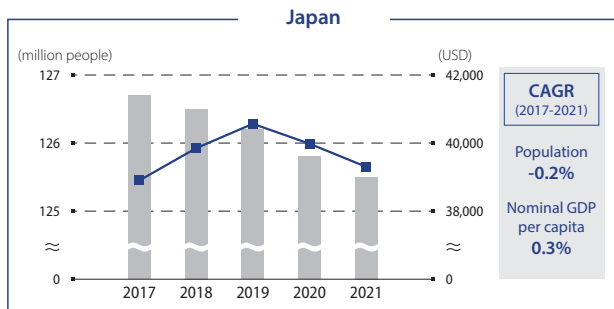
Waste treatment facilities  
**3**  
Water treatment facilities  
**193**

- Press machines for automobiles
- Marine diesel engines
- Process equipment

Latin America

Waste treatment facilities  
**1**  
Water treatment facilities  
**4**

- Press machines for automobiles
- Marine diesel engines
- Process equipment



# A History of Creating New Value

## Creating new businesses leveraging technologies developed since the establishment of our Company

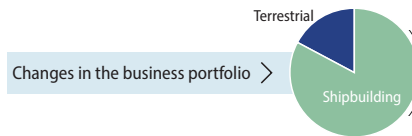
While maintaining our roots in shipbuilding technology, the Hitachi Zosen Group has transformed our portfolio by opening up new terrestrial businesses. Our goal is to create value for society by continuing to challenge social issues, which are forever changing with the times.

■ **1949**  
Listed on the Tokyo and Osaka Stock Exchanges  
¥5.6 bil.

■ **1960**  
Technological collaboration with Swiss company Von Roll Environmental Technology Ltd. (Currently Hitachi Zosen Inova)

### Changes in sales structure

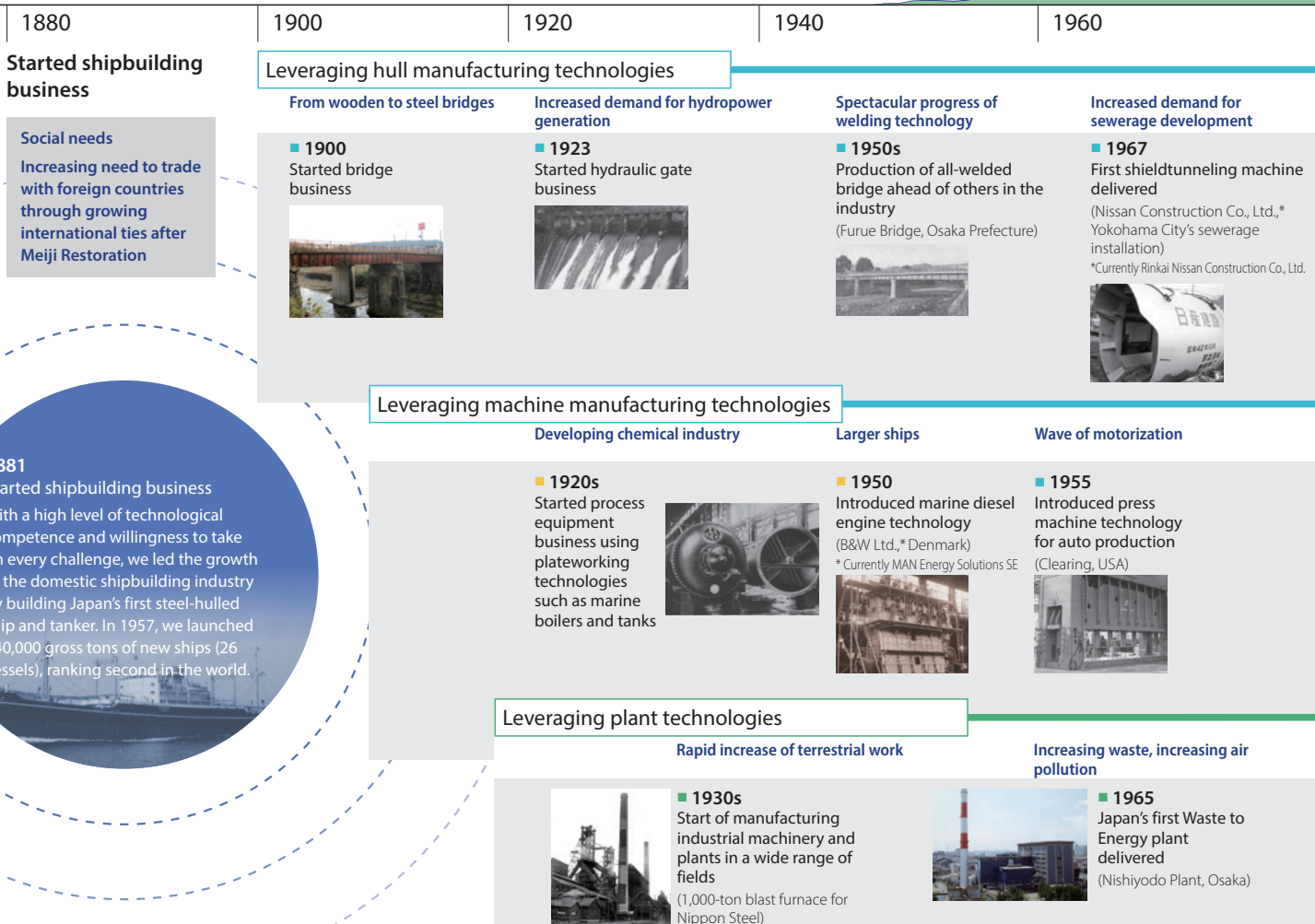
■ Shipbuilding ■ Terrestrial

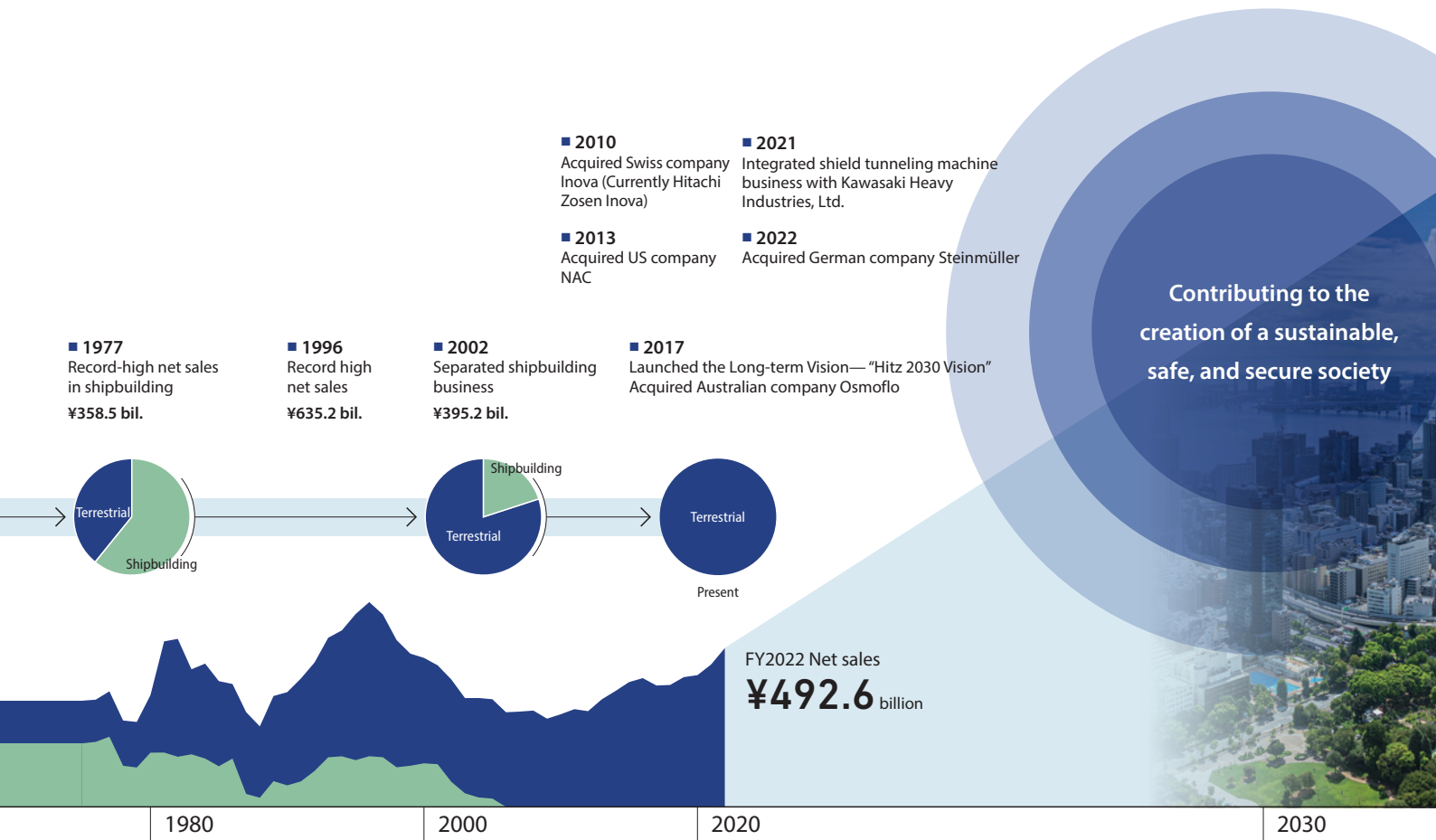


Note: The starting point for net sales is set at fiscal 1949, when our stock went public. Figures before fiscal 1976 are non-consolidated (Hitachi Zosen only).

■ **1881**  
Founded

■ **1900**  
Started venturing into terrestrial businesses





The era of long-span bridges

■ 1980s and 1990s  
Participated in the manufacturing and construction of underwater caissons and superstructures for long-span bridges



(Honshu-Shikoku Bridge Authority\*, Akashi-Kaikyo Bridge)  
\*Currently Honshu-Shikoku Bridge Expressway Company Limited

Increased awareness of disaster prevention

■ 2013  
Started flap-gate type seawall against flood disaster business



Increased demand for renewable energy

■ 2019  
Started demonstrated operation of floating offshore wind power system



Machinery & Infrastructure

Period of growth for the beverage industry

■ 1971  
Delivery of Japan's first aluminum can beer canning machine  
(Large delivery of our product to the Nishinomiya Plant of Asahi Breweries, Ltd.)



Increase of nuclear power plants

■ 1978  
First nuclear casks delivered  
(for a power company)



Prevention of oceanic air pollution

■ 2017  
Delivery of first SCR system for marine engines  
(for a shipbuilding company)



Carbon Neutral Solution

Environment

Increased demand for water & power in Middle East

■ 1979  
First unit of desalination plant delivered  
(Saudi Saline Water Conversion Corporation)



Use of organic waste for energy

■ 2018  
Started in-house operations of the first Kompostogas® plant in the United States  
(California)



## Message from the President



**We will move forward to realize a bright future by focusing on global expansion, promotion of digital transformation (DX), and enhancement of human capital**

**Sadao Mino**

Representative Director, President & Chief Executive Officer

## What is the Hitz Value?

We share the spirit of prioritizing the public interest, which has been passed down since our founding, as our basic philosophy.

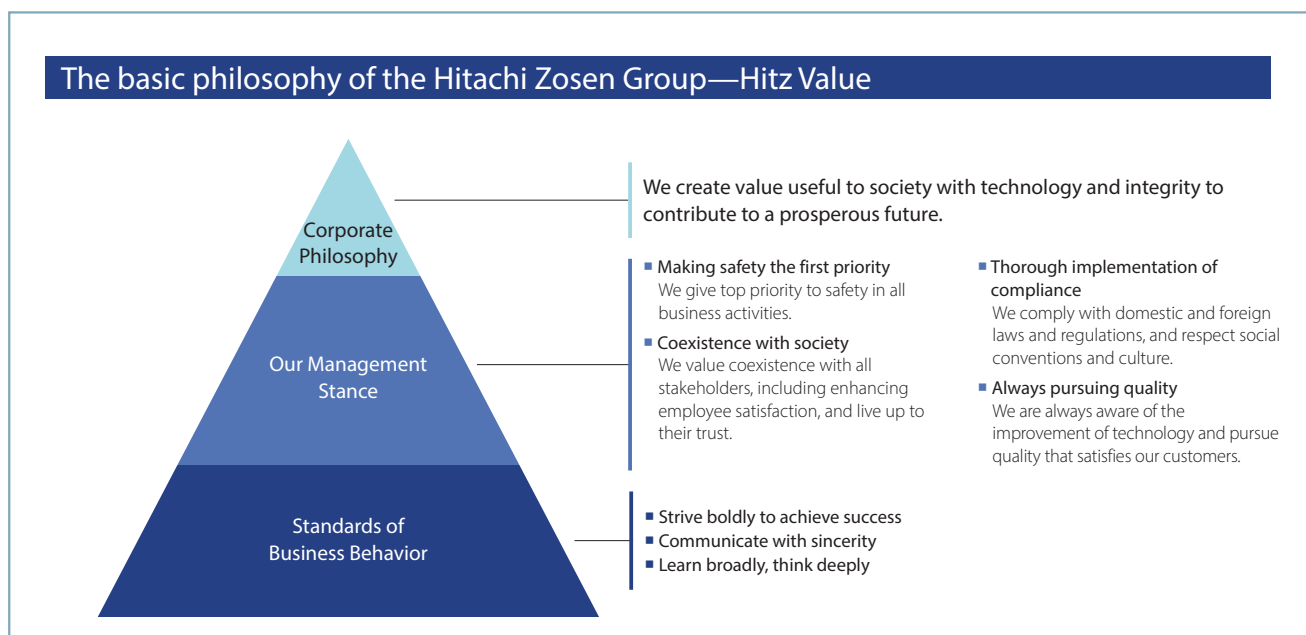
Since its founding in 1881, the Hitachi Zosen Group has survived and grown through various challenges. The founder, E. H. Hunter, was a British businessman who started a company in Japan and selflessly dedicated himself to the local economy and the public good of the country. At the time, it was a huge challenge for a non-Japanese person to start a business in Japan without the protection of the government. I believe that Mr. Hunter's success amid those circumstances was due to his spirit of diversity, equity, and inclusion (DE&I), which respects Japanese people and culture, and his emphasis on the public interest in contributing to the development of society. We at Hitachi Zosen have the Hitz Value, a distillation of our management stance and action principles, based on our corporate philosophy. Over our history of more than 140 years, Mr. Hunter's aspirations and ideas have been passed down through generations and are now shared as the basic philosophy of the Hitachi Zosen Group in the form of the Hitz Value.

Since I became president in 2020, I have been asked about my creed as a top management, but my creed can be summed up as "realize our corporate philosophy." Hitachi Zosen started with shipbuilding and has been engaged in a variety of businesses, but what they all have in common is technology, and we have a history of supporting the development of society through technology. Inheriting this history, we hope to continue as a technology-driven company to solve various social issues. In

addition, we always make it a basic principle in approaching our work to be honest and sincere, following the idea of *shisei tsuten* (sincerity can move heaven). Furthermore, we are always thinking about how to create value that is useful for society and how to contribute to a prosperous future.

When I talk with our employees, I feel that we are attracting people who identify with our corporate philosophy, are happy to be able to contribute to society through their work, and find value in that. I myself studied environmental health at university, including civil and environmental engineering, and joined Hitachi Zosen in 1982 with the desire to prevent secondary pollution caused by waste treatment. At that time, environmental contamination and pollution were emerging as issues, and I wanted to become an engineer who could play an active role in that field. Hitachi Zosen was mainly engaged in shipbuilding and marine business at the time, and its environmental business accounted for only a few percent of sales.

Since then, the proportion of the environmental business has increased with the passage of time, and it is now a pillar of the Hitachi Zosen Group's business. Our strength, which has enabled us to continue our business to today, even with the changes in the values demanded by society, lies in the fact that we have responded to the demands of the times with technology and integrity. This not only benefits society but also defines the value and *raison d'être* of Hitachi Zosen.





## Formulation of a sustainable vision

We will continue to pursue the provision of value that transcends the times, even amid drastic changes in the business environment.

The business environment surrounding our Group is becoming increasingly severe. The global economy is on a recovery trend in the post-pandemic era in which we coexist with COVID-19. However, geopolitical risks and other factors have led to shortages of energy and raw materials, rising prices, and prolonged supply chain disruptions, which are serious concerns for companies and industries across the board. With regard to environmental issues, there is a need to shift to a recycling-oriented economic model that is conscious of resource circulation and reduction of waste generation, as international demands continue to grow.

In addition to all of that, we must constantly monitor changes and pursue new value with regard to developments such as DX and Society 5.0, the transformation of our business model through technological advances, and efforts to address both the problems of population decline and aging in Japan and the growing awareness of human rights internationally.

The value that Hitachi Zosen will continue to provide over time is to maintain a positive cycle of generating benefits for the earth and society through our business and to eliminate the negative impact on the earth and society. Our Sustainable Vision, which was newly formulated in 2023 outlining our desired image in the year 2050, upholds the goals of “Realize zero environmental impact” and “Maximize people’s well-being.” These goals are based on the four Sustainability Principles\* and summarize the values we honor.

Even though the future is uncertain and difficult to predict, we believe that having a compass that enables executives and employees in various positions to confirm the value we should pursue and return to our roots will enhance organizational resilience and enable the creation of financial and social corporate value. For us, the Sustainable Vision and Hitz Value provide that compass.

The essential elements for realizing this vision are the Seven Pillars of Success (Materiality). From the procurement of

raw materials to the disposal of products, we have clarified what social issues exist throughout the supply chain in our activities and how we can contribute to each of the Pillars of Success (Materiality). We are currently in the process of formulating the respective roadmaps and KPIs to realize our vision for 2050.

In line with the formulation of the Sustainable Vision, we have reviewed our milestone long-term vision, and have changed our Group’s business areas to “decarbonization,”



“resource circulation,” and “safe & prosperous community” development. Here, we have also set targets such as an operating income margin of 10% and net sales of ¥1 trillion in the early 2030s. I see this as a passing point, not a goal. In order to realize our vision and contribute to society on a global scale,

we must steadily increase our earnings. If a company itself is not sustainable, it cannot make a sustainable contribution to society, so I would like for us to work hard on that as well.

\* Four Sustainability Principles

For details refer to the following website: <https://thenaturalstep.org/approach/>

## Review of the previous medium-term management plan Forward 22

**We have demonstrated results such as the achievement of five consecutive terms of revenue and profit growth and business portfolio reforms, although profitability remains an issue.**

Under the previous medium-term management plan Forward 22, which started in fiscal 2020, our Group's order intake and net sales for the three-year period exceeded the initial plan of ¥400 billion. With respect to net sales and operating income, we achieved increases in both for five consecutive fiscal years. This was mainly due to fruit born from the completion of the management reform of Hitachi Zosen Inova in Switzerland, which was acquired at the end of 2010, the successful response to demand in new markets such as the Middle East and Australia, which have recently begun to introduce Waste to Energy (WtE) in earnest, in addition to the UK which has been a main market since the 2010s, and the acquisition of long-term contracts for operation and maintenance services. In terms of consolidated order intake, strong orders received in Japan also contributed to a new record high after the separation of shipbuilding.

However, operating income did not keep up with the growth in net sales, and the operating income margin for the final fiscal year of the plan, fiscal 2022, was 4.1%, falling short of the target of 5%. Although inflation has had an impact, issues also include responding to technical problems, reducing the defect rate, and dealing with global supply chain disruptions. Geopolitical risks also require greater attention and thorough risk management than ever before.

The policies under Forward 22 were to “Enhance the added value of products and services,” “Promote business selection and concentration and allocate resources to growth areas,” and “Achieve workstyle reform by improving operational efficiency and productivity.” Although some issues remain, we evaluated that overall we were able to achieve a certain level of results.

In terms of business portfolio management, the spread of COVID-19 significantly affected the business environment and negotiations did not progress smoothly. However, we were able to close and consolidate Kashiwa Works with another factory, establish joint ventures with other companies in shield tunneling machines, marine diesel engines, and radioactive waste-related business, and transfer shares in non-core businesses (logistics, deck machinery, etc.). In Europe, we also conducted acquisitions to expand our WtE plant operations, biogas business, and operation and maintenance business.

The promotion of digital transformation (DX) is progressing with the development of Business DX, which provides new value by incorporating IoT and AI into various products, Corporate DX, which utilizes in-house RPA and visualizes and utilizes data accumulated daily with ERP, and the DX Platform which supports them. The essence of DX is not simply introducing systems but creating new value through digitalization. We will continue to promote our DX strategy as a priority measure for realizing our vision.

## Medium-term management plan Forward 25

**While enhancing our human capital, we will strive for sustainable growth in our existing businesses and work to create and expand new growth businesses.**

Forward 25, a three-year plan from FY2023, was developed by backcasting from the Sustainable Vision outlining our desired

image in the year 2050 and the long-term 2030 Vision aimed at 2030. The three basic principles are “Sustainable growth of

## Message from the President

existing businesses,” “Creation and expansion of growth businesses,” and “Promotion of sustainable management.”

I would like to reiterate that improving the operating income margin is a major challenge for our Group. Business portfolio management has been one of our priority measures since the previous medium-term management plan, and we will continue to work on it as part of organizational reforms aimed at expanding growth areas and key businesses over the next three years. In reviewing our business portfolio, we evaluate each business while also taking up perspectives other than business performance and the market environment, taking into consideration what kind of growth we can expect in the future and the consistency with our vision based on the Sustainable Vision as a compass.

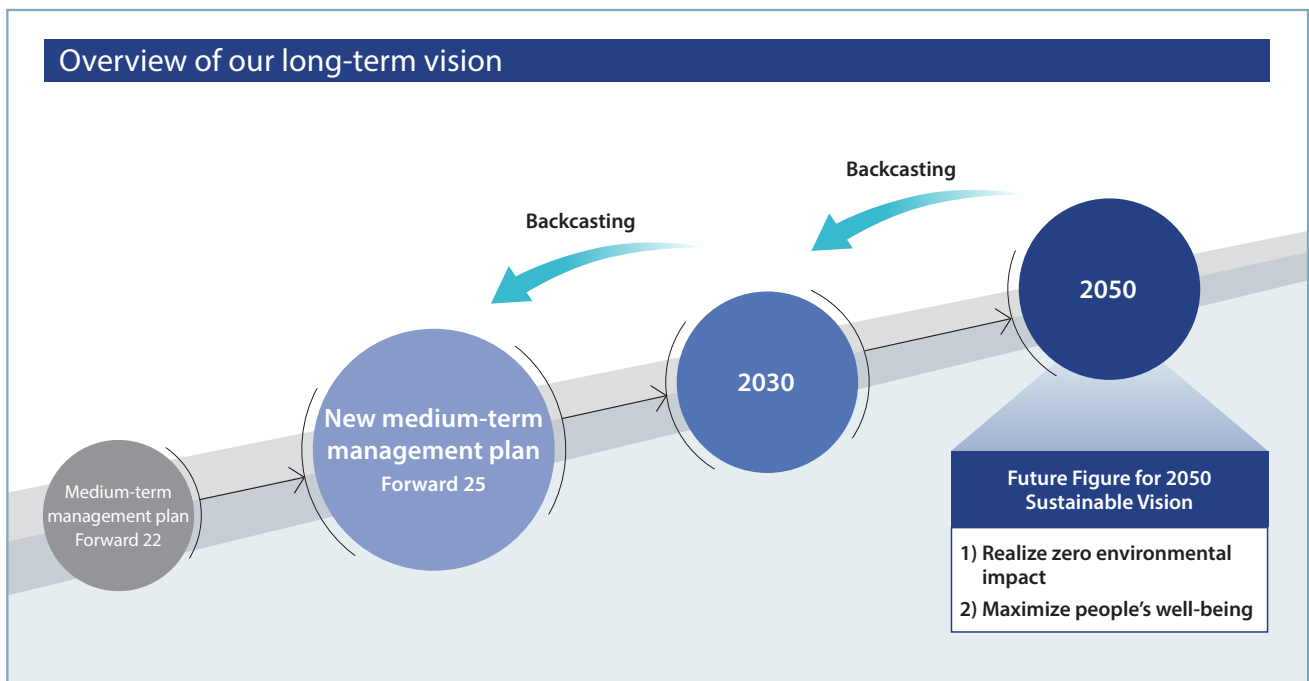
Regarding growth businesses, taking the environmental business, which accounts for about 70% of our consolidated net sales, as an example, WtE plants for municipal waste have become almost ubiquitous in Japan, but many countries are very far from reaching that stage. Furthermore, while the population in Japan is declining, it is expected to continue to increase overseas, and the amount of waste is expected to increase accordingly. The need for sanitary waste treatment will continue to increase. In Europe, the European Commission has announced plans to expand biogas plants on a large scale in response to the current energy crisis, and there is great potential for growth in both the biogas plant and WtE plant business overseas. As overseas markets are becoming the main markets for Hitachi Zosen along with the domestic market, I would like to have our overseas Group companies, which play

an important role, be allowed a certain degree of discretion and boldly take on new challenges. To this end, we are currently reviewing our global structure to ensure that risk management and governance function properly.

I believe that strategic investment is also important for a company’s growth. In order to steer Hitachi Zosen toward a growth path, we will significantly increase business investment under Forward 25 and actively pursue good investment opportunities, such as in the resource recycling business including our own biogas plants, the decarbonization business including wind power generation, the water business, and the life science-related business. The effects of investment may not be seen until after Forward 25, but I believe that this will be a stepping stone to achieving our long-term vision and beyond.

In order to significantly increase our investments, we have also strengthened our risk management system related to business investment. Until now, we have maintained a body to analyze technical issues and estimates at the pre-order stage, but in April 2023, we newly established an Investment Committee to systematically examine multifaceted business risks for projects involving business investment.

Enhancing human capital is also one of the most important measures in promoting sustainable management of our Group. In addition to the DX Human Resources Training Program launched in the previous medium-term management plan, we will pursue the Management Human Resources Training Program and the Global Human Resources Training Program in earnest, and firmly promote development measures including management of the human resource pool and





development of training programs necessary to realize our management and business strategies.

In July 2023, we held an off-site training camp on human capital management for all directors\*, including outside directors, executive officers, and presidents of major domestic affiliates. As lecturer, we invited Dr. Kunio Ito, Director of the Hitotsubashi CFO Education and Research Center and Chairman of the Human Capital Management Consortium, who led a workshop on the "As is-To be" gap, in which all participants spoke about Hitachi Zosen's corporate culture and identified problems during the discussion. A panel discussion with outside directors was also held, providing an opportunity to hear frank and candid opinions from each director. It was very significant that all executives from the corporate and business divisions were able to share an awareness of challenges related to human capital management and a commitment to future initiatives that will help the Hitachi Zosen Group move to the



next stage. We believe this shared awareness will be the driving force behind our Group's human capital management.

\* Excluding Director Lury who resides in the United States

## Work together with our stakeholders to realize a prosperous future

We will take on the challenge of achieving our Sustainable Vision with the pride of a technology-driven company.

In the past, when I was asked to write one Japanese character, I would write *wa* (harmony). I didn't mean it simply in terms of getting along but rather *wa* in the sense of maintaining good relationships where, even if opinions differ, each individual can talk openly about what they believe and assert themselves. Whether it's the management of a company or a division, it is my belief that if we have a culture in which each individual is able to communicate and share their own improvement methods and opinions, things will move in the right direction. To my mind, this is in keeping with the spirit of Mr. Hunter and the spirit of DE&I, which I mentioned at the beginning. In this context, the Hitz Value and Sustainability Vision form the basis for determining what is right or likely right.

Companies whose executives and employees can empathize with the aspirations and philosophy of the company and work together as one tend to have high growth potential and profitability. I feel fortunate to have many such executives and employees in our group. By embodying the Hitz Value and contributing to solving various social issues through our daily business activities, we will gain support and trust of our stakeholders. And by further strengthening our relationships with stakeholders who share our philosophy, we will also increase the value we co-create.

With regard to shareholder returns, Hitachi Zosen has

always maintained stable dividends as its basic stance. Over the next three years, we plan to actively invest in growth to increase future shareholder value, and our basic policy for returning profits to shareholders is to pay continuous and stable dividends.

The Hitachi Zosen Group will continue to work toward the realization of the Sustainable Vision for 2050 as a solution partner for a sustainable, safe, and secure society with the spirit of challenge that has continued since our founding and pride as a technology-driven company.

I would like to ask all of our stakeholders for their continued understanding and support.

Representative Director  
President & Chief Executive Officer

# Sustainable Vision / Materiality / Risks and Opportunities

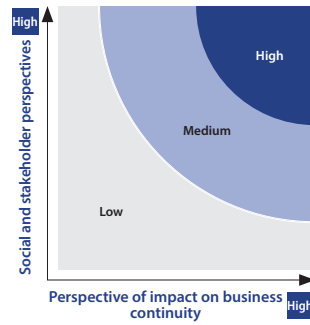
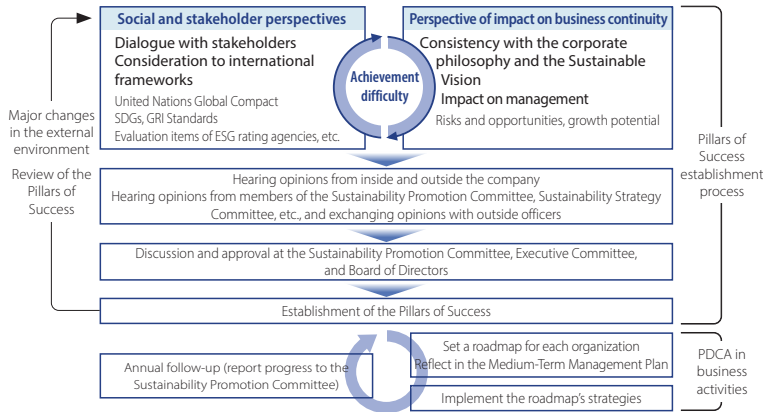
In March 2023, our Group newly established the Sustainable Vision for 2050 under the Hitz Value, which consists of the Group’s corporate philosophy, management stance, and standards of business behavior. In light of social issues, we have identified risks and opportunities, and established the Seven Pillars of Success (Materiality) from the perspectives of society and stakeholders and the impact on business continuity. Going forward, we will implement initiatives that address each of the Seven Pillars of Success.



## Risks and opportunities associated with the Pillars of Success

Seven Pillars of Success (Materiality)	Awareness of social issues	Opportunities	Risks
<b>Carbon neutrality</b>	<ul style="list-style-type: none"> <li>To achieve the 1.5°C target of the Paris Agreement, it is essential for society as a whole to achieve carbon neutrality. The demand for a transition to a decarbonized society is growing rapidly.</li> </ul>	<ul style="list-style-type: none"> <li>Mainstreaming of renewable energy</li> <li>Increasing demand for low-carbon and decarbonized products and technologies</li> </ul>	<ul style="list-style-type: none"> <li>Tightening regulations on GHG emissions, carbon tax, etc.</li> <li>Decreasing demand for high-environmental-impact products</li> </ul>
<b>Complete circulation of resources</b>	<ul style="list-style-type: none"> <li>The explosive growth of the world’s population is causing shortages of energy, resources, food, and water, dwelling problems, waste problems, and the collapse of biodiversity. Demand to make the transition to a society with zero environmental impact is increasing rapidly.</li> </ul>	<ul style="list-style-type: none"> <li>Expansion of the market for environment-related businesses due to growing awareness of the environment and stricter regulations</li> <li>Creation of new business models through the circular economy</li> </ul>	<ul style="list-style-type: none"> <li>Higher business costs caused by stricter environmental regulations and response to the circular economy</li> </ul>
<b>Maximization of the environment’s recovery power</b>	<ul style="list-style-type: none"> <li>To continue sustainable development, it is necessary not to exceed the reproductive capacity of nature, and above that, to restore that capacity.</li> <li>Sustainable development cannot be achieved by solving environmental issues alone; it is also necessary to maintain and restore people’s basic needs, especially their health.</li> </ul>	<ul style="list-style-type: none"> <li>Creation of new businesses in response to growing awareness of the need to regenerate open dumping sites and prevent marine pollution, etc.</li> <li>Pandemic-led rapid increase in demand for healthier and safer living</li> </ul>	<ul style="list-style-type: none"> <li>Increasing costs associated with conservation and restoration of ecosystems in developed areas</li> </ul>
<b>Response to intensifying natural disasters</b>	<ul style="list-style-type: none"> <li>To prepare for emergencies such as intense natural disasters, pandemics, and other emergencies, there has been increasing demand for the establishment of a multilayered supply network for energy and food, the improvement of self-sufficiency rates, and the strengthening of social infrastructure. In particular, infrastructure development is an issue in emerging countries, and aging infrastructure is an issue in developed countries.</li> </ul>	<ul style="list-style-type: none"> <li>Increasing demand for infrastructure development necessary for smart cities and resilient urban development</li> <li>Rising demand for disaster preventive and mitigative infrastructure technology in anticipation of severe disasters</li> <li>Increasing demand for establishment of a multilayered energy supply network and improved self-sufficiency</li> </ul>	<ul style="list-style-type: none"> <li>Supply chain disruption in the event of an emergency</li> <li>Increasing need for disaster prevention measures at production bases and risk management in businesses</li> </ul>
<b>Sustainable procurement</b>	<ul style="list-style-type: none"> <li>Expanding environmental and social responsibility in the supply chain</li> </ul>	<ul style="list-style-type: none"> <li>Enhancement of social credibility by contributing to the sustainability of the entire value chain by eliminating environmental impact throughout the supply chain and creating social value.</li> </ul>	<ul style="list-style-type: none"> <li>Deterioration of reputation due to human rights infringements and environmental impacts in the supply chain</li> </ul>
<b>Maximization of people’s well-being</b>	<ul style="list-style-type: none"> <li>To solve environmental issues, sustainable development also requires that people’s health, influential power, capacities, equity, meaning and significance be recognized.</li> <li>Demand for the realization of workplaces where diverse human resources can be physically and mentally healthy and make the most of their abilities.</li> <li>Strong requirement not to be complicit in human rights infringements by third parties.</li> </ul>	<ul style="list-style-type: none"> <li>Improvement of credibility by creating value for the entire business value chain of our Group</li> <li>Increase of corporate competitiveness by creating innovation through the promotion of DE&amp;I</li> <li>Increase of productivity, efficiency, and motivation by accelerating workstyle reform</li> </ul>	<ul style="list-style-type: none"> <li>Outflow of human resources due to loss of opportunities for diverse human resources to play active roles</li> <li>Decline in competitiveness and slump in business performance due to inability to respond to changes in the business environment</li> </ul>
<b>Enhancement of corporate governance</b>	<ul style="list-style-type: none"> <li>Expanding requirement for highly effective corporate governance</li> <li>Increasing importance of business activities based on high ethical standards and transparency of business activities</li> </ul>	<ul style="list-style-type: none"> <li>Sustainable enhancement of corporate value by realizing highly effective corporate governance</li> <li>Improvement of the credibility of the Company through corporate activities based on high ethical standards</li> </ul>	<ul style="list-style-type: none"> <li>Lack of appropriate management decisions due to dysfunctional corporate governance and internal controls; business stagnation, slumps, and scandals, and loss of stakeholders’ confidence due to these</li> <li>Occurrence of compliance violations, including anti-competitive acts, corruption, bribery, etc. due to lack of compliance awareness and ethics among officers and employees</li> </ul>

Materiality establishment process



- Establish the Seven Pillars of Success taking into account achievement difficulty
- ▶ Carbon neutrality
  - ▶ Complete circulation of resources
  - ▶ Maximization of the environment's recovery power
  - ▶ Response to intensifying natural disasters
  - ▶ Sustainable procurement
  - ▶ Maximization of people's well-being
  - ▶ Enhancement of corporate governance

Opinions from outside experts  
 ▶ [https://www.hitachizosen.co.jp/english/sustainability/policy/pdf/2023\\_thirdpartyopinion\\_E.pdf](https://www.hitachizosen.co.jp/english/sustainability/policy/pdf/2023_thirdpartyopinion_E.pdf)



Seven Pillars of Success (Materiality)	Procurement of materials	Manufacturing (Incl. R&D)	Provision of products and services	Product disposal	Relevance to SDGs
	■ Zero environmental impact throughout the supply chain				
<b>Carbon neutrality</b>		<ul style="list-style-type: none"> <li>■ Development and commercialization of products that support third-party fuel conversion, hydrogen, synthetic methane, ammonia, and other clean energy</li> <li>■ Establishment and commercialization of CCUS (CO<sub>2</sub> capture, utilization, and storage) technology</li> <li>■ Expansion of onshore and offshore wind power generation businesses</li> </ul>			
<b>Complete circulation of resources</b>		<ul style="list-style-type: none"> <li>■ In-house fuel conversion, increase of energy self-sufficiency, and introduction of energy-saving equipment</li> </ul>	<ul style="list-style-type: none"> <li>■ Systematized recycling in the manufacturing process</li> <li>■ Promotion of easy-to-recycle designs, utilization of long-life parts, and establishment of long-life technologies</li> </ul>	<ul style="list-style-type: none"> <li>■ Zero sludge and combustion residue</li> <li>■ Recycling of industrial water, etc.</li> <li>■ Product recovery and recycling of valuable metals from waste</li> </ul>	
<b>Maximization of the environment's recovery power</b>		<ul style="list-style-type: none"> <li>■ Investment in forest management, tree-planting, offset development (afforestation, etc.)</li> <li>■ Conservation and restoration of ecosystems in developed areas</li> <li>■ Life science field related technology</li> </ul>	<ul style="list-style-type: none"> <li>■ Remediation of air, water, and soil contamination</li> </ul>	<ul style="list-style-type: none"> <li>■ Reduction and regeneration of open dumping sites</li> <li>■ Conservation and restoration of ecosystems in developed areas</li> </ul>	
<b>Response to intensifying natural disasters</b>		<ul style="list-style-type: none"> <li>■ Creation of disaster prevention infrastructure technologies in anticipation of severe disasters</li> </ul>	<ul style="list-style-type: none"> <li>■ Establishment of function as regional disaster prevention center, cooperation with local governments</li> </ul>		
<b>Sustainable procurement</b>	<ul style="list-style-type: none"> <li>■ Diffusion of sustainable procurement policy</li> </ul>				
<b>Maximization of people's well-being</b>		<ul style="list-style-type: none"> <li>■ Promotion of DE&amp;I, enhancement of human capital, and improvement of job satisfaction</li> <li>■ Co-existence and co-prosperity at business sites with local communities</li> <li>■ Diffusion of human rights policy of our Group</li> </ul>			
<b>Enhancement of corporate governance</b>		<ul style="list-style-type: none"> <li>■ Maintaining a structure centered on the Sustainability Promotion Committee</li> <li>■ Effective corporate governance and ensuring compliance</li> </ul>			

# Long-Term Vision: The 2030 Vision

In 2017, the Hitachi Zosen Group formulated the Hitz 2030 Vision, our long-term vision, to clarify our desired image for 2030 and to promote initiatives aimed at achieving them. We have now revised part of the content to present a new vision for the Hitachi Zosen Group as the 2030 Vision. While contributing to the achievement of a sustainable society through our overall business activities, our Group aims to enhance its earning power. Through the 2030 Vision initiatives, we will strive to further improve communication with our stakeholders.

## Review of the long-term vision

Our Group has newly formulated the Sustainable Vision, a vision outlining our desired image in the year 2050, and we have revised part of the existing long-term vision as a milestone toward the realization of the Sustainable Vision. In recent years, companies have been called upon more than ever before to make efforts to address climate change, conserve and revitalize the environment, and realize a safe and secure society. Accordingly, and in light of the Seven Pillars of Success (Materiality) defined in the Sustainable Vision, we have redefined our Group's business fields under the 2030 Vision as decarbonization, resource circulation, and the development of

safe and prosperous communities. As a solution partner for a sustainable, safe, and secure society, we are actively working to solve social issues in these three business fields.

In addition, in light of changes in the business environment and the progress in our business performance, we have partially revised our financial targets as shown in the table below. We have made no change to our policy of placing the highest priority on improving profitability and aiming for an operating income margin of 10% by 2030. By making every effort to resolve issues through dialogue with customers and the market, we will improve our Group's operating margin.

	Previous 2030 targets	New 2030 targets
Net sales	¥1 trillion	Achieve ¥1 trillion as early as possible in the 2030s
Operating income margin	10%	10%
Shareholder equity ratio	40%	~*
ROE	10%	More than 10%
Overseas business ratio	50% of net sales	50% of net sales and operating income

\* As total assets are expected to increase due to active investment in growth areas, the equity ratio will be considered in a flexible manner while maintaining a sound financial structure.

## Efforts toward realization of the 2030 Vision

Under the 2030 Vision, we are working to create and expand growth businesses based on the foundation of sustainable growth of existing businesses.

In the existing businesses, in order to secure stable profits, we will enhance the added value of products and services such as remote monitoring and predictive maintenance using IoT and AI, as well as expand operation and maintenance (O&M) services such as maintenance and outsourced plant operations. Currently, new projects account for more than half of our Group's total net sales, but we will implement various measures to reverse the ratio of new projects and O&M businesses by 2030. At the same time, we will continue to focus on the

selection and concentration of our businesses to shift resources to growth areas and strengthen the earnings structure of the Group.

In the growth businesses, we aim to create growth and highly profitable businesses by making strategic business and development investments in our three business areas of decarbonization, resource circulation, and the development of safe and prosperous communities. In particular, during the period of the new medium-term management plan Forward 25, we plan to actively invest in the renewable gas business in Europe, which is expected to grow significantly, and the domestic industrial waste business. Furthermore, in overseas markets where sustainable growth is expected to continue in

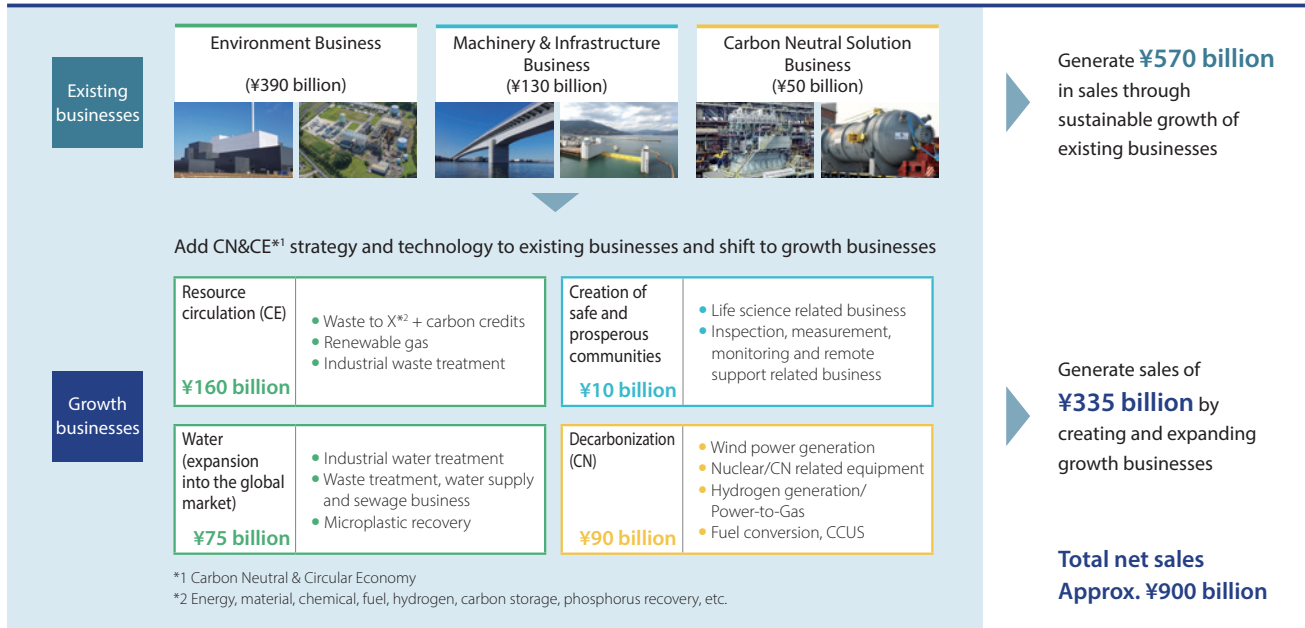
the future, we will strengthen the Group's global business structure, formulate strategies tailored to each country and region, and aim to expand overseas businesses while demonstrating group synergies. As a result, we aim to increase the ratio of overseas businesses to 50% of net sales and

operating income by 2030.

By 2030, we aim to achieve a combined business scale of ¥900 billion in existing and growth businesses, and aim to achieve ¥1 trillion in net sales as early as possible in the 2030s.

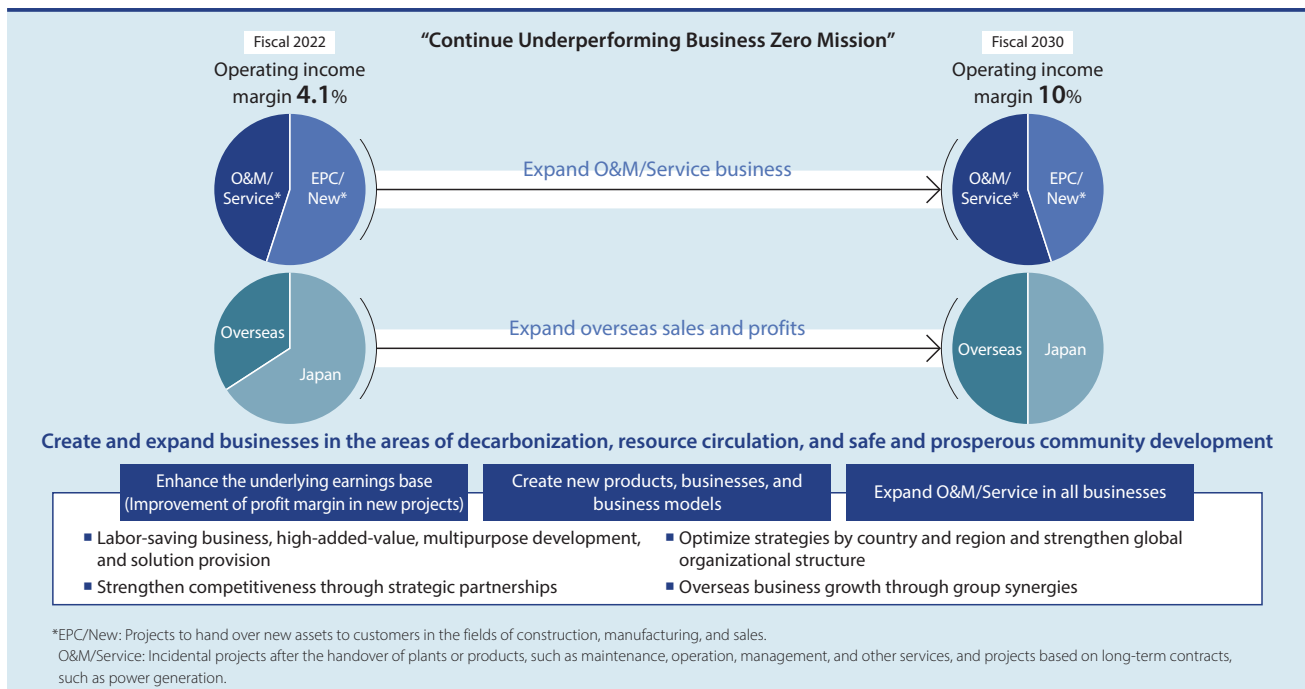
**The 2030 Vision—Our business vision**

**Vision for 2030: Sustainable growth of existing businesses and creation and expansion of growth businesses**



**The 2030 Vision—Strategy to increase profitability (operating income margin of 10%)**

**Create growth businesses and highly profitable businesses (operating income margin of 10%) by expanding strategic business and R&D investments**



# Value Creation Process

Corporate philosophy

We create value useful to society with technology and

## Inputs

### Human capital

- Number of consolidated employees: 11,400 (Japan: 8,959, overseas: 2,441)

### Intellectual capital

- Core technologies of WtE and biogas plants, rich track record and know-how in large-scale plant EPC
- Technical development to respond to climate change (onshore and offshore wind power generation, hydrogen, methanation, etc.)
- Number of industry-academia collaborative research projects: 27

### Social and relational capital

- Number of Group companies: 154 (Japan: 81, overseas: 73)
- Trust and brand power  
Track record (worldwide) ▶ P.6  
Waste treatment facilities: 1,400 (including licensees)  
Water treatment facilities: 261

### Financial capital

- Shareholders' equity ¥139.6 billion
- Interest bearing debt ¥86.5 billion

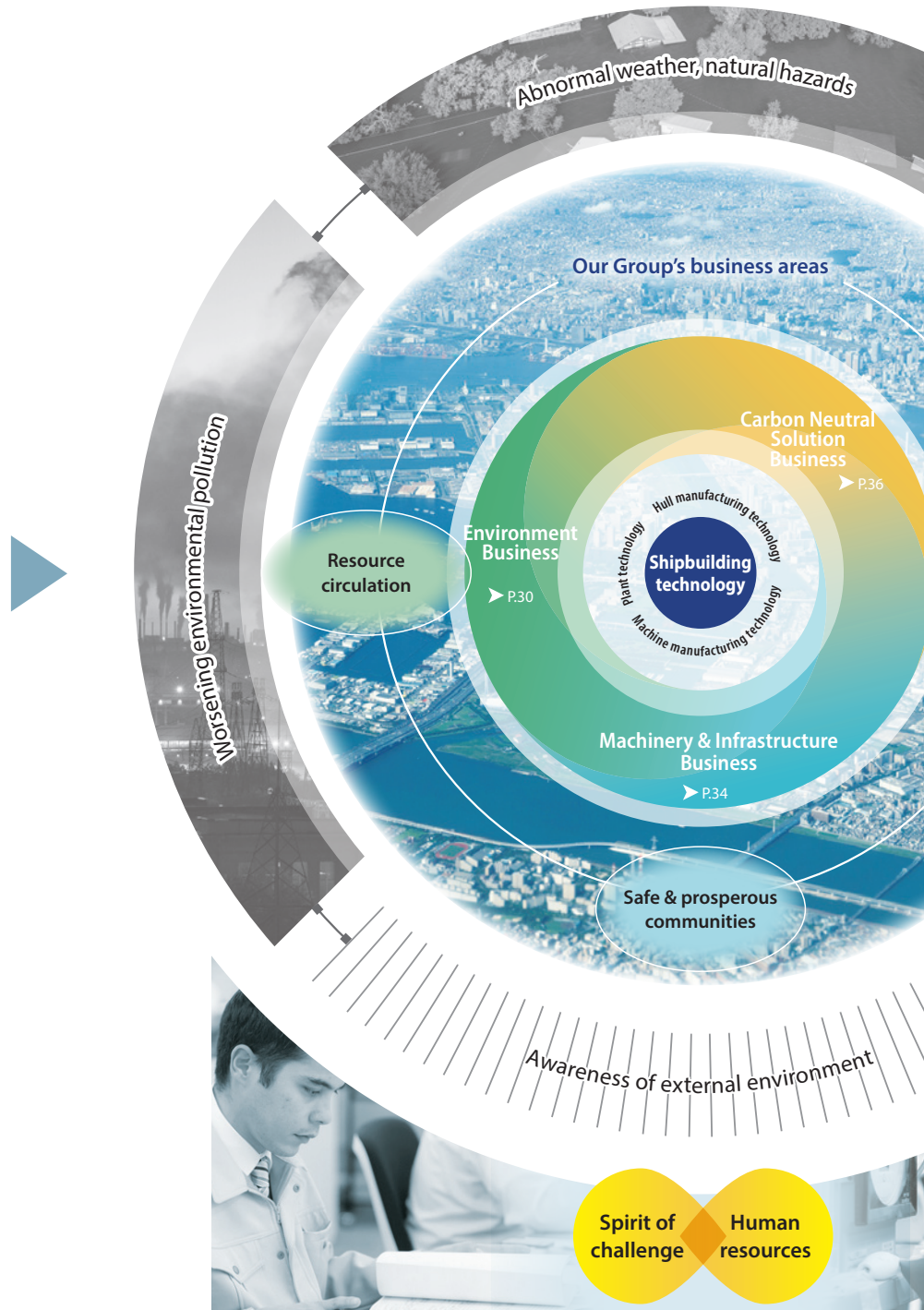
### Manufacturing capital

- Capital expenditures ¥7.9 billion
- R&D expenses ¥8.6 billion
- Major manufacturing bases: 7 in Japan

### Natural capital ▶ P.72

- Energy consumption\*1: 4,611 TJ
- Water consumption\*1: 1,426 million m<sup>3</sup>
- Renewable energy sources such as wind and solar

## Hitachi Zosen's business model

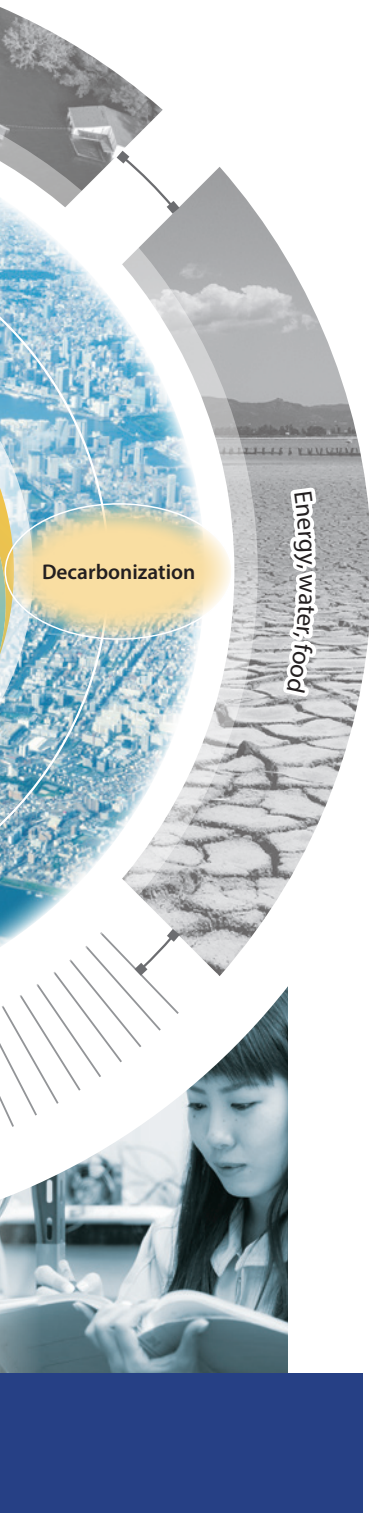


\*1 The Company and certain consolidated subsidiaries (covering 80% of consolidated net sales)

Technology-driven company  
Customers' trust and co-existence  
Diversity and globalization

# Integrity to contribute to a prosperous future.

The basic philosophy of the Hitachi Zosen Group: the Hitz Value ▶ P.1, 11



**Future Figure for 2050**

**Sustainable Vision**

Seven Pillars of Success (Materiality)  
▶ P.16

**Management strategy**

**2030 Vision**

Medium-term management plan Forward 25  
▶ P.18, 24

## Outputs

### Environment Business

**Focus areas**

- WTE plants
- Biogas plants
- Biomass plants
- Water and sludge treatment facilities
- Desalination plants

### Machinery & Infrastructure Business

**Focus areas**

- Press machines for automobiles
- Precision machinery for semiconductors, food, and medical sectors, etc.
- Bridges
- Hydraulic gates and flap gates
- Monitoring of aging facilities and prolonging their service life

### Carbon Neutral Solution Business

**Focus areas**

- Marine diesel engines and SCR systems
- Process equipment
- Power to gas (PtG)
- Wind power generation

## Outcomes

### Human capital ▶ P.46

- Improvement in ability, motivation, and satisfaction  
Employee engagement index<sup>\*2,3</sup>: 55.9%
- Men taking childcare leave<sup>\*3</sup>: 49.5%
- Ratio of female employees<sup>\*3</sup>: 8.4%
- Ratio of non-Japanese employees<sup>\*3</sup>: 2.2%

### Intellectual capital ▶ P.40

- Number of patents held<sup>\*3</sup>: 1,249
- Number of technical papers published<sup>\*3,4</sup>: 105
- Number of in-house papers published by technical personnel<sup>\*3,4</sup>: 124

### Social and relational capital

- Improvement of customer satisfaction and reliability
- Responding to the shrinking labor force and maintaining the operation of basic living infrastructure during natural disasters and pandemics
- Supply of clean energy and contribution to energy security
- Contribution to and revitalization of local communities (creation of jobs, environmental education, creation of disaster prevention bases and local communities)

### Financial capital ▶ P.28

- TSR (total shareholder return)  
Cumulative total for the past 3 years: 160.9%  
Cumulative total for the past 6 years: 48.9%

### Natural capital

- GHG (CO<sub>2</sub>) reduction  
Annual reduction through products<sup>\*5</sup> ▶ P.39  
22.06 million t-CO<sub>2</sub>e
- Landfill reduction and sanitary waste treatment
- Supply of clean water

<sup>\*2</sup> Implemented in fiscal 2021. Measured based on the employee awareness survey conducted biennially.

<sup>\*3</sup> Hitachi Zosen non-consolidated

<sup>\*4</sup> Newly issued in fiscal 2022

<sup>\*5</sup> Calculated based on the power generation capacity (excluding use of heat inside facilities) of operating facilities (including licensees) using our Group's technologies, "The Method of Calculating Greenhouse-Gas Emissions and List of Emission Coefficients" issued by the Japanese Ministry of the Environment, and "Global Warming" (emission factors in foreign countries) by the Agency for Natural Resources and Energy.

# Medium-Term Management Plan

## Review of past medium-term management plans

In 2017, the Hitachi Zosen Group formulated its long-term vision, Hitz 2030 Vision, and has been formulating and implementing measures for its medium-term management plan working back from the future reference point of its ideal state in 2030. During the Change & Growth period (fiscal 2017–2019) and the subsequent Forward 22 period (fiscal 2020–2022), we made steady progress toward realization of the long-term vision, including improvement of our business foundation and the rebuilding of overseas subsidiaries whose performance has been sluggish. At the same time, the external environment changed at a dizzying pace, including rising demand for decarbonization to mitigate climate change, the spread of COVID-19, and acceleration of inflation. Under these circumstances, as a solution partner for a sustainable, safe, and secure society, our Group aims to be a company that itself grows vigorously and sustainably.

	Change & Growth Fiscal 2017–2019	Forward 22 Fiscal 2020–2022
Positioning	Three years of laying the foundation to realize the Hitz 2030 Vision	A period for boosting profitability to ensure that results are achieved
Basic policies	<p><b>1. Restructure the business foundation and improve productivity</b></p> <ul style="list-style-type: none"> <li>(1) Expand business areas</li> <li>(2) Utilize ICT technology</li> <li>(3) Strengthen the risk management system</li> <li>(4) Actualize and promote measures for high profitability</li> <li>(5) Strengthen financial position and expand growth investment capacity</li> </ul> <p><b>2. Maximize the Group's comprehensive strengths</b></p> <ul style="list-style-type: none"> <li>(1) Realize synergies by forming business clusters</li> <li>(2) Focus on consolidated business management</li> <li>(3) Develop human resources through job rotation</li> </ul> <p><b>3. Promote portfolio management</b></p> <ul style="list-style-type: none"> <li>(1) Clarify business positioning through portfolios</li> <li>(2) Prioritize management resources for growth and new businesses</li> <li>(3) Consider revitalizing sluggish products and assess their prospects</li> </ul>	<ul style="list-style-type: none"> <li>• Contribute to the realization of a sustainable, safe, and secure society through all our corporate activities</li> <li>• Boost our own profitability and aim to be a corporate group that can achieve sustainable growth</li> </ul> <p><b>1. Enhance the added value of products and services</b></p> <ul style="list-style-type: none"> <li>(1) Utilize cutting-edge technologies</li> <li>(2) Shift business locations and promote interaction with customers and markets</li> <li>(3) Maximize the Group's comprehensive strengths</li> </ul> <p><b>2. Promote business selection and concentration and allocate resources to growth areas</b></p> <ul style="list-style-type: none"> <li>(1) Introduce the Hitz Goal Achievement Monitoring System</li> <li>(2) Further promote portfolio management</li> </ul> <p><b>3. Achieve workstyle reform by improving operational efficiency and productivity</b></p> <ul style="list-style-type: none"> <li>(1) Improve operational efficiency through changes in the Group management system</li> <li>(2) Review the state of manufacturing businesses</li> <li>(3) Promote human resource development and workstyle reform</li> </ul>
Financial targets and results	<p><b>Fiscal 2019 targets (at the time of planning)</b></p> <p>Order intake ¥460 billion, net sales ¥430 billion, operating income ¥20.5 billion (Operating income margin 4.8%)</p> <hr/> <p><b>Fiscal 2019 results</b></p> <p>Order intake ¥454.1 billion, net sales ¥402.4 billion, operating income ¥13.8 billion (Operating income margin 3.5%)</p>	<p><b>Fiscal 2022 targets (at the time of planning)</b></p> <p>Order intake and net sales ¥400 billion level, operating income margin 5%</p> <hr/> <p><b>Fiscal 2022 results</b></p> <p>Order intake ¥737.5 billion, net sales ¥492.6 billion, operating income ¥20 billion (Operating income margin 4.1%)</p>
Achievements	<ul style="list-style-type: none"> <li>• Established the Hitz Advanced Information Technology Center (A.I/TEC) and implemented a new core business system (SAP) to improve operational efficiency and enhance profitability</li> <li>• Implemented management reforms under the new CEO and strengthened Hitachi Zosen's governance to restore Inova's earnings.</li> <li>• Improved the balance sheet: Disposed of ¥6.5 billion in inventories related to the U.S. shield tunneling machine business and ¥9.8 billion in Japan Marine United stock in fiscal 2019</li> </ul>	<ul style="list-style-type: none"> <li>• Improved Inova's performance through management reform, acquired new WtE business, and won overseas O&amp;M projects</li> <li>• The Hitz Goal Achievement Monitoring System: Established system for monitoring KSF and KPI by business unit</li> <li>• Closed and consolidated Kashiwa Works to other facilities, established joint ventures with other companies in shield tunneling machines, marine diesel engines, and radioactive waste-related businesses, and transferred shares in non-core businesses (logistics, deck machinery, etc.)</li> <li>• Executed strategic acquisitions to expand WtE, biogas, and O&amp;M businesses in Europe</li> <li>• Established Carbon Neutral Solution Business Headquarters and Global Headquarters</li> </ul>
Continuing issues	<ul style="list-style-type: none"> <li>• Missed targets for operating income and other profit items</li> <li>• Break away from an earnings structure in which the O&amp;M services of the environmental and plant division support company-wide profits</li> <li>• Further promote portfolio reform aimed at structural reform of the manufacturing business and optimal allocation of management resources</li> </ul>	<ul style="list-style-type: none"> <li>• Enhance profitability (reduce defect costs by eliminating technical troubles, respond to global supply chain disruptions, minimize the impact of inflation on earnings)</li> <li>• Strengthen synergies with domestic and overseas Group companies</li> <li>• Continue to implement business portfolio management as part of organizational reforms to expand growth areas and focus businesses</li> <li>• Execute strategic investments to create growth businesses</li> </ul>



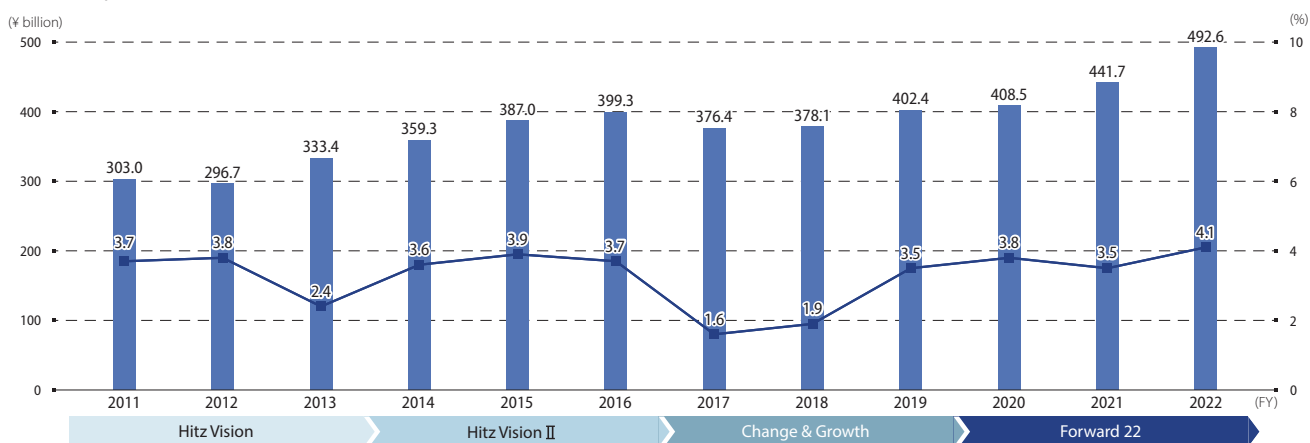
### Review of Forward 22

During the three years of Forward 22, the overseas business steadily moved onto a growth track, and the Group's order intake and net sales exceeded the initial target of ¥400 billion throughout the three years. On the profit side, however, the operating income margin for fiscal 2022, the final year of the plan, was 4.1%, failing to reach the target of 5% due to the deteriorating profitability of individual projects, supply chain disruptions and soaring raw material prices following the outbreak of COVID-19, and the emergence of geopolitical risks.

For each of the three basic policies, we made progress as planned, including utilization of cutting-edge technologies based on the DX strategy, promotion of business selection and concentration, shifting of resources to growth areas, and human resource development and workstyle reform. In particular, with

regard to portfolio management, under the Hitz Goal Achievement Monitoring System, which was launched in fiscal 2020, we regularly reviewed business strategies and measures using a PDCA cycle based on indicators such as key goal indicators (KGIs) and key success factors (KSFs) for achieving them. We also conducted a comprehensive evaluation that included a long-term assessment from the point of view of alignment with the Group's vision (long-term vision) and sustainability, which led to the strategic reallocation of management resources. With regard to the remaining issue of maximizing the Group's comprehensive strengths, we will continue to work toward expanding synergies with domestic and overseas Group companies, including strengthening the functions of the Global Headquarters, which was established in fiscal 2021.

### Business performance



Basic policies	Progress	Status
1. Enhance the added value of products and services	① Utilize cutting-edge technologies → Promote DX strategy	○
	② Shift business locations and promote interaction with customers and markets → Slow progress due to the impact of COVID-19. Gradually recovering in fiscal 2022	△
	③ Maximize the Group's comprehensive strengths → Rebuild strategies to expand synergies with domestic and overseas Group companies	△
2. Promote business selection and concentration and allocate resources to growth areas	① Introduce the Hitz Goal Achievement Monitoring System	○
	② Further promote portfolio management → Alliance with Imabari Shipbuilding in the marine diesel engine business, alliance with Kawasaki Heavy Industries in the shield tunneling machine business, joint venture with TEPCO for cask manufacturing, acquisition of Steinmüller by Inova, transfer of shares of a transport subsidiary to SENKO Group Holdings	○
3. Achieve workstyle reform by improving operational efficiency and productivity	① Improve operational efficiency through changes in the Group management system → Review part of the functions of the common divisions	△
	② Review the state of manufacturing businesses → Alliance in marine diesel engines (Ariake area), reorganization of filter press and electrolyzer business from Kashiwa Works to Chikko Works, activities to improve production technology	○
	③ Human resources development and workstyle reform → Promote human resources strategies (recruitment, development, retention, etc.)	○

## Medium-Term Management Plan

### New medium-term management plan Forward 25

The new medium-term management plan, which starts in fiscal 2023 succeeding Forward 22, which achieved certain results, has been named "Forward 25" with a view to further growth. The vision outlining our desired image in the year 2050, the Sustainable Vision, serves as a compass that shows the direction of the entire Group, and the 2030 Vision, the vision outlining our desired image in the year 2030, serves as a milestone for the Sustainable Vision. Forward 25 is a new first step toward achieving these visions. In carrying out Forward 25, we have established three basic policies: sustainable growth of existing businesses, creation and expansion of growth businesses, and promotion of sustainable management. We will continue to prioritize improving profitability and have set goals targeting order intake of ¥600 billion, net sales of ¥560 billion, and ¥28 billion in operating income (operating income margin of 5.0%) in fiscal 2025, but we will aim for an even greater increase in operating income.

#### Financial targets

	Fiscal 2022	Fiscal 2025 targets
Order intake	¥737.5 billion	¥600 billion
Net sales	¥492.6 billion	¥560 billion
Operating income (operating income margin)	¥20.0 billion (4.1%)	¥28 billion (5.0%)
ROE	11.5%	9.5%

#### Basic policies and priority measures

Basic policies	Priority measures	
<b>1</b> Sustainable growth of existing businesses	<b>1</b> Expanding overseas businesses <b>2</b> Promoting structural reform of businesses <b>3</b> Expanding O&M services and improving profitability of new EPC projects	
	<b>2</b> Creation and expansion of growth businesses	<b>1</b> Execution of investment strategies <b>2</b> Investment in priority areas <ul style="list-style-type: none"> <li>■ Decarbonization (CN*<sup>1</sup>) business: wind power generation, nuclear power/ CN-related equipment, hydrogen and power-to-gas (PtG), fuel conversion, CCUS</li> <li>■ Resource circulation (CE*<sup>2</sup>) business: Waste to X*<sup>3</sup> and carbon credits, renewable gas production and sales, industrial waste treatment business</li> <li>■ Water business: industrial water treatment, waste treatment, water supply and sewerage</li> <li>■ Life science related business: Various devices for drug discovery, regenerative medicine, and next-generation medicine</li> <li>■ Inspection, measurement, monitoring and remote support related business</li> </ul>
	<b>3</b> Promotion of sustainable management (enhancement of corporate value)	<b>1</b> Strengthening human capital      Details ▶ <a href="#">Human Capital and Human Resources Strategies P.46</a> <b>2</b> Decarbonization in business activities      Details ▶ <a href="#">Environmental Data P.72</a> <b>3</b> Promoting DX Strategies      Details ▶ <a href="#">DX Promotion P.42</a> <b>4</b> Thorough risk management      Details ▶ <a href="#">Risk Management P.68</a>

\*1 Carbon Neutral

\*2 Circular Economy

\*3 Energy, material, chemical, fuel, hydrogen, carbon storage, phosphorus recovery, etc.

**Basic policy 1 Sustainable growth of existing businesses**

**Priority measures 1**

**Expanding overseas businesses**

In Japan, Waste to Energy (WtE) plants for municipal waste, which account for a large percentage of our Group's net sales, are deployed virtually nationwide and are positioned as a mature market. Also, since the population is expected to decline over the long term, fluctuations in demand are expected to be small. Meanwhile, as populations grow overseas, demand for sanitary waste treatment and use of WtE is increasing, especially in emerging countries. In Europe, many business opportunities exist for our Group, such as the European Commission's announcement of a plan to significantly expand biogas facilities in order to break away from dependence on energy from Russia.

Against this backdrop, we have positioned expanding the overseas businesses as a priority measure, and will further strengthen our global structure and make active investments. We will focus on the WtE plant operations, biogas business, water business, and nuclear power related business, identify key growth regions for each, and work to expand these businesses in cooperation with overseas Group companies.

As a KPI for fiscal 2025, we aim to increase the ratio of the overseas businesses to 40% of net sales. In addition, 2030 Vision, our long-term vision, sets a target of achieving a 50% ratio for both net sales and operating income in overseas businesses by fiscal 2030.

Our Group also plans to review its organizational structure during the period of Forward 25 to unify our global business strategy with an eye to the entire overseas business of the Group.

**Priority measures 2**

**Promoting business structural reforms**

We will continue to promote portfolio management, which was a priority measure under Forward 22, and accelerate the shift of management resources to growth areas. In selecting and concentrating businesses, we will not only review our business

strategies and specific measures on a regular basis through the PDCA cycle under the Hitz Goal Achievement Monitoring System, but also verify the consistency of each business with the Sustainable Vision and the 2030 Vision, aiming to achieve both business growth and social contribution. In strategic partnerships with other companies, we will strive to strengthen the competitiveness of our products and businesses by combining the strengths of both companies.

**Priority measures 3**

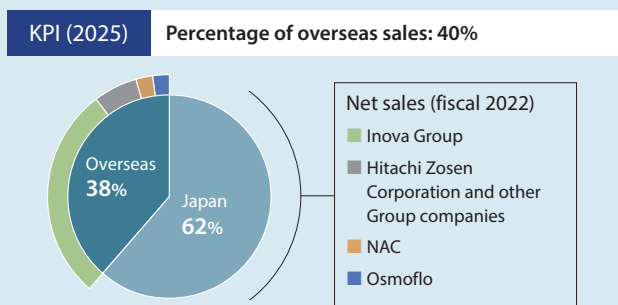
**Expanding O&M services and improving profitability of new EPC projects**

Under Forward 25, our KPIs for FY2025 are to achieve a 50% ratio of net sales from operation and maintenance (O&M) services and to make new engineering, procurement, and construction (EPC) projects profitable.

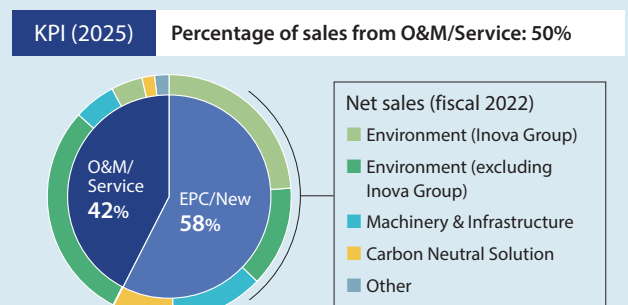
In the domestic environmental business, after-sales O&M services, which are expected to generate continuous and stable earnings, account for a large percentage of net sales, and we plan to expand this in the overseas environmental business, machinery and infrastructure business, and decarbonization business. In new markets for WtE, such as the Middle East and Australia, long-term O&M contracts are often awarded in conjunction with new plant construction. We aim to increase the proportion of O&M services overseas by building up these orders. We also work to extensively broaden the knowledge and expertise of the Hitz Advanced Information Technology Center (A.I/TEC) and the Technical Research Institute on product life, condition monitoring, predictive maintenance, autonomous operations, and decision support for a wide range of products and services other than WtE plants to save human resources and labor as well as achieve added value.

In new EPC projects, profit margins have tended to be relatively low, but we aim to increase profitability by creating new business models through shifting business locations and by adding high value to products and businesses by promoting DX.

**Expanding overseas businesses**



**Expanding O&M/Service**



**Basic policy 2** Creation and expansion of growth businesses

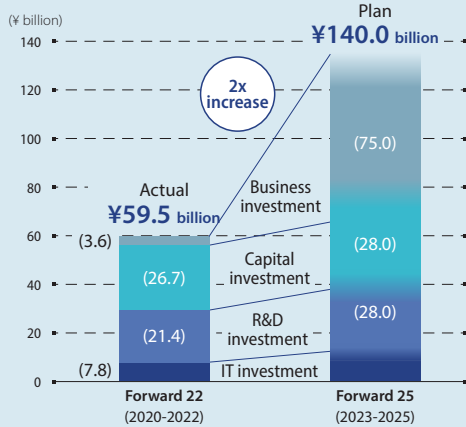
**Priority measures 1** Execution of investment strategies

**Accelerate the creation and expansion of growth businesses by implementing strategic business and R&D investments**

**Investment policy**

- Promote investment in priority areas over the three-year period to fiscal 2025
- Regarding business investment, actively invest in promising projects while paying attention to profitability and risks
- Increase capital, R&D, and IT (DX) investments

Investment amount Actual and plan



**Business investment: ¥75 billion level**

- Waste to X (approx. ¥40 billion)
  - Biogas business in Europe and America (operated in-house)
  - Investment in overseas WtE projects
  - Promotion of recycling business (including industrial waste treatment)
- Wind power generation projects (¥5–10 billion)
  - Investment in projects
- Other (approx. ¥25 billion)
  - Acquisitions to expand water business, nuclear power related business, etc.

**Capital investment: ¥28 billion level**

- Rationalization and replacement of aging equipment to improve productivity
- Facilities for new products and businesses, as well as for increased and enhanced production

**R&D investment: ¥28.0 billion level**

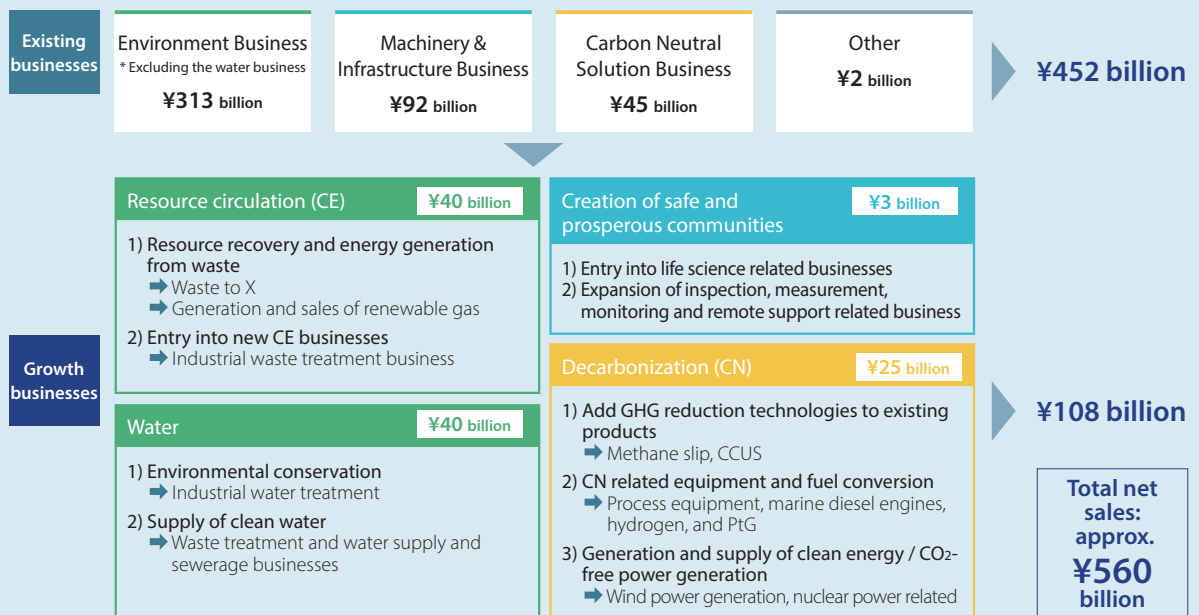
- Post-combustion and other next-generation technologies
- Offshore wind power foundations, larger electrolyzer equipment, methane slip reduction technology for LNG carriers (utilizing GI Fund)
- Life science related
- Smart factory

**IT (DX) investment**

- Investment in line with business expansion

**Priority measures 2** Investment in priority areas

**Create and expand growth businesses while achieving sustainable growth in existing businesses**



\* Figures are sales targets for FY2025.

## Main initiatives

### Priority measures ①

#### Execution of investment strategies

In the three years under Forward 25, we plan to invest ¥140 billion, more than double the amount under Forward 22. We will actively make investments in promising projects, mainly in priority areas, while taking into account the profitability and risks of the business. Business investment is at the heart of this strategy and expected to be at the ¥75 billion level, of which approximately ¥40 billion is planned for the Waste to X related businesses, including the biogas business, for which demand is emerging in Europe and America, and the domestic recycling business. We will also make necessary investments in water- and nuclear-related businesses, etc. to expand into the global market. We plan R&D investment at the ¥28 billion level, and by utilizing the Green Innovation Fund (GI Fund) and other means, we will promote the development of post-combustion and other next-generation technologies, low-cost wind power generation projects, and larger electrolyzer equipment. We will also actively pursue investments in information technology (DX), which forms the foundation of our entire business.

### Priority measures ②

#### Investment in priority areas

##### ■ Resource circulation (CE) business

In our existing businesses, we will continue to expand our core businesses including supply of electricity through incineration or gasification of general waste. In our growth businesses, we will expand the scope of treatment to include industrial waste, and expand our business areas to include volume reduction treatment utilizing our proprietary technologies such as incineration, gasification, fermentation, and carbonization, as well as Waste to X, which produces a wide variety of valuable substances from waste to provide energy and resources. Overseas, centering on Inova, we will actively engage in the biogas business, for which demand is emerging in Europe and America for achieving energy self-sufficiency. In Japan, in May 2023, we entered into a business alliance agreement with TRE Holdings Corporation, which is building an integrated system for industrial waste treatment and resource recycling. This will contribute to the realization of a circular economy by rationally treating municipal waste and industrial waste, which were previously collected and treated separately, in an integrated system.

##### ■ Water business

We will leverage our integrated technologies such as desalination and wastewater treatment to expand our business from Australia and Japan to the global market. Hitachi Zosen and Australia-based Osmoflo will work together to formulate business strategies and deal with M&A and large-scale projects. In Japan, we will maintain our number one market share in human waste treatment facilities and expand sales of water purification facilities in Southeast Asia tailored to the needs of each country. Osmoflo will maintain its number one market share in mining water treatment facilities in Australia and expand its business to water treatment for other industries.

##### ■ Creation of safe and prosperous communities

Amid growing interest in health and safety, the life science related business is expected to grow over the long term. Leveraging the strengths of the technologies that our Group has cultivated over the years including mechanical engineering, electrical control, sterilization, and AI analysis, we will aim to enter new markets such as drug discovery and the manufacture of medical-related equipment. We are currently promoting joint development with universities and startup companies, and we plan to actively invest in future business creation.

##### ■ Decarbonization business (CN)

We will create new value by adapting existing products to meet decarbonization needs, such as converting to LNG, methanol, and other clean fuels and reducing methane slip in LNG fuel in the marine diesel engine business, and ammonia tanks in the process equipment business. In the nuclear power related equipment business, we will work with our U.S. subsidiary NAC International to meet domestic and overseas demand for casks and canisters for the transport and storage of spent fuel in anticipation of an increase in restarts and new construction of nuclear power plants.

In new technologies, we will promote R&D and demonstration projects aimed at the growth of the power-to-gas business, including hydrogen production and methanation, as well as of the wind power generation business. We are currently using the GI Fund to increase the size and efficiency of hydrogen production equipment and to develop floating structures for offshore wind, working toward early commercialization while also leveraging external resources through subsidies and collaborations with other companies.

# Financial Strategy

## Message from the General Manager



**Satoshi Kimura**  
Senior Managing Executive Officer  
General Manager of Corporate Planning Headquarters

## Focus on creating and expanding growth businesses and improving profitability

Hitachi Zosen's history is a history of business transformation. We contribute to society by engaging in new businesses in response to evolving social needs and markets. In the past, we achieved success not only in our founding shipbuilding business, but also in railway car manufacturing, as well as in the e-commerce and food businesses. Even today, we continue to revise our business portfolio with a focus on sustainability, looking ahead to 2030 and beyond to 2050.

During the period of the new medium-term management plan, which started in fiscal 2023, we will accelerate the creation and expansion of growth businesses through active investment in business, R&D, and DX to achieve further growth. At the same time, we consider improving our profitability to be a top priority.

### Review of the previous medium-term management plan (fiscal 2020–2022)

Under the previous medium-term management plan Forward 22, there were events that had a significant impact on corporate activities, including the spread of COVID-19 and global inflation. Under these circumstances, our Group was able to achieve the initial target of a ¥400 billion level of order intake and net sales. In terms of profitability, ROE in the final year of the plan was 11.5%, exceeding 10% for the first time in 11 fiscal years, partly due to extraordinary income. However, the operating income margin was only 4.1%, compared to the target of 5%. Thus, the strengthening of profitability remains an issue.

During this period, the structural reform of Hitachi Zosen Inova (Inova), based in Switzerland, has made significant progress, and demand for large-scale Waste to Energy (WtE) plants has expanded from Europe to the Middle East and other regions, greatly increasing Inova's contribution to the Group's business performance.

Due to the large proportion of domestic business centered on the public sector, our Group has been in a cycle of posting

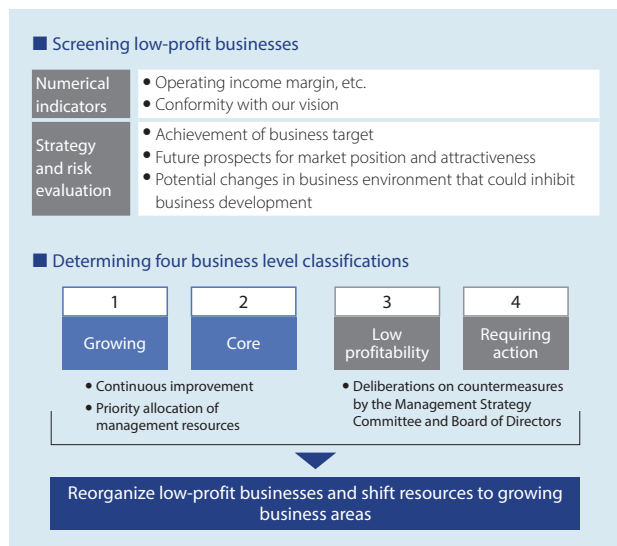
losses in the first half of the year, with most of our profits concentrated in the fourth quarter. However, thanks to the growth of Inova, this gradually leveled out, and in the first half of fiscal 2022, we posted a first-half operating income for the first time in 10 fiscal years.

In order to focus management resources on priority areas, we are revising our business portfolio not only from the perspective of profitability but also of long-term sustainability, and we have made progress in this through transferring subsidiaries, forming alliances with other companies, and selling cross-shareholdings. Overseas, while acquiring maintenance companies in European countries, we also built a foundation for strengthening profitability by investing in ERP to promote the digital transformation of business information management and operations.

### New medium-term management plan Forward 25 (fiscal 2023–2025)

In our long-term vision, which we aim to achieve in fiscal 2030, we have set a high target of 10% for both ROE and operating

### Hitz Goal Achievement Monitoring System



### Main initiatives related to business portfolio management under Forward 22

Timing	Content	Acquisition	Strategic alliance	Transfer
Apr 2020	Inova acquires French maintenance company ESTI	○		
Nov 2020	NAC invests in U.S.-based Deep Isolation		○	
Jul 2021	Inova acquires German biogas company	○		
Oct 2021	Alliance with Kawasaki Heavy Industries in shield machine business		○	
Feb 2022	Inova acquires Steinmüller of Germany	○		
Apr 2022	Inova acquires EST Industries of France	○		
Sep 2022	Transferred shares in deck machinery subsidiary			○
Oct 2022	Formed joint venture with TEPCO HD to produce used fuel casks		○	
Dec 2022	Spin-off of marine diesel engine business for alliance with Imabari Shipbuilding		○	
Feb 2023	Transferred 66.6% of shares in logistics subsidiary		○	

income margin. While we have positioned Forward 25 as a milestone toward this goal, it is clear that strengthening profitability is the most important issue given the current equity ratio (29.1% at the end of March 2023).

During the period of the previous medium-term management plan (fiscal 2020–2022), we made business investments such as the acquisition of biogas and maintenance businesses in Europe and a radioactive waste disposal related business in North America. In the three years starting from fiscal 2023, we plan to invest a total of ¥140 billion, including ¥75 billion in business investments such as in-house development of the biogas business, for which the European Commission has announced the need for large-scale facility expansion.

► Execution of investment strategies P.26-27

The main source of funds will be the operating cash flow for the next three years as well as the current high level of cash and deposits. We believe that this will prevent any significant impact on our financial soundness, although some of the investment funds planned for the next three years are expected to be financed externally through bank loans and corporate bonds.

In order to make appropriate business investment decisions, our Group has set investment decision criteria, including for acquisitions, and has determined appropriate levels of return and payback periods based on the WACC, depending on the details, risk, and country of the target project, and implements them while reviewing them as appropriate. In addition to this, in April 2023, we established a new internal process, the Investment Committee, to assess business investment risks in order to promote the strategy for expanding business investment. The Committee members include the general managers of the Corporate Planning Department, the Finance Department, the Accounting Department, the Project Risk Management Department, and the Legal Department under the chairmanship of the General Manager of the Corporate Planning Headquarters (myself). Its purpose is to evaluate the risks of the subject business from multiple perspectives and to establish a system to strengthen investment risk management and secure appropriate returns.

► Risk management for business investment projects P.69

### Financial strategy conscious of the cost of capital

In our Company, there are two types of businesses: those that generate stable added value by utilizing assets such as factories, and those that generate added value on a project basis without requiring large assets, such as plant engineering. In order to promote management that is conscious of not only profit and loss figures but also capital cost, we began calculating ROIC by business unit in fiscal 2022. Through the PDCA cycle, we aim to increase the accuracy of appropriate ROIC based on the respective characteristics and utilize it in management strategies and decisions.

Our Group's business foundation has long been in engineering and manufacturing, which occupy midstream positions in the value chain, but we are also working to expand

into businesses with higher added value and profitability, namely businesses that occupy upstream and downstream positions in the value chain, as well as service businesses such as operation and maintenance. We aim to build partnerships with our customers and business partners that leverage each other's strengths.

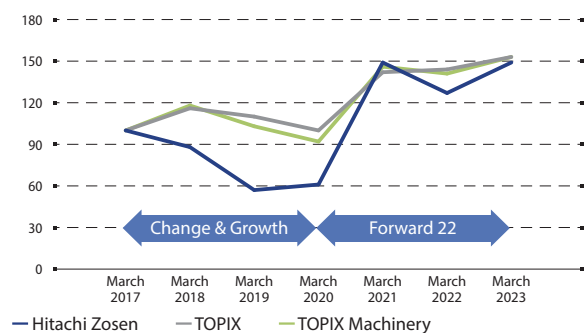
On March 31, 2023, the Tokyo Stock Exchange announced a request for listed companies, "Action to Implement Management that is Conscious of Cost of Capital and Stock Price." As mentioned above, we are working to strengthen profitability with an awareness of our cost of capital, return on capital, and balance sheet. In order to realize appropriate allocation of management resources, we will accelerate the visualization of these management indicators, establish internal processes to utilize them in discussions at the management level, and promote efforts to disclose them in an appropriate form by the end of fiscal 2023.

### Shareholder returns

We believe that the three years of Forward 25 are the right time to invest in the future growth to enhance long-term shareholder value while maintaining stable dividends as in the past.

Total shareholder return, including dividends and capital gains, improved during the period of the previous medium-term management plan (April 2020–March 2023) due to the rise in stock price. In addition to the improvement in earnings, we believe this reflects the market's expectations for our Company, and we will continue to actively engage in dialogue with shareholders and investors to deepen their understanding of our Group's business.

#### Total Shareholder Return



	Past 1 year	Past 3 years		Past 6 years	
		Cumulative	Annual rate	Cumulative	Annual rate
Hitachi Zosen	18.5%	160.9%	37.7%	48.9%	6.9%
TOPIX	5.8%	53.4%	15.3%	52.7%	7.3%
TOPIX Machinery	8.6%	67.1%	18.7%	53.0%	7.3%

\*Total shareholder return (TSR): Represents the total return on investment to shareholders, combining capital gains and dividends.

\*TSR formula: For Hitachi Zosen, the formula is (cumulative dividend amount + stock price change amount) / investment amount (stock price). TOPIX is calculated based on the stock price index including dividends (compiled by the Company from the Tokyo Stock Exchange's monthly statistical report). The annual rate is the geometric mean.

\*The values in the graph are the market value based on TSR using the closing price data as of March 31, 2017 as 100 (until March 31, 2023).



## Expand overseas businesses through group synergies to build a high-profit structure and achieve resource circulation

**Michi Kuwahara**

Managing Director  
General Manager of Environment Business Headquarters

The Environment Business accounts for about 70% of the Hitachi Zosen Group's sales, and boasts a strong competitive advantage in Japan and overseas for engineering, procurement, and construction (EPC) of Waste to Energy (WtE) plants in particular, having an overwhelming market share and track record. We are also involved in environmental facilities such as industrial water treatment, sludge recycling treatment, and other water-related facilities. We strive to differentiate ourselves by enhancing added value in terms of technology and project management through EPC projects and operation, maintenance and services (O&M/Service).

Our environmental business dates back to Japan's first full-scale WtE plant delivered in Osaka City in 1965 through a technical alliance with Von Roll Environmental Technology of Switzerland (now Hitachi Zosen Inova, hereinafter Inova). Then, with the acquisition of Inova in 2010, our business territory expanded to include the entire world. In the water business, we acquired Osmoflo Holdings of Australia (Osmoflo), which has strengths in membrane-based water treatment technology, in 2017, and are advancing the business with a view to global expansion.

In plant engineering, our strengths lie not only in our individual technologies, but also in the accumulation of data based on our extensive track record and experience, and the ability to comprehensively manage this data. Especially in overseas markets where project finance is popular, the trust that we have earned based on our established track record is a major advantage for our Group's customers.

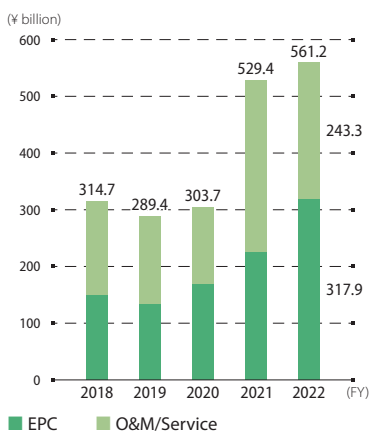
Japan is a mature market and the population is expected to continue declining, but looking overseas, the market is expected to grow further, including an increase in demand for sanitary waste treatment due to population growth, and plans to significantly increase the number of biogas plants in response to the energy crisis in Europe.

Our Group has been dealing with waste for many years, and going forward, we will be even more conscious of resource circulation and will focus on domestic and overseas expansion of our business areas from conventional Waste to Energy to Waste to X (resource and energy generation from waste).

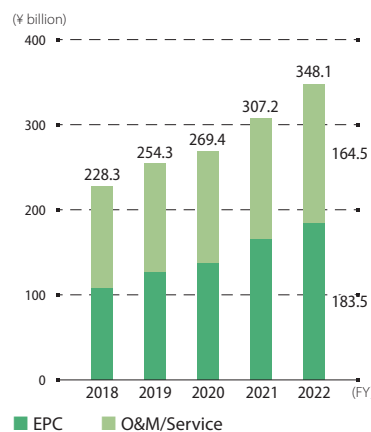
### Summary of the previous medium-term management plan Forward 22 (fiscal 2020–2022)

Of particular note is the growth of Inova. The latter half of the 2010s was a very difficult period, but under the new management team, Inova was able to complete a turnaround in fiscal 2020, and it has now become a growth driver for our Group. Since the 2010s, Inova has been engaged in EPC projects for waste treatment facilities mainly in the UK, but in recent years, it has expanded its business in new markets, and since 2020, the share of orders for WtE plants in the European and Middle East markets has grown to over 50%. Inova was able to increase its market share as players retreated from the highly competitive European market in the mid-2010s while it was also able to successfully capture demand in new markets such as the Middle East and Australia, where WtE adoption began in earnest. As a highly proven and reliable technology provider, Inova has the opportunity to participate in the new markets from the early stage, giving it a competitive advantage. In other

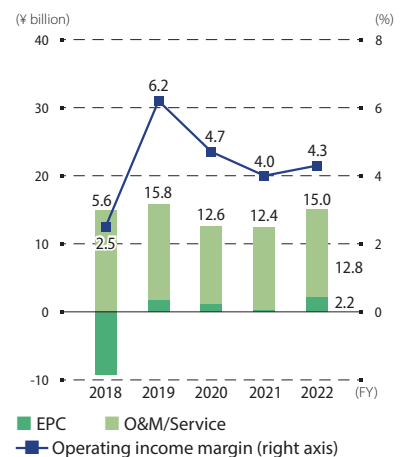
#### Order intake



#### Net sales



#### Operating income/ Operating income margin





countries and regions that currently rely heavily on landfill disposal, the need for sanitary waste treatment is expected to emerge along with economic development, and sustainable growth is expected in the future.

The business model for WtE plant operations differs between Japan and overseas. In Japan, orders are mainly received through local government bids, and when the company receives an EPC order, we also often receive an order for O&M services. On the other hand, in Europe, Inova only received EPC orders from waste treatment companies in the past, and as the plants have grown in size, there was the problem that earnings performance could fluctuate significantly on a single lost order or timing delay. This has led to a strategic focus on expanding O&M/Service overseas as well, and the results have become visible in the past few years.

The acquisition of Steinmüller Babcock Environment (now HZI Steinmüller; hereinafter Steinmüller) in 2022 has provided momentum for the expansion of O&M/Service in the European market. Steinmüller has many achievements in Germany and Scandinavian countries, including Finland, where our Group's market share is relatively low, and its technological strengths in boiler technology provide synergies with Inova, which has strengths in incineration technology. After the acquisition, we steadily gained orders, and in fiscal 2022, we achieved profitability earlier than planned. Steinmüller will play an important role in the future as the cornerstone in the expansion

Hitachi Zosen Inova's long-term operation orders

Order timing	Country	Project	Number of years under operation contract (after plant completion)
2020	Australia	Rockingham	20 years
2021	UAE	Dubai	35 years
2021	UK	Westfield	25 years
2023	UK	Slough	25 years
2023	UK	Earls Gate	25 years

We also received orders for design and supply of major equipment (or construction) for the above projects, with the exception of Earls Gate.

of our maintenance and service business.

Meanwhile, in Japan, there were also some points to reflect on and challenges, such as the occurrence of a significant cost overrun due to technical troubles. Rather than treating these costs as one-time trouble expenses, we will transform them into lessons learned for future growth, which will lead to improvements in technology, pursuit of quality, and eventually, increased earnings.

New medium-term management plan Forward 25

Market characteristics / our strengths

Market characteristics

Waste to Energy (WtE) plants

- Japan: Demand for waste treatment facilities is expected to remain flat, mainly due to renewal demand (annual order volume: 3,000–5,000 tons/day).
- Europe: The region began early efforts to prevent and reduce waste emissions and their harmful effects, resulting in widespread use of WtE facilities. The EU issued the Landfill Directive in 1999 to reduce landfill. The EU also plans to significantly expand biogas production to diversify energy sources.
- China: Although the number of new constructions is the largest in the world, it is difficult for foreign companies to be directly involved (the Hitachi Zosen Group grants licenses to local companies).
- New markets: Against a backdrop of increasing environmental awareness, an increase in waste and decreasing capacity at landfills, WtE began to be introduced in earnest from the late-2010s onward and is expanding (Middle East, Eastern Europe, Southeast Asia, Australia).

Water treatment facilities

- Providing water and sewage services for emerging markets, emerging need for desalination in the Middle East and island countries.

Other risks and opportunities

- Growing interest in investing in decarbonization
- Concerns about sharp increases in costs such as steel prices.

Our strengths

- Core WtE technology and business development, engineering, construction, O&M, and operations capabilities.
- A world-class delivery record and reliability
- Expertise in the combustion of special fuels, i.e., waste, backed by experience, and the foundation of the maintenance service business.
- Wide-ranging technology and construction and operating experience in biogas (methane fermentation) facilities.
- Ability to make proposals that integrate technologies possessed by other departments and Group companies such as CO<sub>2</sub> recovery and methanation.



## Environment Business

### (fiscal 2023–2025) initiatives and outlook

Under 2030 Vision, our long-term vision, we aim to reverse the business ratio of EPC projects to O&M/Service and to increase the overseas business ratio to 50% by 2030. Under Forward 25, a milestone to these achievements, our KPIs are for 50% of net sales to come from O&M/Service with the overseas business ratio at 40%.

The Environment Business plays a significant role in this context, and we believe that promoting the abovementioned initiatives will greatly contribute to the achievement of the Group's KPIs. In particular, Inova will lead the growth of our Group as a greentech company that comprehensively handles EPC projects and O&M/Service, going beyond the framework of WtE.

In May 2022, the European Commission announced REPowerEU in response to the recent energy crisis in Europe. In addition to the goal of increasing the renewable energy usage ratio to 45% by 2030, it has announced demand equivalent to 5,000 new biogas plants. The Hitachi Zosen Group plans to expand its business areas in the value chain to include more value-added upstream and downstream segments, and to make major investments in the biogas business, including ownership and operation, mainly in Europe, by 2025. Inova currently owns and operates biogas plants constructed in the U.S. and Sweden.

In Japan, we will further clarify the path to our long-term vision goals through 2030, and lay the groundwork for future growth, including acquisitions and alliances, while ensuring the

Group's inherent high level of safety and quality control. One example of this is the business alliance announced in May 2023 with TRE Holdings Corporation, an industrial waste treatment company, which will provide a foothold in the business area of industrial waste, which we have not handled until now.

### Toward realization of the Sustainable Vision

In response to the growing demand for decarbonization and resource circulation, our Group intends to build a business model that can cover a wider range of the Waste to X value chain, which starts with collection of waste and converts that waste into some kind of resource. We also believe that we can contribute globally in the water business, including water treatment and desalination.

However, there are many areas where it will be difficult to realize our Sustainable Vision through these businesses on our own. Going forward, we will continue to promote initiatives to realize the Sustainable Vision through co-creation with partner companies and other stakeholders who share our Group's vision.

---

### Taking on the challenge of creating innovation to meet social needs

As a development department within the Environment Business Headquarters, the Business & Product Development Center conducts development while also supervising the technological development conducted by each department.

Decarbonization is a long-term and major development issue. Since the Japanese government's declaration in 2020 to achieve carbon neutrality by 2050, companies in the waste field have been competing to develop technologies for decarbonization. Even before this declaration, Hitachi Zosen has been working on methanation of CO<sub>2</sub> recovered from exhaust gas from waste treatment plants and development of waste gasification technology. Our field demonstrations of these, conducted ahead of other companies, have attracted a great deal of attention, and we feel that we are making progress toward implementing them in society. The Center is also engaged in development of a variety of other technologies, and we believe that we can continue to propose technologies that will support a decarbonized society.

Also, as we work to advance our proprietary technologies, we have been promoting the introduction of AI into our operation control technology. In our mainstay business of WtE plants, we are in the final stages of study on technologies for AI-based automatic combustion control for waste and automatic operation for waste pit cranes, and we are starting to introduce actual equipment as the technologies are developed. Recently, we have also been active in the development of sewage sludge incineration technology, applying our expertise in combustion technology to the sewage field.

Another major move is the collaboration with the R&D division of Hitachi Zosen Inova, a Group company based in Switzerland. As the COVID-19 pandemic subsides, human traffic has increased, and there are also more occasions to mutually consider the applicability of developed products. I would like for us to work more than ever before on development with a sense of unity as a group.

Going forward, we will continue to leverage our track record and strengths as the leader in WtE plant operations to develop a variety of products to meet social needs, and as the division in charge of R&D within the Environment Business Headquarters, we will take on the challenge of creating innovation by combining the technologies of each department.



**Sachiko Ohchi**

General Manager of Business & Product Development Center  
Environment Business Headquarters

## Hitachi Zosen Inova

### Overview

Founded in 1933. Based in Zurich, Switzerland. Possesses core WtE and renewable gas technologies. Inova formed a technical partnership with Hitachi Zosen in the 1960s. Joined the Hitachi Zosen Group in 2010.



### Bruno-Frédéric Baudouin

Chief Executive Officer and Member of the Supervisory Board

The Hitachi Zosen Inova is making steady progress toward becoming a vertically integrated greentech company that develops waste management infrastructure. Leveraging its strong technological and EPC capabilities, it is now actively supporting its customers across the entire value chain, from project development to long-term service.

#### Brief biography

After working for GE Power (Switzerland) as general manager for the Europe/Africa region and large EPC projects globally in the Gas Power Systems division, he assumed his current position in January 2018. Master of Science, Master of Business Administration (MBA).

#### Our goal is to create “a world free of wasted waste”

Following the latest political developments in Europe, essential focus of the continent have progressively become decarbonized, circular and secured supply of raw materials and energy. A similar dynamic is at work in Japan, the United States, and other countries. As Hitachi Zosen Inova, we are able to exceptionally contribute to such aspiration looking at waste as a resource which we treat thermally or biologically to produce new green renewable commodities. However, our ambition is not to just build such green infrastructures in developed countries. Our aim is to make such solutions economically affordable also for large megalopolis across the globe, and we are pleased to see the first opportunities taking shape in the Middle East and Africa. Only the Hitachi Zosen Group can provide innovative waste treatment solutions in these areas where landfill is the mainstream.

Towards the 2030 Vision, our target is to generate not only green electricity and biomethane from waste, but also green ammonia, green hydrogen, and other renewable chemicals that form the basis of various value chains, as well as recycled metals and

other valuable circular commodities.

In parallel to this edge technological positioning, HZI is developing solid capabilities across the value chain of waste management infrastructure, from Project Development, through Asset Management and plants construction, up to plants operations. This ensures that HZI becomes a partner of choice of green infrastructure funds seeking investment opportunities across the globe in the waste management field.

In recent years, collaboration with Hitachi Zosen has progressed substantially. Many synergies have been created, from the development of new technologies including AI and IoT, and standardization of some key parts, as well as progressive joint development of some projects in Asia. Recently, we are also collaborating with Osmoflo for some projects.

We are committed to providing the world with sustainable, decarbonized waste management solutions for the next generation. As a member of the Hitachi Zosen Group, we will continue to aim to be a greentech company that creates a world free of wasted waste.

## Osmoflo Holdings

### Overview

Founded in 1991. Based in Adelaide, Australia. Possesses desalination and water treatment technologies. Joined the Hitachi Zosen Group in 2017.



### Carmine Ciccocioppo

Chief Executive Officer and Managing Director

Osmoflo provides innovative, sustainable, and value-based water solutions that contribute to a circular economy. Our aim is a future where nothing is wasted; and that we use as many residuals and resources from our treatment processes as possible.

#### Brief biography

Joined Osmoflo in 2010 after holding various senior management positions at Abigroup, United Utilities Australia, and Sinclair Knight Merz. Assumed his current position in April 2022. Director of the Australian Water Association from 2003 to 2011. B.A. of Civil Engineering, Master of Environmental Engineering Science, Master of Business Administration (MBA).

#### For a sustainable water future

Our mission is to provide innovative, sustainable and value-based water solutions that contribute to a circular economy. Our business advantage lies in our extensive process knowledge and experience in water treatment for a wide variety of applications, the latest and most advanced technology, and our ability to provide various solutions across all parts of the water treatment value chain.

In "Forward 25," we will continue to further expand our activities in the Middle East and look to become more firmly established as a key supplier in the green hydrogen sector. In the "2030 Vision", we aim to further expand our business areas and

business domains, and develop and provide technologies that contribute to resource recycling and brine minimization.

By combining the strengths of the Hitachi Zosen Group, we will be able to globally provide comprehensive technologies and services for further decarbonization and resource recycling.

As more and more collaborations progress in the future, water is an indispensable and precious resource. We will continue to provide solutions to realize a sustainable water future.



## Create sustainable value by improving the integrated strength of all business units

**Shinji Shimamura**

Managing Executive Officer  
General Manager of Machinery & Infrastructure Business Headquarters

The Machinery & Infrastructure Business is based on our Group's founding shipbuilding technology. In particular, the infrastructure business has a long history dating back to the early 1900s, and the transport equipment and machine control technologies used in the plant business since the prewar era are utilized in the current press machines, food and pharmaceutical equipment, and electronic control businesses.

In the machinery business, we are responsible for improving the efficiency of manufacturing processes in a wide range of industrial fields, including products that have a large share despite being a niche field, such as the world's top lapping plates (silicon wafer polishing plates) and Japan's top filter presses (pressure filtration equipment), as well as press machines, semiconductor-related equipment, and food and medical-related equipment. We provide integrated support from development to after-sales service. In the infrastructure business, in addition to manufacturing bridges, hydraulic gates, flap-gate type seawalls, and other structures, we actively work to extend the service life of infrastructure facilities through anti-deterioration measures and maintenance. By making full use of our advanced technologies and development capabilities, we are contributing to the creation of disaster-resistant and prosperous communities.

### Summary of the previous medium-term management plan Forward 22 (fiscal 2020–2022)

In the machinery business, which focuses on demand from the private sector, the business environment remained challenging due to a drop in demand on the spread of COVID-19 and soaring raw material prices. However, demand for semiconductor-related equipment, such as vacuum valves and lapping plates used in the semiconductor manufacturing process, remained generally firm, contributing to the bottom line. On the other hand, for press machines, although the automotive industry's investment has finally recovered to pre-COVID-19 levels, the competitive environment continues to be fierce. Our efforts to reduce fixed costs have paid off, but the challenge is to improve the profit margin by increasing added value.

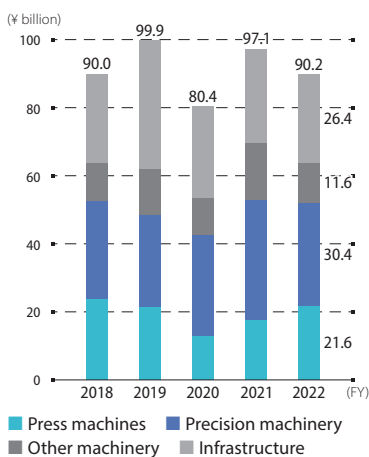
### New medium-term management plan Forward 25 (fiscal 2023–2025) initiatives and outlook

This is one of the few business divisions that manufactures mass-produced products such as vacuum valves. I myself have gained experience by being seconded to a Group company, a vacuum valve manufacturer, setting up an overseas factory, and serving as president. I would like to make use of this experience to actively consider business models necessary to improve profitability.

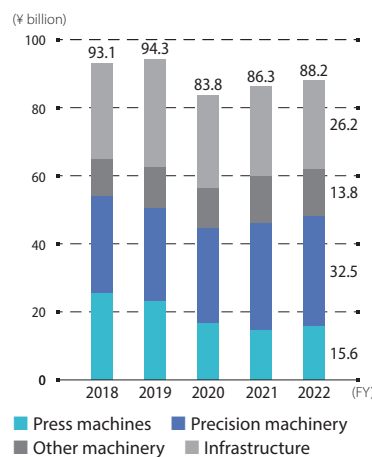
For example, many of our existing products are customized to meet customer requirements, but for some products there are commonalities in customer requirements. For these products, we will explore the possibility of shifting to a business model that adds customer-specific options (customization) and a monitoring system to the standard model.

Additionally, our business headquarters handles a large number of products and possesses a variety of elemental technologies. Therefore, in order to promote horizontal

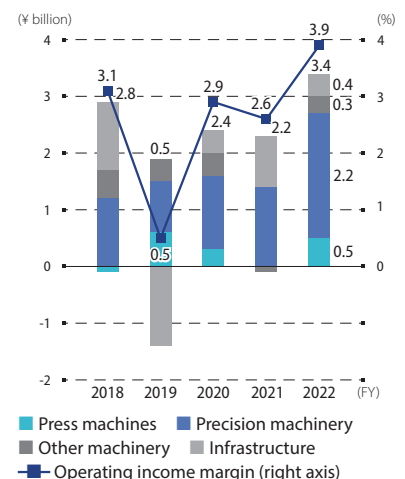
Order intake



Net sales



Operating income/  
Operating income margin



connections, information exchange, and technology interchange across divisions within Hitachi Zosen, from fiscal 2023 we established four groups within our Business & Product Development Center where members appointed from each business unit work on digital transformation (DX), smart factories, and other projects. The goal is for these groups to become a horizontal force within the business headquarters, making the most of the elemental technologies that exist within the company and developing products quickly. We also hope that active communication will help change the mindset of each employee to be more outward-looking. Through these initiatives, we aim to create synergies to develop new businesses and return existing businesses to growth.

For individual products, in the area of press machines, various companies are working to introduce a range of new technologies in anticipation of expansion of the EV market, and our Group is working to increase the value it provides to customers by developing models that contribute to reducing CO<sub>2</sub> emissions.

Demand for semiconductor-related equipment has been in a temporary lull since the second half of fiscal 2022, but demand is expected to rise steadily again from fiscal 2024. The challenge will be to grasp the needs of the rapidly changing market in a timely manner and to make appropriate decisions and responses.

In the infrastructure business, domestic demand for renovation of hydraulic gates is increasing as a measure against torrential rains. We propose to our customers a special technology for repairing hydraulic gates called the floating temporary closing method in combination with a system that adjusts the amount of water stored in the dam in conjunction with weather information. In order to meet similar demand for renovations in South and Southeast Asia, we are considering

establishing a manufacturing base in Southeast Asia. We will continue to contribute to the construction of safe and secure social infrastructure in Japan and overseas.

To create growth businesses, we have identified the inspection, measurement, monitoring, and remote support related business and the life science related business as priority areas, and we will make strategic investments. Specifically, we will actively invest in businesses that integrate services with products, such as expanding our range of semiconductor manufacturing equipment using AI and IoT technologies, GPS analysis technology, and weather and tectonic movement data transmission. Our goal is to strengthen these businesses by expanding the value we provide to customers. As interest in health and safety increases, the life science field is expected to grow over the long term, and we intend to actively invest in future business creation.

### Toward realization of the Sustainable Vision

Under the Sustainable Vision, our business headquarters is primarily responsible for the development of a safe and prosperous community, aiming to create social value through the provision of high value-added social infrastructure and a wide range of machinery. The changes in the business model described above are not only aimed at improving profit margins, but also at grasping the needs of society and customers and rapidly delivering products with high customer value. Our mission is to create products and services with higher added value and quickly provide them to society, and we believe that the key to achieving this is for each and every employee to work with this awareness. As the saying goes, "easier said than done," but all of us will work together to make this happen.

## Market characteristics / our strengths

### Market characteristics

#### Press machines

- Demand for large automotive equipment has been on a recovery trend since the second half of fiscal 2021.
- Uncertain global conditions and long waits for parts remain concerns.

#### Precision machinery

- Demand for semiconductor-related equipment has temporarily stagnated since the second half of fiscal 2022, but is expected to remain on a growth trajectory from fiscal 2024. There is demand in China for capital investment as a result of an accelerating shift to domestic production.
- The FPD market is expanding, mainly centered on LCD televisions, but demand for manufacturing equipment has settled down.

#### Infrastructure

- Higher budgets for new bridge construction in line with the Fundamental Plan for National Resilience. Despite growing demand for maintenance work in Japan, there are concerns about drastic increases in costs such as steel material prices.
- For hydraulic gates, redevelopment work for existing dams is being stimulated.
- The market for new steel stacks is shrinking with the trend toward decarbonization, but demolition work is expected to increase in the future.

### Our strengths

#### Press machines

- A product lineup that covers the entire press factory. We also have a strong capacity to produce custom orders.

#### Precision machinery

- High quality, high durability, and strong delivery track record.

#### Infrastructure

- A high level of technological competence in earthquake-resistant reinforcement and rapid construction. Preventive maintenance, monitoring, diagnosis, and other maintenance services using AI and ICT.
- One of the few manufacturers with offshore docks and the ability to take advantage of this strength to win orders.





## Centered on the Carbon Neutral Solution Business Headquarters, we intend to drive innovation in technology solutions for climate change mitigation

**Tatsuji Kamaya**  
 Managing Director  
 General Manager of Carbon Neutral Solution Business Headquarters

Since the adoption of the Paris Agreement at the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP21) in 2015, the global trend toward decarbonization has accelerated. In Japan, we believe that the government’s declaration in 2020 to countries around the world to achieve carbon neutrality by 2050, which clearly stated the nation’s goal, has significantly changed people’s awareness of the issue. In April 2022, our Group established the Carbon Neutral Solution Business Headquarters by integrating our internal organizations related to decarbonization in order to flexibly respond to the needs for innovative technologies and social changes by utilizing the diverse knowledge and technologies we have cultivated over the years to achieve carbon neutrality. Currently, carbon neutrality is a major challenge for our customers. We will promote innovation in technology solutions for climate change mitigation centered on the Carbon Neutral Solution Business Headquarters, and aim to grow our business and expand profits while contributing to solving our customers’ issues.

### Summary of the previous medium-term management plan Forward 22 (fiscal 2020–2022)

During the period of Forward 22, we flexibly utilized external resources, including alliances with other companies and acquisitions, to establish a foothold for future growth. Although the marine diesel engine business continued to struggle as it was difficult to pass on soaring material costs to prices, we decided to spin off the business and to collaborate with Imabari Shipbuilding Co., Ltd. (a 35% stake in the new company) to develop technologies with a view to improving profitability and conversion to clean fuels.

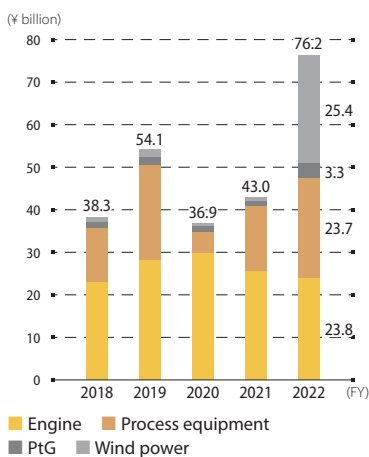
In the process equipment business, where orders have continued to be sluggish, in addition to restoring capital investment at petrochemical plants in line with the rise in crude oil prices, we are working to develop and launch new LNG, hydrogen, and ammonia-related products in response to the needs of our client companies for their transition to decarbonization. In the area of nuclear power-related equipment, NAC International (NAC), a U.S. subsidiary, has

expanded its domain from its conventional business of high-level radioactive waste to low-level radioactive waste through M&A. In Japan, in October 2022, Hitachi Zosen jointly established Tousou Mirai Manufacturing Co., Ltd. (a 33% stake by our Company) in Fukushima Prefecture with Tokyo Electric Power Company Holdings, Inc. to manufacture decommissioning products.

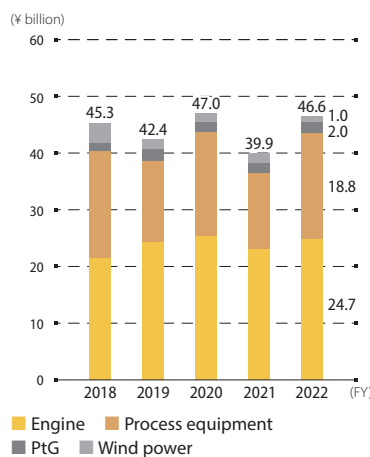
In the Power to Gas (PtG) business, we are responding to orders from the public and private sectors for equipment for demonstration projects aimed at social implementation of hydrogen generation systems and methanation equipment. We are also taking steps toward early commercialization by participating in a project to scale up hydrogen generation equipment in Yamanashi Prefecture utilizing the Green Innovation Fund.

As for wind power business, we have promoted the commercialization of onshore and offshore wind power generation with respective partner companies to secure superiority in terms of technology and operational expertise

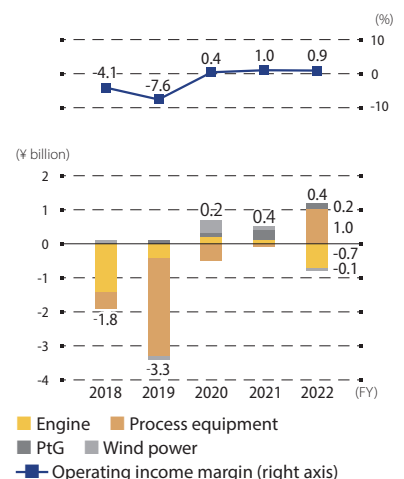
#### Order intake



#### Net sales



#### Operating income/ Operating income margin



through business development. In the field of onshore wind power generation, we jointly developed a project with ITOCHU Corporation—a large wind farm with 15 wind turbines facing the Pacific Ocean in Rokkasho, Kamikita, Aomori Prefecture—and received an order for the EPC for the project in March 2023. In this project, we will earn revenue from electricity sales by investing in the project ourselves and secure stable earnings throughout the project period by providing operation and maintenance services for 20 years after completion. For offshore projects, our development of a floating structure was selected for the Green Innovation Fund Projects (a joint proposal with Kajima Corporation in 2021), and we are working to develop technologies to reduce the cost of manufacturing and installing floating foundations.

### New medium-term management plan Forward 25 (fiscal 2023–2025) initiatives and outlook

In the marine diesel engine and process equipment businesses, improving the profit margins on existing products continues to be an issue. Hitachi Zosen Marine Engine Co., Ltd., which was established by spinning off the marine engine business, began operations in April 2023. Going forward, we will work with Imabari Shipbuilding to improve profitability through stable orders for marine diesel engines and synergies in procurement. In the process equipment business, we intend to grow the after-sales service business both in Japan and overseas and develop it into a pillar of earnings.

In these two businesses, we will simultaneously promote initiatives to realize a decarbonized society. For example, in the area of marine diesel engines, we are developing engines that

use LNG, methanol, and ammonia as fuel. In this area as well, we will develop technologies based on customer needs through synergies with Imabari Shipbuilding, which aims to develop zero-emissions vessels. In the nuclear power-related equipment business, we will respond to the increased demand associated with the restart of nuclear power plants in Japan and promote global expansion by strengthening cooperation with NAC.

We expect the Electrolysis & PtG and wind power generation businesses to make a full-fledged contribution to earnings from the latter half of the 2020s. Until then, we will strengthen our competitiveness in the Electrolysis & PtG business by accumulating demonstration projects and continue to increase the size and efficiency of the equipment required for social implementation.

In onshore wind power generation, we will continue to carry out the entire process from business development to construction and operation. For offshore wind power generation, we are currently working with Cosmo Eco Power Co., Ltd. and the Iberdrola Group of Spain to develop a wind farm off the northwest coast of Aomori. In the future, we plan to develop our business mainly in the manufacture of foundation structures utilizing the technologies we have cultivated in the shipbuilding and infrastructure businesses. We are working on the development of technologies and demonstration tests for both bottom-fixed and floating type wind farms.

I believe the most important thing in the new medium-term management plan Forward 25 is how to launch new businesses related to decarbonization. Many of the businesses in the Carbon Neutral Solution Business Headquarters are at an early stage. While there are various approaches, such as what

## Market characteristics / our strengths

### Market characteristics

#### Engines

- Although the current order intake is steady, buoyed by the favorable new shipbuilding market, profitability is a challenge due to soaring raw material prices
- New demand for ship exhaust gas regulation and fuel conversion

#### Process equipment

- New demand for tanks for alternative fuels such as ammonia
- Demand for casks and canisters for spent fuel and decommissioned reactors at nuclear power plants in North America, latent demand for the same in Japan

#### PtG

- As part of the Green Growth Strategy, the Japanese government has announced a target of injecting 90% synthetic methane into existing infrastructure by 2050 as well as Basic Hydrogen Strategy
- Increasing size and reducing costs will be issues to be resolved for implementation in society

#### Wind power

- The Japanese government has announced and is actively pursuing a target of introducing 10 million kW of offshore wind power generation by 2030 and a maximum of 45 million kW by 2040 (total wind power generation installed in Japan by the end of 2022 was 4.802 million kW)

### Our strengths

- Ability to share market information, technology, and know-how within the Group.
- Extensive experience in plant engineering.
- Marine diesel engines: SCR systems combined with NOx removal catalysts.
- Offshore wind power generation: Design and manufacturing technology for offshore structures and floating structures.
- Onshore wind power generation: Expertise in integrated development, construction, and operation.
- Methanation: High-efficiency reaction catalysts developed in-house. Know-how accumulated through demonstration projects. Package proposals including hydrogen generation and CO<sub>2</sub> separation and recovery.



## Carbon Neutral Solution Business

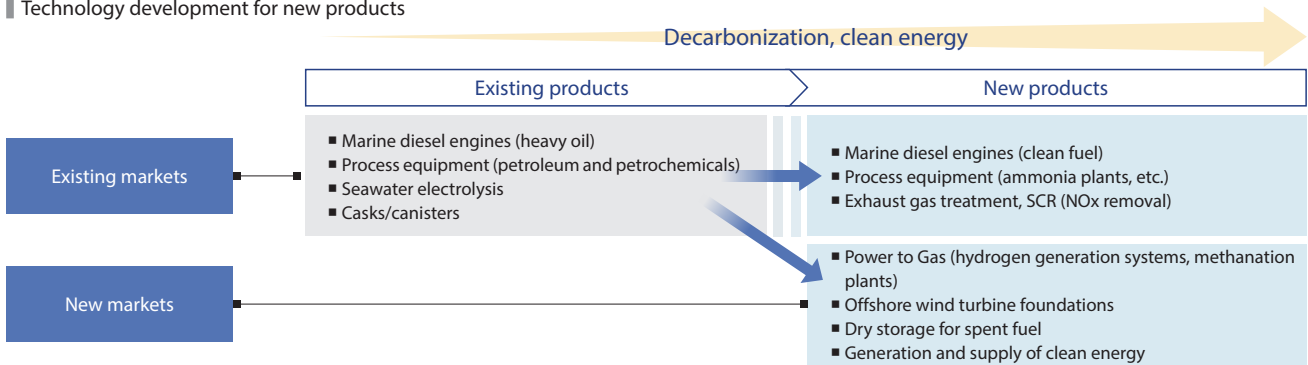
kinds of proposals to make for customers' problems and what kinds of companies to collaborate with, we believe that it is our mission to provide solutions that match our customers' problems and needs and that this is a great opportunity to create new value. We will continue to accelerate these efforts while listening sincerely to our customers.

### Toward realization of the Sustainable Vision

It is expected that as the world moves toward a carbon-free

society, new regulations and technological standards will be established, centered in Europe and the U.S. For this reason, we will work closely with overseas Group companies such as NAC in the U.S., Hitachi Zosen Inova in Europe, which conducts the PtG business, and Osmoflo in Australia to ensure that we become the global standard in the fields we are involved in, even if it is a niche market. Through these efforts, we hope to help solve our customers' problems and achieve sustainability ourselves.

### Technology development for new products



## NAC International

### Overview

Established in 1968, located in Norcross, Georgia, U.S. Engaged in the design, transport, and consulting related to spent fuel transport and storage equipment. Joined the Hitachi Zosen Group in 2013.



**Kent S. Cole**  
President and Chief Executive Officer

NAC International (NAC) supports clean energy and environmental conservation through the safe and secure management of radioactive wastes generated in nuclear power plants, as well as engineering and consulting on the entire nuclear fuel cycle, with the aim of realizing a decarbonized society.

#### Brief biography

After gaining experience in engineering and project management in General Electric's nuclear energy business, he joined NAC in 2003, first serving as Vice President of Spent Fuel Projects, before becoming President in 2006. He assumed his current position in 2013. Master of Mechanical Engineering.

### Nuclear Power Helps Drive Decarbonization

Worldwide attention is now focused on nuclear energy as a proven, reliable source for carbon free power generation. Operating nuclear power plants, with the addition of advanced reactor designs scheduled for startup in the near future, are capable of generating carbon free electricity at the scale needed to meet predicted energy demands. Small and advanced nuclear reactor designs are also being tested and licensed, and are expected to produce energy within the next decade. Nuclear energy sources are widely recognized as the most viable source for power generation and essential for decarbonization. Appropriate management and disposal of spent fuel, which is expected to increase in the future, is an important issue to manage for the safe use of nuclear power generation. NAC provides solutions for the safe and reliable transport, storage, and disposal of nuclear materials and radioactive waste, supporting the creation of clean energy and environmental conservation, with the aim of realizing a sustainable society.

### Achieving the 2030 Vision

With the emergence of new types of nuclear reactors and other factors diversifying the forms and processing methods of spent fuel, NAC aims to provide more comprehensive solutions in the fuel cycle value chain. As an example of our efforts for long-term business growth, we are collaborating with Deep Isolation (NAC acquired a portion of the shares in 2020) to develop a special canister for geological disposal that buries spent fuel deep underground. As a member of the Hitachi Zosen Group, NAC is supported in various aspects, including strategy formulation, partnerships with other companies, and mergers and acquisitions. Going forward, NAC aims to become the No. 1 supplier in the global cask/canister market together with Hitachi Zosen by leveraging synergies among group companies and promoting technological development tailored to the needs of each region and customer.

### Business development toward 2030

#### Consulting

- Spent fuel storage
- Fuel performance and fabrication oversight
- Others

#### Radioactive waste management

- Spent fuel and radioactive waste storage systems and services
- Packaging and transportation solutions
- Others

#### Future markets

- Off-site spent fuel storage (CISF)
- Final disposal of spent fuel and high- and low-level radioactive waste



## TOPICS

Our Group will contribute to the realization of a carbon-free and resource-recycling society through our products and services.

### TOPIC 1 Contributing to decarbonization with hydrogen generation systems

Hydrogen is attracting attention as a next-generation energy source that will be a key to achieving a carbon-free world. Since Hitachi Zosen began selling hydrogen generation systems in 2000, we have delivered more than 40 units to companies and research institutes in Japan and abroad.

In May 2023, the 1-MW hydrogen generation system (hydrogen generation capacity: 200N m<sup>3</sup>/h) that we delivered to Hokkaido Electric Power Co., Inc. (HEPCO) began operation. HEPCO supports Hokkaido's Zero Carbon Hokkaido initiative and is undertaking various measures. Utilizing our technologies and achievements to date, we will continue to support HEPCO's efforts to promote the spread of hydrogen and realize Zero Carbon Hokkaido.



Hydrogen generation system delivered to HEPCO

### TOPIC 2 Contribution to CO<sub>2</sub> emission reduction through our Group's products

Clean energy facilities, including Waste to Energy (WtE), biogas, biomass, and wind power facilities, using our Group's technologies contribute to reducing CO<sub>2</sub> emissions through our customers' business activities. As of the end of fiscal 2022, our products (including the products of licensees) had reduced CO<sub>2</sub>\* by 22.06 million tons per year worldwide, equivalent to roughly 3.4% of the new target for reducing greenhouse gas emissions announced by the Japanese government in April 2021. We will continue to contribute to CO<sub>2</sub> reduction through our products, aiming to create an annual CO<sub>2</sub> reduction effect of approximately 40 million tons by the end of fiscal 2030.

\* The CO<sub>2</sub> reduction effect was calculated from the power generation capacity of working facilities (excluding use of heat inside facilities), "The Method of Calculating Greenhouse-Gas Emissions and List of Emission Coefficients" issued by the Japanese Ministry of the Environment, and "Global Warming" (emission factors in foreign countries) issued by the Agency for Natural Resources and Energy. The fiscal 2030 target was calculated proportionally based on actual results through fiscal 2022. Japan's fiscal 2030 target for reducing greenhouse gas emissions, which was used to estimate the Hitachi Zosen Group's contribution rate, is a reduction of 46% from the 2013 level of 1,408 million tons (CO<sub>2</sub> equivalent).

	CO <sub>2</sub> reduction effect (including licensees)
Fiscal 2022	22.06 million t-CO <sub>2</sub> e/year
Fiscal 2030 (target)	Approx. 40 million t-CO <sub>2</sub> e/year
Cumulative total for fiscal 2020–2030	Approx. 320 million t-CO <sub>2</sub> e

## Utilization of green finance

### Hitachi Zosen Green Bonds

In September 2018, Hitachi Zosen became the first Japanese manufacturer to issue green bonds. On October 28, 2021, Hitachi Zosen issued its second round of Hitachi Zosen Green Bonds to fund a wind power generation project.

#### Hitachi Zosen Green Bonds issued in 2021

#### 1 Overview of projects and status

Project	Mutsu Ogawara Onshore Wind Farm Project
Scope of business	Design, construction, and operation of onshore wind power generation facilities
Description	Number of turbines: 4.3 MW class wind power generator x 15 Maximum output: 57,000 kW
Start of operation	Scheduled for around April 2026
Current status	Received an order from Mutsu Ogawara Wind Power LLC for construction and long-term operation management. Started foundation work and the ordering and manufacturing of various equipment.

#### 2 Fund allocation (as of March 31, 2023)

	(¥ million)
Amount raised from green bonds	10,000
Investment in special purpose company	(825)
Construction costs of power generation facilities	0
Unallocated portion	9,175

#### Hitachi Zosen Green Bonds

Details ▶ <https://www.hitachizosen.co.jp/english/sustainability/greenbond.html>



# Research and Development

## Message from the General Manager



**Tadashi Shibayama**  
 Managing Director  
 General Manager of R&D Headquarters

## Creating new value with world-leading technology to achieve zero environmental impact

To achieve sustainable growth, the Hitachi Zosen Group must expand future earnings by creating new products and businesses that help solve social issues and improve current profitability by differentiating, adding higher value to, and enhancing the cost competitiveness of its existing products.

To this end, we have established development centers in the R&D Headquarters' Technical Research Institute, which focuses on developing elemental technologies, as well as in each business headquarters. The development centers mainly work on products in the development stage under a project system.

Since our founding, we have constantly taken on the challenge of creating new technologies to develop our business. However, in Japan, where the population is expected to decline, infrastructure investment is unlikely to grow much in the future, and competition will intensify within a constrained market. To create future business, we must promote R&D aimed at creating technologies and products that are globally competitive. I believe fostering human resources is the most important factor in making this happen. We are working on human resource development by collaborating with external research institutions to improve the capabilities of our researchers and encouraging them to pursue doctoral degrees. In addition, we believe that optimizing our Group's development system, including Hitachi Zosen Inova (hereinafter, Inova) and other overseas subsidiaries, is a priority, and intend to further enhance collaboration. We will continuously strengthen our human resources and globalize our R&D system to produce development results that contribute to society.

## Policy and strategy

We added two items to our R&D policy for fiscal 2023, for a total of seven items. The first item is to “continuously create new products and businesses,” which includes initiatives to create market-based new products and businesses in response to national policies and social trends such as carbon-neutrality. Three projects have been selected for the Ministry of Economy, Trade and Industry's Green Innovation Fund (GI Fund)\* through fiscal 2022, and we are working on major projects related to carbon neutrality. For the second item, “accelerate product development for the fastest possible time to market,” we will further prioritize investment of resources (people, things, money) in promising development topics. We classify them into

three levels in order of importance and strive to work on development in a lively manner. Of the promising development topics, about 70% are carbon neutrality-related topics.

\* Green Innovation Fund project <https://green-innovation.nedo.go.jp/en/>

## Initiatives

At the R&D Headquarters, in addition to continuously enhancing digital engineering including for AI, simulation technologies, and smart factories (inspection technologies), we are accelerating the development of technologies that help achieve carbon neutrality, such as synthetic LPG. In the Environment Business, we are focusing on developing next-generation WTE technologies such as post-combustion waste-to-fuel conversion,

## R&D policy for fiscal 2023

### 1 Continuously create new products and businesses

Promote market-based development themes in response to national policies and social trends such as carbon neutrality (explore new themes to further utilize the GI Fund).

### 2 Accelerate product development for the fastest possible time to market

Accelerate development and clarify exit strategies by stepping up selection and concentration and prioritizing investment of resources (people, things, money) in promising development projects

### 3 Brush up on core technologies and actively develop new ones

Promote development of core technologies that can boost the competitiveness of existing businesses and new technologies that can be rolled out to new markets, while bolstering intellectual property.

### 4 Strengthen problem-prevention functions

Enhance AI systems that provide insights for problem prevention, and provide regular support to business units from senior research center personnel. Through these measures, establish development themes that specifically address fundamental issues.

### 5 Enhance investments in human resources

Actively recruit human resources. Strengthen and deepen areas of expertise; cultivate planning power for development and new businesses; increase management skills through technology management; and activate job rotations.

### 6 Enhance Group development capabilities

Strengthen collaboration and technology exchange with Inova and other overseas Group companies, as well as H&F, VTEX, and other Group companies in Japan, to leverage our collective development capabilities as a Group.

### 7 Actively leverage external resources

Actively collaborate with universities and research institutions to incorporate cutting-edge research. In addition, explore collaboration opportunities with startup companies that have unique and superior technologies by tapping into venture capital funds.

high CO<sub>2</sub> concentration combustion, and biomethanation. In the Machinery & Infrastructure Business, we are strengthening our life science-related initiatives such as AI diagnostic imaging, analytical evaluation equipment, and biotechnology-related equipment, as well as DX and smart factory development initiatives. In addition, in the Carbon Neutral Solution Business, we are accelerating product creation aimed at achieving carbon neutrality, such as methanation and fuel tanks, mainly through the Green Innovation Fund project.

#### Participation in major government development projects

##### Green Innovation Fund (GI Fund) projects

- Hydrogen production using water electrolysis with renewable electricity: Development of energy demand conversion and utilization technology using a large-scale PtG system to achieve carbon neutrality
- Development of next-generation vessels: Development of methane slip reduction technology for LNG-fueled vessels through catalyst and engine improvements
- Cost reduction of offshore wind power generation: Mass production and cost reduction of semi-submersible hybrid floating structure

##### Projects commissioned by the Ministry of the Environment

- Development of next-generation waste treatment systems for high-efficiency energy utilization
- Demonstration project to establish a carbon recycling model by recycling carbon dioxide captured from cleaning plants

## Intellectual property

The source of the Hitachi Zosen Group's earnings is its engineering and manufacturing technologies, and the Group recognizes that investing in, using, and protecting rights related to intellectual property are important issues in the management strategy. With the basic policy of strengthening market competitiveness by creating and maintaining intellectual property rights based on its business and development strategies, the Group is working to identify and create inventions, and to apply for and obtain patents that are appropriate to the business model. Specifically, the Group is stepping up various activities, including the acquisition of

overseas patents in response to its global business expansion, and the acquisition of intellectual property rights to increase the added value of products and services through the use of AI and IoT. In addition, the Group conducts ethical intellectual property activities for fair competition by using the intellectual property rights acquired by the Group in a fair manner and respecting the rights of others.

### Intellectual property management system

Each unit at our business headquarters and R&D Headquarters has a member who is in charge of intellectual property promotion activities. These members intensively coordinate activities such as identifying patent opportunities and facilitating patent applications in cooperation with the Intellectual Property Department.

### Strategic patent applications

Using technology and patent maps to assess and analyze our patent portfolio as well as those of other companies, we ensure optimal patent applications and acquisitions that suit our business model.

### Intellectual property education

We strive to nurture an intellectual property-oriented corporate culture by holding seminars for each employment level, conducting e-learning programs tailored to different job responsibilities, and providing information in our internal newsletters. In addition, we hold intellectual property seminars that focus on AI and IoT and are moving forward with the introduction of ICT throughout the Group.

### Invention award system

We have established awards for the filing and registration of patents and their practical applications. We encourage inventions by rewarding inventors for the value of their inventions.

#### Intellectual property

Record of patent applications, acquisitions, and possession (Hitachi Zosen non-consolidated)		Fiscal 2018	Fiscal 2019	Fiscal 2020	Fiscal 2021	Fiscal 2022
No. of patent applications	Japan	112	138	51	72	81
	Overseas	118	112	67	85	59
No. of patent acquisitions	Japan	71	82	84	93	83
	Overseas	76	113	118	60	61
No. of patents held	Japan	803	756	742	744	779
	Overseas	386	480	551	506	470

Number of design rights and trademark rights held (Hitachi Zosen non-consolidated)		Fiscal 2018	Fiscal 2019	Fiscal 2020	Fiscal 2021	Fiscal 2022
No. of design rights	Japan	85	99	103	100	96
	Overseas	45	45	45	46	28
No. of trademarks	Japan	177	171	171	170	171
	Overseas	37	49	50	51	56

# DX Promotion

## Message from the General Manager



**Munenobu Hashizume**  
 Managing Executive Officer  
 General Manager of Information and Communication  
 Technology Promotion Headquarters

Hitachi DX website  
<https://www.hitachizosen.co.jp/english/company/dx/>



## Creating new customer value by adding digital technology to traditional strengths

Hitachi Zosen has leveraged its strengths in manufacturing and engineering technologies to help solve social issues that have changed over time. However, to further contribute and grow, we must add digital technologies as a source of profit.

AI enables us to process a variety of data in an integrated manner to produce optimal solutions. For example, at Waste to Energy (WtE) plants, we can automate what was previously controlled by skilled staff, thereby lowering costs and resolving social issues related to the declining birthrate and aging population. In addition, by using IoT to remotely monitor the operational status of machines and equipment we have delivered, we can provide predictive maintenance and quickly analyze the causes of failures, thereby minimizing opportunity loss for our customers. Even for internal business processes, we can improve productivity, quality, and safety. For example, we were quick to introduce generative AI throughout the company and are making use of it.

We will hone digital technologies as a new strength of the Company and solidify the foundation of our digitally-enhanced services to enhance customer value and improve our corporate value.

## Policy and strategy

We position the DX strategy as one of the priority measures in our medium-term management plan Forward 25, and are promoting a dramatic digital transformation throughout the Company based on a three-pillar strategy consisting of promoting Business DX to digitally transform our business, driving Corporate DX to achieve business process and staff workstyle reforms, and establishing the DX Platform to support the other two pillars.

## Initiatives

In the development of the DX Platform, which serves as the core of DX promotion, we are making steady progress, particularly in strengthening our digital platform and developing our human resources.

## Strengthening the digital platform

By developing a common digital platform rather than developing systems for each product, we are able to shorten the time it takes to launch services and reduce development and operating costs. We aim to maximize the value we provide

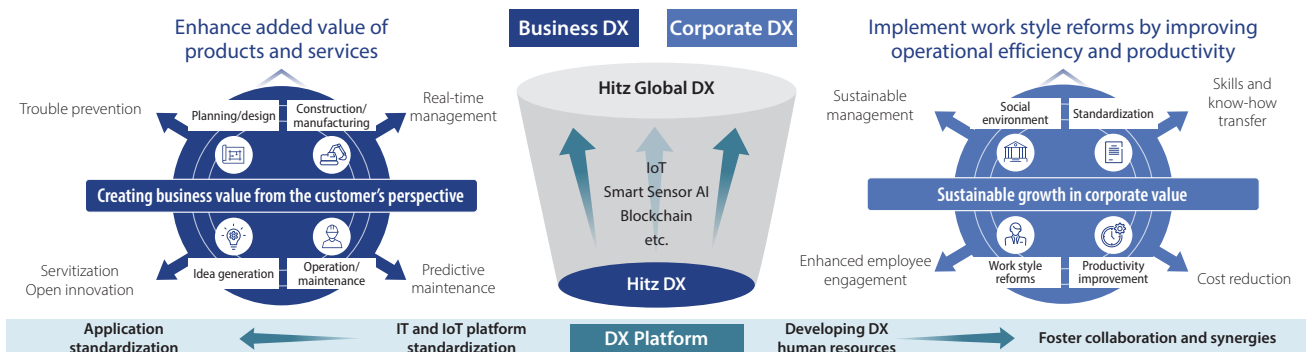
to our customers by increasing the IoT rate of our products and services to 60%.

## Developing DX human resources

To promote DX, it is important not only to develop the technological foundation, but also to develop human resources who can leverage data to transform companies and businesses. Between the digital (D) and transformation (X) components, the ability to transform is particularly important, and in February 2022 we began offering a DX leader training course for business manager-level personnel who will be responsible for the future of each business. We will foster a corporate culture of creating new businesses by introducing design thinking and aim to develop 500 DX human resources by the end of fiscal 2025. In addition, we have already established a DX Promotion Community for DX leaders, and plan to roll it out as a company-wide cross-sectional community to promote our All-company DX efforts.

KPI (2025)	■ Product IoT rate: 60%
	■ Number of DX human resources trained: 500

## DX strategy under Forward 25



# Global Expansion

## Message from the General Manager



**Yuichi Okura**  
Senior Managing Executive Officer  
General Manager of Global Headquarters

## Strengthening the global management system to achieve further growth of overseas business

The Global Headquarters was established in July 2021 to expand overseas operations and improve synergies among Group companies.

We will formulate strategies and promote specific measures to achieve our medium-term management plan, long-term vision, and Sustainable Vision, while enhancing governance and risk management, and pursuing growth in areas where each of our overseas businesses can demonstrate its presence from a cross-organizational perspective. Furthermore, we also perform risk analysis and framework studies for new business launches, support fundraising, check contracts, manage business progress, and provide M&A support, etc.

With regard to the strategies and measures of overseas Group companies, we examine them from a parent company perspective and deepen discussions, sometimes communicating different views, in order to move the business in the appropriate direction.

## Policy and strategy

Under the 2030 Vision, our Group's long-term vision, we have set a financial target of increasing the share of overseas business to 50% of net sales and operating income in fiscal 2030, and under our medium-term management plan Forward 25, we established a KPI target of achieving an overseas sales ratio of 40% in fiscal 2025.

In addition to the business growth of our three major overseas subsidiaries (Hitachi Zosen Inova, Osmoflo Holdings, and NAC International), the Global Headquarters will promote efforts to develop and grow in other overseas markets, including Southeast Asia and South Asia, while also strengthening our overseas business base with an eye toward the future.

KPI  
(2025)

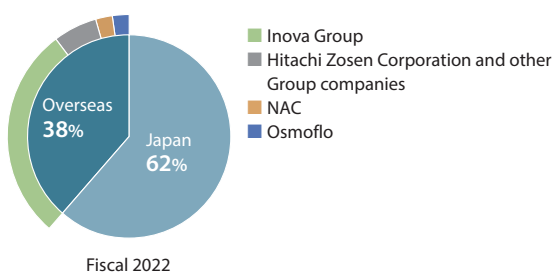
### Overseas sales ratio: 40%

Key existing market: Europe, East Asia

Key growth market: Southeast Asia, South Asia

New market development: North America, Middle East

## Overseas sales ratio



## Initiatives

### Building a foundation toward achieving the 2030 Vision

Since the financial targets for overseas businesses under the 2030 Vision are equivalent to the current scale of the Group's entire business, we will focus on building a future-oriented organization and developing the human resources needed to manage it.

To enhance the quality and quantity of human resources responsible for strategy execution, we have begun operating a program to train leaders by age group. We aim to develop leaders who have broad knowledge of overseas markets and businesses and can make appropriate decisions, including risk management, to drive the growth of our overseas businesses.

In fiscal 2022, we conducted a survey on overseas-related work experience and language skills and began identifying global human resource candidates and building human resource pool data. In the training program we plan to launch in fiscal 2023, we are exploring programs related to our overseas business strategy roadmap, risk management, and governance, in addition to language skills and general knowledge needed for overseas business. By carrying out the training for about 20 people each year, we will build the foundation necessary to achieve our 2030 Vision targets.

## Sales ratio by region

	Sales ratio by region	
	Sales	Percentage
Fiscal 2022		
Japan	303.4	62%
Europe	106.5	22%
Asia	20.7	4%
North America	21.9	4%
Middle East	31.0	6%
Others	9.1	2%

# Promoting Sustainability

## Message from the Chair of the Sustainability Promotion Committee

### Toward our future figure for 2050

One year has passed since we established our Sustainability Promotion Committee, and we created a Sustainable Vision as part of our desired image in 2050. Our Sustainable Vision, which aims to “realize zero environmental impact” and “maximize people’s well-being,” represents our commitment to “taking on the challenge, through the power of technology, to create a world that lives in balance with nature.” We will implement sustainability-oriented management to capture new business opportunities and achieve sustainable growth for the Hitachi Zosen Group.

The Group will not take part in activities that add to the amount of materials extracted from the Earth’s crust or created by human society, or activities that lead to deforestation or loss of biodiversity in the natural environment. In addition, the Group’s business activities will never adversely affect human rights. Furthermore, we will not be complicit in human rights violations by third parties. The Group will also refrain from engaging in any activity that would prevent people from being respected as individuals.

The Group pledges to maintain a strong commitment and spare no effort to achieve its Sustainable Vision. We sincerely appreciate the understanding and support of our stakeholders for the Group’s sustainability initiatives.

Representative Director, President & Chief Executive Officer



### Basic approach

With the understanding that promoting sustainability represents the very essence of Hitz Value, the Hitachi Zosen Group will continue to implement a variety of measures to promote sustainability in order to capture new business opportunities and achieve sustainable growth for the Group. Based on this policy, we aim to be a solution partner that

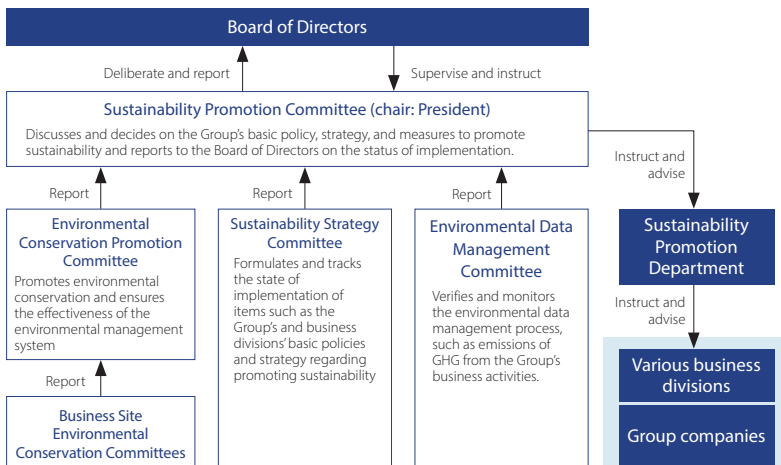
contributes to the realization of a sustainable, safe, and secure society by strengthening our business foundation and decarbonization-related businesses that support sustainable corporate value enhancement.

### Sustainable management

Details ▶ <https://www.hitachizosen.co.jp/english/sustainability/policy/>



### Sustainability promotion framework



### Sustainability Promotion Committee

<b>Committee Chair</b>	President
<b>Members</b>	General managers, business site heads, Group company presidents, etc.
<b>Items discussed and reported</b>	Various Group sustainability-related policies, strategies, important measures, etc.
<b>Activities in fiscal 2022</b>	Held: 4 times Reviewed and established a Sustainable Vision and Pillars of Success (Materiality)
<b>Secretariat</b>	Sustainability Promotion Department

## Sustainable Vision

We have set our Sustainable Vision to “realize zero environmental impact” and “maximize people’s well-being.” In addition, we established a roadmap for achieving our Vision with Seven Pillars of Success as materiality items, with 2050 as our target. In working on these initiatives, the Sustainability Promotion Committee regularly follows up on the progress of KPIs set for each item. To appropriately reflect changes in the external environment and society’s needs and expectations, the Pillars of Success will be reviewed periodically in accordance with updates to the medium-term management plan. In addition, our long-term 2030 Vision, which is set as a milestone toward achieving the Sustainable Vision, outlines what we aim to become by the year 2030. As a solution partner that contributes to the realization of a sustainable, safe, and secure society, we will proactively work to solve social issues in the areas of decarbonization, resource circulation, and safe & prosperous community development, with the aim of achieving sustainable growth in existing businesses and creating and expanding growth businesses.

► Sustainable Vision P.16

## Forward 25 initiatives

In our roadmap for achieving our Sustainable Vision, we have defined measures that the Group itself will undertake, as well as measures to help resolve environmental and social issues that third parties may face through the Group’s products and services. The roadmap to fiscal 2025 is incorporated in the medium-term management plan Forward 25. For example, we will switch to clean fuels, design products that are easy to recycle, develop long-lifecycle technologies, create workplaces where diverse human resources can maximize their individual abilities, and build internal systems based on the UN Guiding Principles on Business and Human Rights.

► Medium-term management plan Forward 25 P.24

## Sustainability training

To ensure that the Group’s directors and employees properly understand and practice sustainability, we invited external lecturers to hold a training seminar on sustainable management in fiscal 2022, which was attended by 2,585 participants. We plan to continue regular education and training to raise the sustainability awareness of our directors and employees.

## Toward achieving the Sustainable Vision

### Background of the Sustainable Vision

The Sustainability Promotion Department was established in October 2021 as an organization under the direct control of the President, and is responsible for promoting basic sustainability policies, plans, and overall sustainable strategies, including TCFD, throughout the entire Group. We launched the Sustainability Promotion Project to develop a vision and Seven Pillars of Success (Materiality) looking ahead toward the year 2050. This project involved discussions over the course of more than a year, with over 100 participants from various departments, each bringing their own discussion points to the table.

The reason we have set “realize zero environmental impact” as part of our Sustainable Vision is because we provide products and services that help create a recycling-oriented society. In the Environment Business, we are responsible for ensuring a circular economy in all phases of the plant’s construction and decommissioning over the course of more than 30 years. In addition, we have a responsibility to ensure that the products of our Machinery & Infrastructure Business and Carbon Neutral Solution Business do not impact the environment at all stages of production, use, and disposal. In addition, our business provides the foundation for people’s well-being. “Maximize people’s well-being” expresses our determination to continue our efforts to create a society in which people can pursue happiness in their own way.

We have also used very simple language for our Sustainable Vision. This is so that each employee can paraphrase according to their own situation. Although the Group operates in a wide range of business fields, we will make this vision the guiding policy throughout the entire Group as we move forward to achieve sustainable management.

### Disseminating the Sustainable Vision

The Sustainable Vision is not only a management and business guideline, but is also an axis that serves as an action guideline for each department and employee. Based on this axis, we will clarify the products we need to develop and the businesses we need to pursue, and work to ensure that our businesses will continue to generate value in 2050.

First, I would like to change the mindset of our employees. We will continue to patiently spread awareness so that sustainability is taken into consideration for both our current and future businesses. In addition, we will quickly work on formulating Pillars of Success (Materiality) and roadmaps tailored to the characteristics of the Group companies, and disseminate our Sustainability Vision throughout the entire Group.

People are becoming increasingly attuned to the belief that a person should not benefit only themselves while harming the environment or others. Sustainable management based on the Sustainable Vision is a way for companies to embody this belief in society. The Hitachi Zosen Group will accelerate its progress toward 2050 as a practitioner of this belief.



**Aiko Tomooka**  
General Manager of  
Sustainability Promotion  
Department

# Human Capital and Human Resources Strategy

## Message from the General Manager



**Toshifumi Makihata**  
Executive Officer  
General Manager of General Administration  
Headquarters

## Strengthening human capital under the medium-term management plan Forward 25

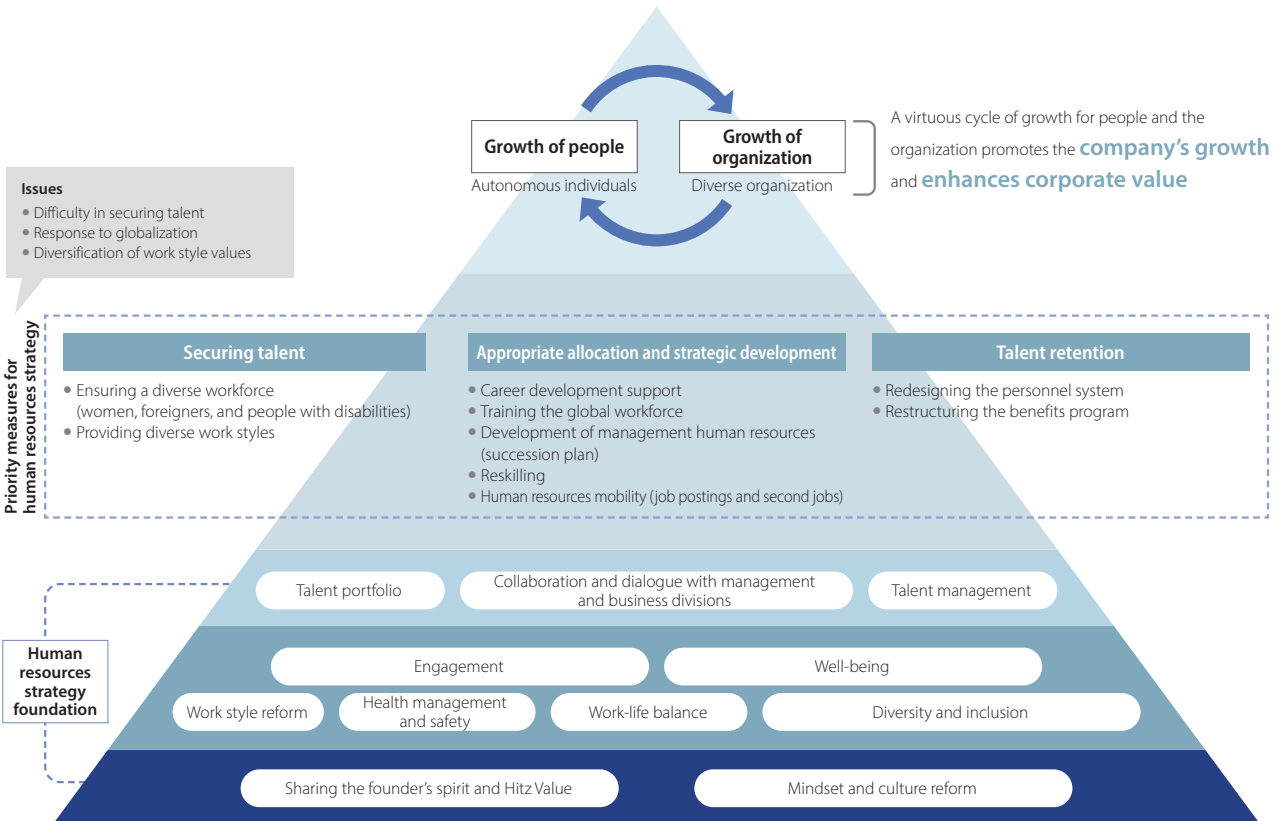
As the external environment, including the state of society and economic conditions, changes on a daily basis, the human resources mobility will increase and the relationship between companies and their employees will change more than ever before. In our medium-term management plan Forward 25, one of our basic policies is to promote sustainable management through a human resources strategy tied to our management strategy, or in other words, to strengthen our human capital.

The Hitachi Zosen Group's corporate philosophy is to "create value useful to society with technology and integrity to contribute to a prosperous future." To achieve our management and business strategies based on our corporate philosophy, we must secure, train, and retain the necessary human resources. The Group has formulated a human resources strategy based on the belief that a virtuous cycle of interaction between people and organizational growth leads to company growth and enhanced corporate value.

## Strengthening human capital under Forward 25

Secure, deploy, train, and retain the talent needed to execute management and business strategies

KPI (2025)	<ul style="list-style-type: none"> <li>Females in new graduate hires: <b>50%</b> for administrative jobs and <b>10%</b> for technical jobs</li> <li>Male employees taking childcare leave: <b>100%</b></li> </ul>	<ul style="list-style-type: none"> <li>Employee engagement index: <b>70%</b></li> <li>Prevalence of lifestyle disease: <b>21% or lower</b></li> </ul>
------------	---	---





To comprehensively manage a series of human resources strategies, which starts with understanding the gap between the talent needed to execute our management and business strategies and where we are today, followed by recruitment, training, and retention, we must further deepen management discussions.

Accordingly, in July 2023, we held a two-day training camp on human capital management for directors and executive officers, including outside directors, as well as presidents of major domestic affiliates to deepen knowledge at the management level and discuss strategies.

▶ [Message from the President P.15](#)



Training camp

### Secure talent and support career development

While securing human resources is a pressing issue, it is important to identify, hire, and train the people needed to achieve sustainable growth and enhance corporate value of the Group.

The foundation of the human resources strategy requires, among other things, building a human resources portfolio and enhancing talent management. To implement the priority measures of our strategy, i.e., securing talent, appropriately allocating and strategically developing talent, and retaining talent, we need to further enhance and visualize our human resources, and we have DX utilization in mind to make this happen.

In addition, from the perspective of human resources diversity, we take into consideration the percentage of women in our new graduate hiring, as well as hiring excellent human resources regardless of nationality or other factors. In particular, we have set KPIs for the ratio of female hires at 50% for administrative jobs and 10% for technical jobs. In Japan, the percentage of women in technical fields is not high, but we have successfully managed to keep our female ratio for technical staff hiring at over 10% since fiscal 2021.

<b>KPI (2025)</b>	<ul style="list-style-type: none"> <li>■ <b>Females in new graduate hires</b> Administrative jobs: 50%    Technical jobs: 10%</li> </ul>
<b>Hitachi Zosen non-consolidated results</b>	<ul style="list-style-type: none"> <li>■ <b>Three-year average</b> Administrative jobs: 42.4%    Technical jobs: 11.2%</li> </ul>

There have been fluctuations for administrative jobs from year to year, but the three-year average is 42.4%, and for technical jobs, the average has remained at over 10% for three consecutive years. To raise awareness and encourage female students to apply for jobs at the Hitachi Zosen Group, we carry out public relations activities such as events and seminars for female students to interact with our female employees.

In terms of talent development, we will focus particularly on developing DX, global, and management human resources.

We began implementing initiatives for DX human resources in fiscal 2021 and management human resources in fiscal 2022, and have begun working on global human resources in earnest in fiscal 2023. We currently offer more than 100 in-house courses, and plan to establish a more in-depth training program that includes self-directed learning based on roles and careers, as well as career development support and reskilling to help employees take on new challenges.

▶ [DX Promotion P.42](#)

▶ [Global Expansion P.43](#)

### Key training programs

- New employee training (two years: initiation training, follow-up training, etc.)
- Rank-specific training
- Skills training (skills training school)
- Technical courses
- Career planning training
  - For young to mid-career (2nd/3rd/10th year)
  - For mid-career and experienced employees (age 45–50s)
- Various skills training (logical thinking, accounting and finance, marketing, logical coaching, etc.)
- Language training (English, Chinese, Japanese, etc.)
- External training (external dispatch, study programs in Japan and overseas, etc.)

### Development of management human resources (succession plan)

The Management Human Resources Development Program, which we launched in fiscal 2022, involves moving forward systematically through a cycle of identifying, training, and evaluating candidates for future directors, including the CEO. In selecting candidates, we conduct interviews with outside experts, 360-degree evaluations, and task presentations to assess whether or not employees have the ability to execute management strategies and operate businesses as the next generation of officers of the Group, and whether or not they have the ideas, abilities, and behavioral qualities appropriate for fulfilling the Group's corporate philosophy.

Those selected in the first batch of candidates will undergo a two to three year training period based on individual development plans, including transfers to other divisions and overseas from the second half of fiscal 2023, while monitoring and assessing their growth process before placing them in the pool of candidates for associate executive officer and executive officer, which is one step below the director position.

With regard to operating the succession plan, we will expand our scope to include succession planning for general managers and managers, and move forward with building a human resources portfolio and enhancing talent management.

The selection and training of management candidates and the operation and maintenance of the human resource pool will be handled by the Human Resources Development Committee, which reports directly to the president, and the

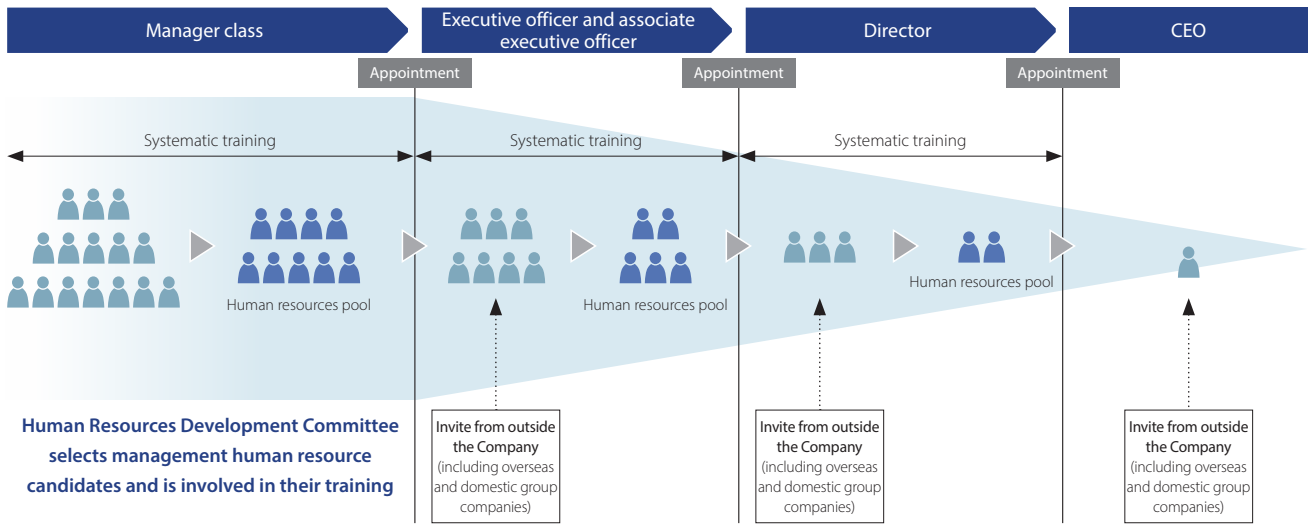
## Human Capital and Human Resources Strategy

Nomination and Remuneration Advisory Committee will discuss matters such as officer appointments. We will ensure the effectiveness of appropriate involvement in training and placement for management candidates, and will engage in

regular and ongoing training and discussion to strategically promote the development of management human resources.

▶ Selection policy for management executives and director candidates P.64

### Flow of training and appointment process leading up to CEO position



### D&I that leverages diverse experiences, values, and more

We believe that eliminating unconscious bias against nationality, gender, age, and other factors is critical to achieving diversity and inclusion (D&I). To ensure that employees can work with peace of mind for a long time, we are working to create a workplace environment that respects the diverse values of Group employees and encourages them to play an active role in the Group, for example by establishing various systems such as childcare and nursing care leave, shorter working hours, and telecommuting, and by holding seminars and exchange events to create an environment where foreign employees can work without any worries or concerns. Our 100% Childcare Leave by Men Declaration is a part of this effort, and we set a KPI target of having all eligible male employees take childcare and related leave.

<b>KPI (2025)</b>	■ Male employees taking childcare or related leave: 100%
<b>Hitachi Zosen non-consolidated results</b>	■ Fiscal 2022: 49.5%

The Hitachi Zosen Group will continue to promote D&I with the aim of creating an organizational culture that embraces diversity and a workplace that offers excellent psychological safety, where everyone is included, heard, and can speak freely, with a diverse set of people playing an active role.

### Improving engagement

Since fiscal 2009, we have conducted employee awareness surveys every other year to measure their level of comfort and satisfaction with their work environment, with the aim of creating a rewarding workplace.

In fiscal 2023, the first year of Forward 25, we began conducting an engagement survey focusing on the connection between the Company and its employees. Each year, we comprehensively measure each employee's level of satisfaction and happiness, as well as their level of empathy with the Company's direction, and reflect this in our human resources strategy initiatives, thereby working to create a virtuous cycle of growth for both employees and the Company.

<b>KPI (2025)</b>	■ Employee engagement index: 70%	
<b>Hitachi Zosen non-consolidated results</b>	■ Survey year	2019      2021
		50.6%    55.9%

The most recent survey showed an improvement of approximately 5% in the employee engagement index attributable to factors such as the ability to work more flexibly and achieve a better work-life balance. On the other hand, the results show that there are issues in career support for young employees and lack of communication among supervisors, subordinates, and colleagues, and we are working on initiatives to rectify these issues. The employee engagement index has been measured based on the employee awareness survey that we have been conducting every other year since fiscal 2009. However, from fiscal 2023, we have switched to a survey focused on engagement in order to delve deeper into the factors that influence engagement so that we can take more effective actions.

We will continue to attract more people who share our vision and actively promote our branding both internally and externally so that people who work for the Hitachi Zosen Group can take pride in their work, embody the Hitz Value and helps us achieve our Sustainable Vision.

# Safety and Health

## Basic approach

We promote safety activities throughout the Group based on our basic philosophy, Hitz Value, which states that safety is our top priority in all of our business activities.

We believe that the origin of our safety-first policy stems from asking ourselves why safety is important and continuing to explore what we should do to ensure safety.

Safety and security are the basis of human capital management and health management. We will continue to pursue safety in all processes from product design, manufacturing, construction, and operation, and create a safe and comfortable working environment for all people involved in our Group's business activities.

## Safety and health initiatives

### Safety management system

In July 2023, we established a company-wide Safety and Health Committee, chaired by the president and including the general managers of each business headquarters and headquarters management department, to further improve the level of safety management in the Hitachi Zosen Group. The committee formulates basic policies for safety and health management and raises issues, and the deliberations are reported to the Board of Directors.

## Enhancing safety training activities

In June 2023, we held an eight-day (total of 40 hours) machinery and equipment safety training course led by the Japan Industrial Safety & Health Association for employees of the design and safety management departments at the headquarters in order to promote the safety-first philosophy and enhance our functions.

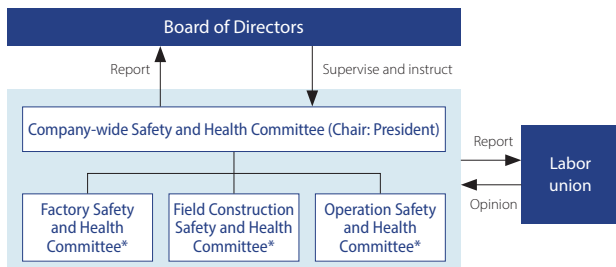
This training is designed to ensure thorough risk assessment in all processes of machinery and equipment, from manufacturing to disposal, and will be incorporated into the Group's training system to carry on the safety-first philosophy.

## Enhancing the safety management network with ICT technology

All accidents and incidents that occur within the Group are reported to the Safety Department of the head office in Japan. The Group analyzes the data collected and identifies the underlying issues surrounding accidents and incidents, as well as issues that need to be addressed in order to ensure safety. The results of the data analysis are used as daily safety instructions and reflected in annual safety management policies and medium- and long-term safety management plans.

In addition, we have established an ICT-based safety management system for consolidating damage and support systems for natural disasters caused by typhoons, heavy rains, earthquakes, and other natural disasters. We will continue to leverage ICT technology to create an organization that can respond flexibly to health and safety-related risks.

### Company-wide Safety and Health Committee organization chart



\* Includes presidents of group companies

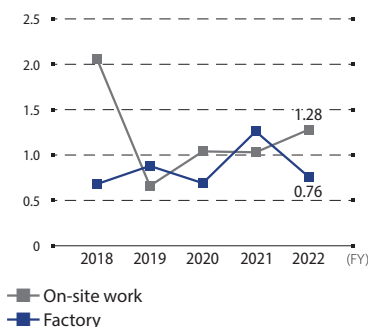
**KPI (2025)**

- Number of lost time injuries: 0

We will develop an occupational safety and health management system that focuses on eliminating and reducing risks that lead to lost time injuries, with the goal of eliminating all accidents.

### Lost Time Injury Frequency Rate

(Number of fatalities and injuries due to occupational accidents requiring 1 day or more absence from work ÷ cumulative hours worked) x 1,000,000



\* On-site work: Total of domestic construction work (for projects where Hitachi Zosen was the prime contractor, including subcontractors).

\* Factory: Domestic factories and group companies that conduct business activities on these premises in accordance with the principles of consolidated financial statements.

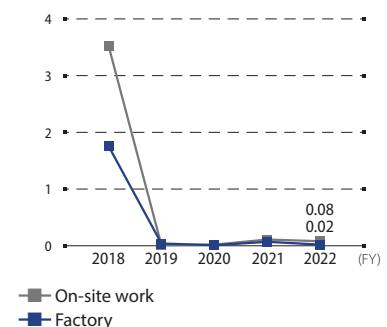
### Number of lost time injuries

Occupational accidents requiring 1 day or more absence from work



### Lost Time Injury Severity Rate

(Number of days absent from work ÷ cumulative hours worked) x 1,000



# Procurement

## Message from the General Manager



**Koichi Kaibuchi**  
Executive Officer  
General Manager of Procurement Headquarters

## Promoting sustainability throughout the supply chain

With the rise of various business risks and increased concern for human rights, companies are required to take social responsibility in their supply chains both in Japan and overseas, and improving the sustainability of the entire supply chain is one of the most important issues for companies to tackle. In our Sustainable Vision, which is a part of our desired image for 2050, we have heralded sustainable procurement as one of the Seven Pillars of Success (Materiality). The Procurement Headquarters has long provided optimal quality, cost, and delivery (QCD) based on fair and impartial transactions but, going forward, we are also committed to improving Group and social sustainability through sustainable procurement.

### Policy and Strategy

One of our goals for fiscal 2023 is to formulate and disseminate our Basic Procurement Principles with an emphasis on sustainability. Sustainable procurement is a company-wide topic to be tackled not only by the procurement department alone, but also by all related departments, including sales and design departments, while also requiring the understanding and cooperation of suppliers that make up the supply chain. Since fiscal 2019, we have been surveying our suppliers regarding their sustainability using the Self-Assessment Questionnaire (SAQ), and are working with them to build a sustainable supply chain by cycling through the process of survey, evaluation and feedback, request for improvement, and re-evaluation.

### Initiatives

In formulating the medium-term management plan Forward 25, we positioned its period as the first three years toward achieving our 2050 targets, and created a roadmap for each fiscal year. To achieve sustainable procurement, it is important to collaborate not only internally, but also with external stakeholders and suppliers to promote change in understanding and behavior. To this end, we will hold study sessions internally and for suppliers, create a guidebook for suppliers, and roll out sustainability surveys for the suppliers of our Group companies.

Furthermore, we also believe that sustainability of our overseas suppliers is an important issue to be addressed going forward. In Southeast Asia and other regions where we plan to expand our business in the future, there may be cases where the understanding of human rights, labor safety, the environment, and other matters may differ from that in Japan. Accordingly, we carry out transactions after conducting sufficient research in our procurement activities to establish and maintain a sustainable global supply chain.

We will help create a better and more prosperous future by promoting sustainability-oriented procurement activities through continuous communication with our diverse suppliers, without viewing the initiatives themselves as a goal.

#### Basic Procurement Principles

▶ <https://www.hitachizosen.co.jp/english/supply/policy.html>



### Supplier sustainability survey

Since fiscal 2019, we have conducted an annual survey of supplier attitude toward sustainability initiatives using a questionnaire (SAQ) developed by the Global Compact Network Japan (GCNJ) subcommittee.

In fiscal 2022, we surveyed 698 companies, representing approximately 85% of our non-consolidated order value, for a response rate of approximately 84% (588 companies). For suppliers with low scores in the survey results, we check the status of their initiatives by communicating with them, including through interviews, and tie this into improvements. Going forward, we plan to expand the scope of the survey to include suppliers of Group companies.

#### SAQ question categories

- |                                   |   |
|-----------------------------------|---|
| <b>I</b> Corporate governance     | <b>VI</b> Quality and safety                            |
| <b>II</b> Human rights            | <b>VII</b> Information security                         |
| <b>III</b> Labor                  | <b>VIII</b> Supply chain                                |
| <b>IV</b> Environment             | <b>IX</b> Harmonious coexistence with local communities |
| <b>V</b> Fair corporate practices |   |

# Quality

## Enhance quality mindset of all officers and employees, from top management to the field

### Basic approach

The Hitachi Zosen Group's corporate philosophy, Hitz Value, places emphasis on always pursuing quality and expresses our commitment by stating that "we are always aware of the improvement of technology and pursue quality that satisfies our customers." To date, we have continued to keep our promises to our customers and deliver high quality products, and have built deep customer trust and a strong presence in the market, which are our assets. We will continue our efforts to maintain and improve the trust of our customers, employees, and other stakeholders by ensuring that we provide high-quality products and services.

### Quality policy

▶ <https://www.hitachizosen.co.jp/english/company/iso-9001.html>

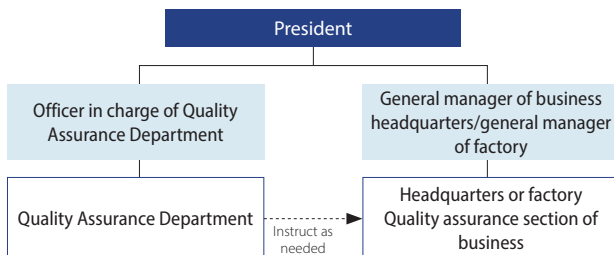


### System for promoting initiatives

The Hitachi Zosen Group has established the Quality Assurance Department, which reports directly to the president, as well as quality assurance sections at each business headquarters and factory, which report to the respective general managers.

We are promoting cross-departmental cooperation to prevent problems from occurring. Specifically, the risk management department reviews risks at the time an order is received, and the research and development department examines technical concerns before proceeding with a project. The quality assurance department guarantees the quality of plants and products, and the production engineering department passes on the results of evaluations and verifications to the entire company and to the next generation. By thoroughly identifying risks and preventing problems in each of these areas in this way, we examine projects from multiple perspectives and strive to always pursue quality and ensure thorough risk management.

### Quality assurance organization chart



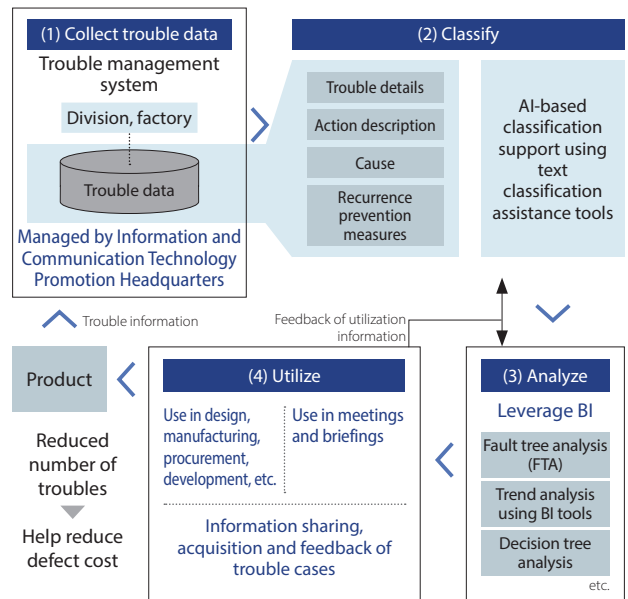
**KPI (2025)** ■ Defect cost to sales ratio: 0.5% or less

### Trouble database system goes live

At Hitachi Zosen, we leverage our trouble database to help prevent quality issues. We are centralizing the accumulated knowledge, case studies, and past trouble histories of experienced personnel into a database that can be searched and referenced by all officers and employees. The database went live for all business headquarters in fiscal 2023. As a result, even new employees can easily learn from past trouble information, and we now have a system in place to prevent the recurrence of similar problems. In addition, we are working to ensure that information from other business departments can be used in each department.

Currently, we are working to incorporate these into our business processes, for example by incorporating verification based on past trouble information into design reviews. By effectively applying the PDCA cycle, we will build a more efficient and reliable system for preventing problems.

### Flow of using trouble data



### Company-wide mindset reform

Toshiyuki Shiraki, Advisor (former officer in charge of Quality Assurance Department)

The Quality Assurance Department has continued its initiatives to enhance the quality mindset throughout the company. We have placed particular emphasis on mindset reform at the top management level, and as a result of ongoing discussions at executive training sessions, we have been able to unify the pursuit of quality from top management down to the field, and we feel that problems are being shared at a much faster pace. In addition, the response of the general managers of each department and officers in charge of quality assurance has become quicker, with instructions becoming more precise. We will continue to work to ensure that everyone from top management to employees in the field maintain a strong quality mindset.

# Environmental Management

## Basic approach

To promote environmental conservation activities in our business activities, the Hitachi Zosen Group has established, maintains, and operates an environmental management system based on the Basic Environmental Conservation Policies, ISO 14001, and environmental laws and guidelines in each country and region.

### Environmental Basic Policy

▶ <https://www.hitachizosen.co.jp/english/sustainability/policy.html>



## Environmental Conservation Promotion Plan

Fiscal 2022 targets and results		Medium- to long-term targets (fiscal 2023–2025)	
Maintain environmental management system	Establish a Hitachi Zosen Group environmental management system centered on the Environmental Conservation Promotion Committee <b>Activity examples</b> (1) Continue to conduct environmental audits (surveys) and expand the scope to include Group companies (2) Maintain ISO 14001 management systems	Maintain environmental management system	Maintain Group environmental management systems <b>Priority measures</b> Establish and implement an environmental due diligence process
	Reduce Scope 1, 2, and 3 emissions by 50% in fiscal 2030 compared to fiscal 2013 Achieve carbon neutrality in fiscal 2050 <b>Results</b> Fiscal 2022 emissions: 224.5 kt-CO <sub>2</sub> e (39.3% reduction compared to fiscal 2013) <b>Details</b> ▶ <a href="#">Environmental Data P.72</a> <b>Activity examples</b> (1) Promote switchover to renewable energy (2) Promote efficient energy use		Carbon neutrality Reduce Scope 1 and 2 greenhouse gas (GHG) emissions by 34% in fiscal 2025 compared to fiscal 2013 Reduce Group GHG emissions (Scope 1 and 2) by 3% or more from the previous year <b>Priority measures</b> (1) Formulate, disseminate, and thoroughly implement a carbon neutral policy (2) Reduce fossil energy use and promote switchover to renewable energy Align products with decarbonization measures and investigate feasibility of using in-house technologies (3) Promote efficient energy use Improve efficiency of production processes by identifying transformers, air conditioning equipment, lighting equipment, and other equipment that have not yet been renewed, and by reviewing renewal work procedures
Reduce CO <sub>2</sub> emissions	Manage the quality and volume of water resources used in our businesses <b>Results</b> ▶ <a href="#">Environmental Data P.72</a> <b>Activity examples</b> Reuse cooling water and thoroughly conserve drinking water	Zero environmental impact	Water resources Begin managing water resource-related targets, implement ongoing management <b>Priority measures</b> (1) Identify, set targets for, and manage water consumption by water source and use (2) Identify issues for recycling and investigate the feasibility of using in-house technologies
	Thoroughly manage environmental pollutants emitted from business activities (including prevention of air, water, and soil pollution) <b>Results</b> ▶ <a href="#">Environmental Data P.72</a> <b>Activity examples</b> (1) Survey, manage emissions, and track transfer volume of substances subject to Specified Chemicals Ordinance*2 and Pollutant Release and Transfer Register (PRTR) program*3 (2) Prevent air, water, and soil pollution, set additional voluntary standards, and conduct preventive measures through monitoring		Chemical substance management Complete survey on substances subject to the Specified Chemicals Ordinance*2 and the PRTR program*3, and decide on a plan to change materials used in products <b>Priority measures</b> (1) Investigate substances subject to the Specified Chemicals Ordinance and the PRTR program, and promote changes in materials used (2) Prevent air, water, and soil pollution; control noise, vibration, and odors; thoroughly implement preventive measures
Implement environmental pollutant measures, including for VOCs*1	Thoroughly manage noise, vibration, and odor <b>Activity examples</b> (1) Identify and address sources of noise, vibration, and odor (e.g., relocate work site) (2) Establish and manage additional voluntary standards	Waste	Final landfill rate: 3% or less, recycling rate: 90% or more <b>Priority measures</b> (1) Identify items that are not recycled and expand the number of recycled items (2) Promote recycling of valuable metals through product collection
	Reduce landfill waste generated from business activities <b>Results</b> Final landfill rate: 2.4%, recycling rate: 92.7% (Scope of data disclosure: Hitachi Zosen and one consolidated subsidiary) <b>Activity examples</b> Use industrial waste contractors with high recycling rates, and ensure thorough separation of waste		Biodiversity Promote water resources and forest conservation activities <b>Priority measures</b> Establish additional indicators and targets for water resources and forest conservation and begin managing targets
		Coexist and prosper with local communities	Strengthen relationships with local communities <b>Priority measures</b> Actively participate in community activities and strengthen relationships with neighboring suppliers
		Well-being-focused company	Promote sustainable procurement and manufacturing process automation

\*1 VOC: Volatile organic compounds, such as toluene and xylene.

\*2 Specified Chemicals Ordinance: Short for Ordinance on Prevention of Hazards due to Specified Chemical Substances.

\*3 PRTR: Refers to Pollutant Release and Transfer Register. For details, see Environmental Data on page 73

## Structure and system

### Environmental conservation promotion system

The Group's environmental conservation promotion system is led by the Environmental Conservation Promotion Committee, a subcommittee of the Sustainability Promotion Committee, and the Environmental Conservation Committees of each business site, and is aimed at promoting compliance with environmental laws and regulations, preventing environmental risks including climate change-related risks from materializing, and promoting environmental preservation activities.

The Environmental Conservation Promotion Committee sets up an Environmental Conservation Promotion Plan based on the roadmap established for achieving our Sustainable Vision, and regularly follows up and reviews the progress and processes of the plan. In addition, the Committee receives reports on the results of environmental audits conducted by the Sustainability Promotion Department, and provides instructions and guidance to each factory.

#### Environmental Conservation Promotion Committee

<b>Committee chair</b>	Officer in charge of sustainability promotion
<b>Items discussed and reported</b>	Formulates basic policy for environmental conservation and priority action items
<b>Activities in fiscal 2022</b>	Held: 2 times Conducted and reported on environmental audit Formulated Environmental Conservation Promotion Plan (fiscal 2023–2025) Discussed environmental data
<b>Secretariat</b>	Sustainability Promotion Department

#### Number of companies with ISO 14001 certification

GRI Standard reference number  
GRI 103-1/103-2/103-3

	Fiscal 2021	Fiscal 2022
<b>Japan</b>	9	8
<b>Overseas</b>	3 (including one equity method affiliate)	3 (including one equity method affiliate)

Note 1: Includes companies that acquired certification for only some business sites.

Note 2: Decrease of one company in fiscal 2022 due to the removal of Nippon Pusnes Co., Ltd. from the scope of consolidation.

Note 3: Includes one company in Japan that has acquired a standard equivalent to ISO 14001 (Kyoto Environmental Management System Standard).

### Environmental management system for Group companies

In principle, the environmental management system of Hitachi Zosen Group covers its consolidated subsidiaries, including overseas Group companies. The business formats of Group companies include those with manufacturing facilities, those primarily engaged in engineering and field construction, and those with only offices and no manufacturing facilities. To ensure compliance with environmental laws and regulations, prevent environmental risks from materializing, and promote environmental preservation activities, we select items to be managed at each applicable business site based on the industry, impact on the environment and ecosystems, and

other factors, and collect environmental information. In addition, we include subsidiaries that have manufacturing facilities in the scope of surveys and environmental audits conducted by the Sustainability Promotion Department.

## Initiatives

### Environmental data disclosure

To properly understand the environmental impact of the Hitachi Zosen Group and effectively set targets and formulate measures accordingly, we switched from disclosing environmental data for Hitachi Zosen and some subsidiaries to disclosing environmental data for the Group on a consolidated basis starting in fiscal 2022. We plan to gradually expand the scope of data collection.

Furthermore, we will disclose ESG information in accordance with global standards, and aim to enhance the content of disclosure by proactively engaging in dialogue with our stakeholders in Japan and overseas.

Going forward, we will introduce an environmental data management system to disclose information in a timely manner, while also preparing to implement third-party verification.

### Environmental law and regulation compliance and environmental audits

There were no environment-related regulatory violations reported in fiscal 2022. In addition, we have not received any significant fines or other non-monetary sanctions for violations of environmental laws and regulations. Field audits conducted by the Sustainability Promotion Department at seven factories (Hitachi Zosen and consolidated subsidiaries) also revealed no non-compliance matters, confirming that the environmental management system is being properly operated.

### Environmental communication

We promote activities to educate and raise awareness about the environment, such as by hosting tours of Waste to Energy (WtE) plants and biomass power plants that we have built, and by offering lectures at elementary schools in local communities. The Miyanosato Woody Biomass Power Plant has hosted tours for three consecutive years beginning in fiscal 2019.

In addition, as part of our SDG activities, we have been involved in environmental awareness activities in Laos since 2015. From the second half of fiscal 2022 to the first half of fiscal 2023, we held four online lectures for students of the National University of Laos on topics such as waste treatment and resource recycling. In July 2023, our employees traveled to Laos to participate in environmental awareness activities at the National University of Laos and visited a final waste disposal site (landfill) with teachers and students. Furthermore, in a lecture at the university, the students and our employees were able to discuss and deepen their understanding of the issues that Laos faces and what the future should look like.

# Response to TCFD

## Climate change initiatives

In March 2021, we expressed our support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), and we are committed to disclosing information by identifying and assessing climate-related risks

and opportunities and conducting scenario analyses.

We have designated carbon neutrality as one of our Pillars of Success (Materiality), and we are committed to addressing climate change.

Key initiatives include the following.

Disclosure items	Status of initiative
<b>Governance</b>	<ul style="list-style-type: none"> <li>Established the Sustainability Promotion Committee in March 2022 to determine and monitor basic management policies, business activity policies and strategies, and important measures related to the Group's sustainability promotion, including climate change measures.                             <ul style="list-style-type: none"> <li>▶ <a href="#">Promoting Sustainability P.44</a></li> </ul> </li> <li>Established an Environmental Data Management Committee to propose management methods and rules for environmental data, including greenhouse gas (GHG) emissions, and track the state of environmental data management in order to respond to the climate change risk (March 2022). ▶ <a href="#">Environmental Data P.72</a></li> <li>Began discussing issues to be addressed by the Group based on the results of climate change scenario analysis and changes in the external environment, such as the transition to a carbon-neutral society, from fiscal 2022. ▶ <a href="#">Sustainable Vision P.16</a></li> <li>Solicited opinions and advice from outside experts on the Group's initiatives to address sustainability issues, including climate change, and reflected them in our measures and roadmap. ▶ <a href="#">Sustainable Vision P.16</a></li> </ul>
<b>Strategy</b>	<ul style="list-style-type: none"> <li>Identified and assessed short-, medium-, and long-term climate change risks and opportunities from the present to 2050.</li> <li>Formulated the Sustainable Vision as part of our desired image for 2050. We established our Pillars of Success (Materiality), including for achieving carbon neutrality, and developed measures and a roadmap to 2050. Reflected measures in the medium-term management plan Forward 25 covering the period from fiscal 2023 to fiscal 2025 (March 2023).                             <ul style="list-style-type: none"> <li>▶ <a href="#">Sustainable Vision P.16</a> / ▶ <a href="#">Medium-term management plan Forward 25 P.24</a></li> </ul> </li> <li>Conducted scenario analysis using three scenarios (4°C, 2°C, and 1.5°C) for three businesses that are most likely to be affected by climate change in 2050 (Waste to Energy (WtE), biogas plant, and wind power generation businesses).</li> <li>Continued to use green financing to promote green projects such as for the WtE business and wind power generation business.                             <ul style="list-style-type: none"> <li>▶ <a href="#">Green finance P.39</a></li> </ul> </li> </ul>
<b>Risk management</b>	<ul style="list-style-type: none"> <li>Identified, assessed, and managed climate change risks and opportunities that could have a significant impact on our business in cooperation with each risk management department.</li> <li>Analyzed social issues, risks, and opportunities based on scenario analysis in the process of reviewing the Pillars of Success (Materiality). Planning to conduct periodic reviews in line with updates to the medium-term management plan to reflect changes in the external environment.                             <ul style="list-style-type: none"> <li>▶ <a href="#">Sustainable Vision P.16</a></li> </ul> </li> </ul>
<b>Indicators and targets</b>	<p><b>GHG emissions reduction target</b> ▶ <a href="#">Environmental Data P.72</a></p> <ul style="list-style-type: none"> <li>Scope 1 and 2: Aiming for a 34% reduction from fiscal 2013 levels by fiscal 2025.</li> <li>Scope 1, 2, and 3: Aiming for a 50% reduction from fiscal 2013 levels by fiscal 2030. Achieving carbon neutrality across the Group by fiscal 2050</li> <li>The scope of data disclosure is being gradually expanded to include the consolidated Group from fiscal 2022. We will continue initiatives to expand the scope of Scope 3 disclosures.</li> </ul> <p><b>Medium-term management plan Forward 25</b> ▶ <a href="#">Medium-term management plan Forward 25 P.24</a></p> <ul style="list-style-type: none"> <li>Expand Carbon Neutral Solution Business and boost sales by ¥25 billion to ¥70 billion over the three years through fiscal 2025.</li> </ul>

## Scenario analysis

We adopted three scenarios that assume a global average temperature increase of 4°C, 2°C, and 1.5°C by 2100 compared to the pre-industrial era, and conducted an analysis of the impact of climate change on applicable businesses.

### Overview of scenario analysis

<b>Key scenarios</b>	Transition risks and opportunities: NZE, SDS, STEPS by IEA Physical risks and opportunities: RCP 1.9, 2.6, and 8.5 by IPCC
<b>Applicable businesses</b>	WtE business, biogas plant business, wind power generation business
<b>Target year</b>	2050

(Note) IEA: International Energy Agency  
 NZE: Net Zero Emissions by 2050 Scenario  
 SDS: Sustainable Development Scenario  
 STEPS: Stated Policies Scenario  
 IPCC: Intergovernmental Panel on Climate Change  
 RCP: Representative Concentration Pathways

## Future vision of society under the 2°C scenario

In the 2°C scenario, policies are developed to spread the use of renewable energy and curb greenhouse gas emissions, and there are impacts from rising costs due to higher raw material prices and carbon taxes. Meanwhile, as the share of renewables in the overall energy mix increases, demand for biogas and offshore wind power plants is expected to increase in addition to WtE plants. In particular, demand for waste treatment in developing countries is expected to grow. Although it will be necessary to monitor regulations in each region as needed, we will advance R&D to generate technical innovations to achieve sustainable growth, keeping in mind the possibility that the amount of waste generated in developed countries will decrease and that the growth in demand for waste treatment will decline.



Future vision of society under the 2°C scenario

**Government**

- Carbon taxes may be increased and carbon border adjustments may be introduced
- CE-related regulations, plastic-related regulations, and food loss-related regulations may be tightened
- WtE may not be positioned as renewable energy

**Hitachi Zosen Group / markets**

**Investors**

- There will likely be pressure for business transformation and divestment (if WtE is positioned as a non-renewable energy).
- Green bonds and sustainability bonds should expand in capital markets

**Energy mix**

- The share of renewables might increase and the energy mix might diversify to include wind power generation, biogas, methanation, etc.

**Suppliers**

- Renewable energy may expand and electricity prices may increase
- Iron and other raw material prices may rise, as may material and equipment costs (as a result of carbon taxes)

Summary of scenario analysis results

Item		Anticipated changes and worldview		Financial impact			Countermeasures
				Scenario			
		Overview ( Risks • Opportunities )		4°C	2°C	1.5°C	
Transition	Risks	Introduction of carbon taxes	<b>Risks</b> Operation costs increase as a result of carbon pricing				<ul style="list-style-type: none"> <li>Set GHG emission reduction targets and roadmaps</li> <li>► Sustainable Vision P.16</li> <li>Develop carbon neutral products</li> <li>Introduce internal carbon pricing (ICP) and use it as an engine for company-wide decarbonized management</li> <li>Participate in Green Transformation (GX) League (May 2023)</li> </ul>
			<b>Risks</b> If carbon border adjustments are implemented, costs associated with importing and exporting materials and equipment may increase		High	High	
	Risks and opportunities	Higher raw material costs	<b>Risks</b> Procurement costs for energy-intensive materials and equipment rise (items that use iron, copper, cement, plastic, etc. as raw materials)		Medium	Medium	
			<b>Risks</b> Regulations on circular economy, plastics, and food losses are strengthened and waste processing volumes decrease to limit temperature rise		High	Medium	
	Changes in policies, regulations, and energy mix	WtE plants	Share of renewable energy varies widely by scenario (WtE plants)				
			<b>Risks</b> WtE is no longer treated as renewable energy in developed countries and demand for new plant stagnates		High	Medium	
Biogas plants		<b>Opportunities</b> Overseas markets expand substantially as a solution to increased waste generation and landfill problems associated with economic growth in developing countries		High	Medium		
Wind power plants	(Biogas and wind power plants) <b>Opportunities</b> Markets expand significantly in low-carbon societies (particularly for offshore wind power)		Medium				
Physical	Risks and opportunities	Worsening natural disasters (floods, lightning strikes, etc.)	<b>Risks</b> Natural disasters, such as floods, typhoons, heavy rain, and lightning strikes, damage plants, resulting in additional costs to restore plants and reduced revenues during downtime for DBO projects <b>Opportunities</b> Orders for repair work on damaged facilities increase		High		<ul style="list-style-type: none"> <li>Ensure annual provisions for countermeasures based on historical damage levels</li> <li>Implement business continuity plans, including insurance to cover natural disaster damage</li> <li>Establish an ICT-driven system to ensure that social infrastructure, such as WtE facilities and sludge recycling centers, will not be shut down even in the event of a disaster</li> <li>Develop a wide range of disaster prevention infrastructure technologies for major disasters, including flap-gate type seawalls</li> </ul>

## Board of Directors and Corporate Auditors



## Directors

## Sadao Mino

Representative Director, President and Chief Executive Officer

1

- Apr. 1982 Joined the Company
- Apr. 2015 General Manager of Environment Business Headquarters, and Responsible for Architect Supervision Dept. and Quality Assurance Dept., the Company
- Jun. 2015 Managing Director, the Company
- Apr. 2017 Representative Director, Executive Vice-President, the Company President's Assistant (Responsible for Production Engineering Dept., Wind Power Business Promotion Office and Functional Materials Business Promotion Office), the Company
- Apr. 2018 President's Assistant (Responsible for Sales and Production Engineering Dept.), the Company
- Apr. 2019 President's Assistant (Responsible for Sales and Procurement Headquarters), the Company
- Oct. 2019 President's Assistant (Responsible for Sales, Procurement Headquarters, and Yumeshima Area Development Promotion Dept.), the Company
- Apr. 2020 Representative Director, President and Chief Operating Officer, the Company
- Apr. 2022 Representative Director, President and Chief Executive Officer, the Company (current position)

## Tatsuji Kamaya

Managing Director

2

- Apr. 1984 Joined the Company
- Apr. 2014 Executive Officer, the Company
- Apr. 2017 General Manager of Corporate Planning Headquarters, and Responsible for General Administration Headquarters and Procurement Headquarters, the Company
- Jun. 2017 Director, the Company
- Aug. 2017 General Manager of Corporate Planning Headquarters, and General Manager of SR99 Project Team, Corporate Planning Headquarters, and Responsible for General Administration Headquarters and Procurement Headquarters, the Company
- Apr. 2018 Managing Director, the Company (current position)
- Apr. 2019 General Manager of Corporate Planning Headquarters, and General Manager of General Administration Headquarters, and General Manager of SR99 Project Team, Corporate Planning Headquarters, and Responsible for Production Engineering Dept., the Company
- Apr. 2020 General Manager of Corporate Planning Headquarters, and General Manager of General Administration Headquarters, and General Manager of SR99 Project Team, Corporate Planning Headquarters, the Company
- Jul. 2020 General Manager of Machinery Business Headquarters, and General Manager of SR99 Project Team, Corporate Planning Headquarters, and Responsible for Infrastructure Business Headquarters, the Company
- Apr. 2021 General Manager of Machinery & Infrastructure Business Headquarters, the Company
- Jun. 2021 General Manager of Machinery & Infrastructure Business Headquarters, and Responsible for Production Engineering Dept., the Company
- Apr. 2022 General Manager of Carbon Neutral Solution Business Headquarters, and Responsible for Machinery & Infrastructure Business Headquarters, and Production Engineering Dept., the Company (current position)

## Tadashi Shibayama

Managing Director

3

- Apr. 1982 Joined the Company
- Apr. 2012 Executive Officer, the Company
- Apr. 2017 General Manager of Machinery Business Headquarters, the Company
- Jun. 2017 Director, the Company
- Apr. 2019 General Manager of Machinery Business Headquarters, and Responsible for Infrastructure Business Headquarters, the Company
- Jun. 2019 Managing Director, the Company (current position)
- Apr. 2020 General Manager of Machinery Business Headquarters, and Responsible for Sales, Overseas Business, Infrastructure Business Headquarters and Yumeshima Area Development Promotion Dept., the Company
- Jul. 2020 Responsible for Sales, Overseas Business, General Administration Headquarters, Corporate Planning Headquarters and Yumeshima Area Development Promotion Dept., the Company
- Jun. 2021 General Manager of R&D Headquarters, and Responsible for Overseas Business and Information and Communication Technology Promotion Headquarters, the Company
- Jul. 2021 General Manager of R&D Headquarters, and Responsible for Information and Communication Technology Promotion Headquarters and Global Headquarters, the Company (current position)

## Michi Kuwahara

Managing Director

4

- Apr. 1986 Joined the Company
- Apr. 2015 General Manager of Corporate Planning Dept., the Company
- Jan. 2018 General Manager of Corporate Planning Dept., the Company and Chairman of the Supervisory Board of Hitachi Zosen Inova AG
- Apr. 2018 Executive Officer, the Company
- Apr. 2018 Assistant to General Manager of Environment Business Headquarters, the Company and Chairman of the Supervisory Board of Hitachi Zosen Inova AG
- Jul. 2020 General Manager of General Administration Headquarters, and Corporate Planning Headquarters, the Company
- Apr. 2021 General Manager of Corporate Planning Headquarters, the Company
- Jun. 2021 Director, the Company General Manager of Corporate Planning Headquarters, and Responsible for General Administration Headquarters, Quality Assurance Dept., and Yumeshima Area Development Promotion Dept., the Company
- Oct. 2021 General Manager of Corporate Planning Headquarters, and Responsible for General Administration Headquarters, Sustainability Promotion Dept., Quality Assurance Dept., and Yumeshima Area Development Promotion Dept., the Company
- Apr. 2022 Managing Director, the Company (current position) General Manager of Environment Business Headquarters and Responsible for Procurement Headquarters, the Company
- Jun. 2023 General Manager of Environment Business Headquarters, and Responsible for Procurement Headquarters and Architect Supervision Dept., the Company (current position)

**Richard R. Lury**

Outside Director

5

May 1974 Admitted to the bar of the State of New York  
 Sep. 1989 Partner, Kelley Drye & Warren LLP (retired in January 2015)  
 Jun. 2003 Admitted to the bar of the State of New Jersey  
 Mar. 2013 Outside Director, Sanken North America, Inc. (currently, Allegro Microsystems, Inc.) (current position)  
 Jun. 2014 Outside Director, Sanken Electric Co., Ltd. (retired June 2022)  
 Jun. 2016 Outside Director, the Company (current position)

**Tetsuya Shoji**

Outside Director

6

Apr. 1977 Joined Nippon Telegraph and Telephone Public Corporation  
 Jun. 2006 Senior Vice President and General Manager of Personnel Dept., Nippon Telegraph and Telephone West Corporation  
 Jun. 2009 Senior Vice President and Head of General Affairs Dept., Nippon Telegraph and Telephone Corporation  
 Jun. 2012 Senior Executive Vice President, Representative Member of the Board, NTT Communications Corporation  
 Jun. 2015 President & CEO, Representative Member of the Board, NTT Communications Corporation  
 Jun. 2020 Corporate Advisor, NTT Communications Corporation (current position)  
 Dec. 2020 Outside Director, circlace Inc. (current position)  
 Mar. 2021 Outside Director, Sapporo Holdings Limited (current position)  
 Jun. 2021 Outside Director, the Company (current position)  
 Jun. 2021 Outside Director, Mitsubishi Logistics Corporation (current position)  
 Mar. 2022 Outside Director, Japan Tobacco Inc. (current position)

**Shinoi Sakata**

Outside Director

7

Apr. 1979 Joined Sumitomo Chemical Co., Ltd. (currently, SUMITOMO CHEMICAL COMPANY, LIMITED)  
 Apr. 2013 Executive Officer, Responsible for Intellectual Property Department, SUMITOMO CHEMICAL COMPANY, LIMITED  
 Apr. 2016 Advisor, SUMITOMO CHEMICAL COMPANY, LIMITED  
 Apr. 2016 Director & Vice President, Sumika Technical Information Service, Inc.  
 Jun. 2017 Representative Director & President, Sumika Technical Information Service, Inc. (retired in March 2018)  
 May 2018 Executive Director, Japan Chemical Industry Association (in charge of the chemical management and international affairs) (retired in May 2022)  
 Jun. 2020 Outside Director, Nomura Research Institute, Ltd. (current position)  
 Jun. 2023 Outside Director, the Company (current position)

**Akiko Horiguchi**

Outside Director

8

Apr. 1985 Joined Oki Electric Industry Co., Ltd.  
 Apr. 2011 Head of Public Relations Division, Oki Electric Industry Co., Ltd.  
 Apr. 2015 Head of Human Resources Division, Oki Electric Industry Co., Ltd.  
 Apr. 2015 Director, Oki Consulting Solutions Co., Ltd. (retired in April 2019)  
 Apr. 2017 Executive Officer & Head of Human Resources Department, Corporate Management Headquarters, Oki Electric Industry Co., Ltd.  
 Apr. 2017 Director, Oki Proserve Co., Ltd. (retired in April 2019)  
 Jun. 2018 Director, Japan Institute for Women's Empowerment & Diversity Management (retired in June 2022)  
 Apr. 2019 Associate Executive Officer, Corporate Management Headquarters, Oki Electric Industry Co., Ltd.  
 Apr. 2019 Representative Director, President and Executive Officer, Oki Workwel Co., Ltd. (current position)  
 Apr. 2020 Associate Executive Officer, Corporate Headquarters, Oki Electric Industry Co., Ltd. (retired in March 2023)  
 Jun. 2023 Outside Director, the Company (current position)

**Corporate Auditors**

**Kazuhiya Yamamoto**

Full-time Corporate Auditor

9

Apr. 1982 Joined the Company  
 Apr. 2014 Executive Officer, the Company  
 Apr. 2017 General Manager of Environment Business Headquarters, the Company  
 Jun. 2017 Director, the Company  
 Apr. 2019 General Manager of Business Planning & Technology Development Headquarters, and Responsible for Information and Communication Technology Promotion Headquarters, Architect Supervision Dept. and Quality Assurance Dept., the Company  
 Jun. 2019 Managing Director, the Company  
 Apr. 2020 General Manager of Business Planning & Technology Development Headquarters, and Responsible for Information and Communication Technology Promotion Headquarters, Production Engineering Dept., Architect Supervision Dept. and Quality Assurance Dept., the Company  
 Apr. 2021 General Manager of R&D Headquarters and Responsible for Information and Communication Technology Promotion Headquarters, Production Engineering Dept., Architect Supervision Dept., and Quality Assurance Dept., the Company  
 Jun. 2021 Full-time Corporate Auditor, the Company (current position)

**Masayuki Morikata**

Full-time Corporate Auditor

10

Apr. 1974 Joined the Company  
 Jun. 2010 Director, the Company  
 Apr. 2012 Managing Director, the Company  
 Apr. 2014 Responsible for Corporate Planning Dept., Accounting Dept., Subsidiary Administration Dept., and Overseas Business Administration Dept., the Company  
 Jun. 2015 General Manager of General Administration Headquarters and General Manager of Corporate Planning Headquarters, the Company  
 Apr. 2016 General Manager of General Administration Headquarters and General Manager of Corporate Planning Headquarters, and Responsible for Procurement Headquarters, the Company  
 Jun. 2017 Corporate Adviser, the Company  
 Jun. 2018 Full-time Corporate Auditor, the Company (current position)

**Hirofumi Yasuhara**

Outside Corporate Auditor

11

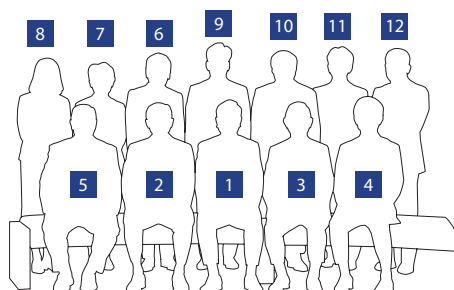
Apr. 1979 Joined Matsushita Electric Industrial Co., Ltd. (currently Panasonic Holdings Corporation)  
 Sep. 1996 Director and CFO, America Matsushita Battery Industrial Co., Ltd (currently Panasonic Energy Corporation of North America)  
 Jun. 2008 Director and Executive Officer, PanaHome Corporation (currently Panasonic Homes Co., Ltd.)  
 Jun. 2012 Representative Director, PanaHome Corporation (Retired in June 2014)  
 Jun. 2015 Senior Audit & Supervisory Board Member, Panasonic Corporation (currently, Panasonic Holdings Corporation) (Retired in June 2019)  
 Jun. 2019 Outside Corporate Auditor, Santen Pharmaceutical Co., Ltd. (Retired in June 2023)  
 Mar. 2020 Outside Corporate Auditor, Sumitomo Rubber Industries, Ltd. (current position)  
 Jun. 2020 Outside Corporate Auditor, the Company (current position)  
 Jun. 2023 Outside Director, Sumitomo Densetsu Co., Ltd. (current position)

**Makoto Araki**

Outside Corporate Auditor

12

Apr. 1987 Joined The Kansai Electric Power Co., Inc.  
 Dec. 2011 General Manager of Corporate Planning & Accounting Department, Corporate Reformation Headquarters, Kanden System Solutions Co., Inc. (currently, Kanden Systems Inc.)  
 Jun. 2012 Director & Vice General Manager of Corporate Reformation Headquarters, Kanden System Solutions Co., Ltd. (Retired in June 2013)  
 Jun. 2016 Executive Officer & General Manager of IT Strategy Department, The Kansai Electric Power Co., Inc.  
 Jun. 2017 Vice President and Representative Director, Executive Officer, K-Opticom Corporation (currently, OPTAGE Inc.)  
 Jun. 2018 President and Representative Director, K-Opticom Corporation (Retired in June 2021)  
 Jun. 2021 Executive Vice President, The Kansai Electric Power Co., Inc. (current position)  
 Jun. 2023 Outside Corporate Auditor, the Company (current position)  
 Jun. 2023 Director, Representative Executive Officer, Vice President, The Kansai Electric Power Co., Inc. (current position)



(As of July 1, 2023)

## Messages from Outside Directors

### Looking forward to initiatives aimed at solving issues from a global perspective

**Richard R. Lury**  
Outside Director



In line with corporate governance reforms in Japan, Hitachi Zosen has been working diligently to strengthen its corporate governance and human resources management, while also implementing best practices in the area of compliance.

Under the previous medium-term management plan, Forward 22, the Company achieved some success in business portfolio management by establishing joint ventures with other companies and divesting businesses in areas where growth opportunities were limited when operating alone. Examples include the establishment of a joint venture with Kawasaki Heavy Industries, Ltd. in the shield tunneling machine business, the spin-off of the marine diesel engine business, and the collaboration with Imabari Shipbuilding Co., Ltd. On the other hand, there are still issues concerning technical troubles and cost control. I believe that downward pressure on profits caused by these issues will be eliminated in the future, as we openly discuss these issues at board meetings and management is committed to fundamentally resolving these issues.

When the new medium-term management plan, Forward 25, was formulated, we were briefed by the management team and worked to understand the strategies they envisioned to ensure the plan's success. Going forward, I believe it is important for the Board of Directors to regularly evaluate progress and problems with regard to strategy and direction. In addition, we, as outside directors, need to present ideas and perspectives that firmly support the management team in fulfilling the plan. The Board of Directors spent a great deal of time discussing the 2030 Vision, our management strategy for 2030, and the Sustainable Vision, our desired image for 2050, and what the focus of management should be going forward. As a result, we shared that many of the Company's business areas are aligned with the ESG thought process and that sustainability, environmental conservation, and diversity are important. In terms of environmental conservation, the Company has developed the technology necessary to achieve its vision and has also created a division focused on carbon neutrality and sustainable living. With regard to diversity, we advised that people who play important roles in overseas Group companies should be promoted to senior management positions in Japan. Furthermore, I recommended a remuneration structure for executives that is commensurate with the productivity and performance of individuals and business units, as well as the achievement of overall financial targets. If possible, equity-based remuneration would be preferable. In this way, I believe we can further increase the enthusiasm and motivation of executives to achieve corporate goals.

### Seeking a Board that leads in transforming for sustainable growth

**Tetsuya Shoji**  
Outside Director



With the development of overseas businesses in recent years, there is a need for Hitachi Zosen to strengthen and deepen global governance. To this end, we are placing greater emphasis on communication and sharing key information with management. We are working to enhance communication with local management teams, while promoting mutual understanding of common visions and goals. This has strengthened global cooperation among organizations and has led to the solid development of overseas businesses, including Hitachi Zosen Inova and other overseas Group companies. To sustainably boost the profitability and growth potential of our overseas businesses going forward, I believe we must ensure that local management teams and the Board of Directors in Japan share as much awareness of issues and challenges as possible.

The current Board of Directors, with the addition of two new female outside directors in June, is now composed of members who are able to deliberate from a variety of perspectives, each with their own areas of expertise and knowledge gained from different experiences. Indeed, discussions have been both active and lively.

As for the Nomination and Remuneration Advisory Committee, I, as an outside director, will serve as its chair from January 2022, replacing the Chairman of the Board, who previously also chaired the Committee. The Committee's direction to strengthen the initiative of outside members and to bring greater appropriateness and objectivity to the nomination and remuneration discussions is now more clearly defined. With Mr. Tanisho stepping down as Chairman in fiscal 2022, the new medium-term management plan Forward 25 is being implemented under the leadership of CEO Mino, with the new management members working together as a unified team.

In the more than 140 years since its founding, Hitachi Zosen has achieved its current corporate scale by undergoing various transformations from its founding business of shipbuilding. To achieve sustainable growth over the long term, the Board of Directors must also transform and evolve more flexibly than ever before. For example, with regard to executive remuneration, I believe our challenge is to create a system that encourages growth by looking ahead toward where the Company is going, such as by introducing performance-based medium- and long-term incentives. In this way, I believe it is the responsibility of outside directors to support sustainable management while constantly reviewing and monitoring consistency with our vision for 2030 and 2050.

## Leveraging risk management expertise gained from experience at a chemical manufacturer

**Shinoi Sakata**  
Outside Director



When I first heard the name “Hitachi Zosen,” I had the impression that the company was engaged in building infrastructure. Today, I have the impression that Hitachi Zosen is a creative company with diverse and innovative technologies, with a large portion of its business coming from the Environment Business, while at the same time engaging in the Machinery & Infrastructure Business and the Carbon Neutral Solution Business.

I believe that the important element of both companies and technologies is people. I believe that a good company that grows sustainably is one that has a system that enables its employees to maximize their abilities and take on challenges. On the other hand, taking on challenges involves risks, and it is important to properly manage the various risks associated with business activities. I will leverage my experience in risk management at a comprehensive chemical manufacturer to ensure prompt and accurate information disclosure and dialogue, with an emphasis on transparency and fairness. Through these initiatives, I will strive to gain the understanding and trust of our stakeholders and strengthen our governance to further enhance our corporate value.

## Helping enhance corporate value by further developing human capital

**Akiko Horiguchi**  
Outside Director



Hitachi Zosen was founded in 1881, the same year as OKI (Oki Electric Industry Co., Ltd.), the company I came from. I can relate to Hitachi Zosen’s corporate philosophy, which emphasizes the spirit of taking on challenges and focusing on technology, because it is similar to OKI’s. Hitachi Zosen provides technologies and solutions that are essential to achieving the SDGs and carbon neutrality, but unfortunately only a handful of people know about the company. I would like more stakeholders to know about Hitachi Zosen, which works diligently and earnestly to achieve its long-term vision.

Companies with long traditions tend to follow precedent. As a member of the Board, I will help strengthen governance swiftly in response to changes in the environment. I will apply my knowledge and experience in corporate communications and DE&I to further improve corporate governance.

### Information on outside directors and outside corporate auditors

The Company gives due respect to the input and advice from an independent and neutral perspective provided by outside directors and outside corporate auditors, who bring extensive corporate management experience and broad knowledge to the Company, and strives to ensure management oversight and supervision functions.

Position	Years of service	Fiscal 2022 attendance	Reasons for appointment
<b>Richard R. Lury</b> Outside Director (independent)	7	Board of Directors meetings 14/14	Mr. Lury served as a partner in a U.S. law firm for many years and has extensive experience and expertise in international corporate legal matters. As an outside director, Mr. Lury has provided appropriate opinions and advice from an independent standpoint to the Company, which is promoting stronger corporate governance and globalization of business. In addition, as a member of the Nomination and Remuneration Advisory Committee, he has played a role in strengthening the supervision of business execution through his involvement in decisions on executive personnel and directors’ remuneration, and we anticipate that he will continue to fulfill these roles.
<b>Tetsuya Shoji</b> Outside Director (independent))	2	Board of Directors meetings 14/14	Mr. Shoji served as a representative director and in other positions of a telecommunications carrier and has extensive experience and knowledge in corporate management. As an outside director, Mr. Shoji has provided appropriate opinions and advice from an independent standpoint to the Company, which is promoting stronger corporate governance, globalization of business, and digital transformation (DX), and has fulfilled the role of strengthening supervisory functions on business execution by engaging in decisions on executive appointments and director’s remuneration as chair of the Nomination and Remuneration Advisory Committee since January 2022. Therefore, the Company anticipates that Mr. Shoji will continue to fulfill these roles.
<b>Shinoi Sakata</b> Outside Director (independent)	(new)	—	Ms. Sakata worked for a chemical manufacturer for many years, serving as an executive officer there, and was a representative director of an information company, all of which gave her a wealth of experience and insight into corporate management. As an outside director, we believe she will provide appropriate opinions and advice from an independent standpoint as we push to strengthen our corporate governance and promote DX. In addition, as a member of the Nomination and Remuneration Advisory Committee, we expect her to play a role in strengthening supervisory functions on business execution by engaging in decisions on executive appointments and director’s remuneration.
<b>Akiko Horiguchi</b> Outside Director (independent)	(new)	—	Ms. Horiguchi has a wealth of experience and insight in corporate management and diversity management, having served as a general manager of the public relations and human resources departments and as an executive officer and representative director of a special subsidiary at a telecommunications equipment manufacturer. She has also served as a board member of the Japan Institute for Women’s Empowerment & Diversity Management. As an outside director, we believe she will provide appropriate opinions and advice from an independent standpoint as we push to strengthen our corporate governance and promote DX, diversity management, and human capital management. In addition, as a member of the Nomination and Remuneration Advisory Committee, we expect her to play a role in strengthening supervisory functions on business execution by engaging in decisions on executive appointments and director’s remuneration.
<b>Hirofumi Yasuhara</b> Outside Corporate Auditor (independent)	3	Board of Corporate Auditors meetings 8/8	Mr. Yasuhara served as a full-time auditor at a manufacturer of electrical machinery and equipment, as well as a representative director and accounting officer at a subsidiary of this company. He has extensive experience and knowledge in corporate management, auditing, finance, and accounting. As an outside corporate auditor, Mr. Yasuhara has provided appropriate opinions and advice on matters such as the Company’s management and business operations. In addition, as a member of the Nomination and Remuneration Advisory Committee, he has played a role in strengthening supervisory functions on business execution by engaging in decisions on executive appointments and director’s remuneration. We anticipate that he will continue to contribute to the enhancement of our corporate governance and auditing systems.
<b>Makoto Araki</b> Outside Corporate Auditor (independent)	(new)	—	Mr. Araki has extensive experience and insight in corporate management and ICT/digital-related matters, having served as a representative director at an information and telecommunications company and as the head of the corporate planning and IT departments and an executive officer at an electric power company. As an outside corporate auditor, we expect him to help enhance our corporate governance and auditing system by providing appropriate opinions and advice on our management and business operations from an independent standpoint.

(Note) 1. The attendance of Ms. Shinoi Sakata and Ms. Akiko Horiguchi in fiscal 2022 is not shown as they are new directors appointed at the Annual General Meeting of Shareholders held on June 21, 2023.  
2. The attendance of Mr. Makoto Araki in fiscal 2022 is not shown as he is a new corporate auditor appointed at the Annual General Meeting of Shareholders held on June 21, 2023.

# Corporate Governance

## Basic approach

We believe that meeting the expectations of our stakeholders, including shareholders, customers, business partners, local communities, and employees, and ensuring sound, transparent, and efficient management are indispensable for sustainable growth and medium- to long-term enhancement of corporate value, and we are committed to strengthening corporate governance as a management priority.

## Board of Directors

Since June 2023, the Board of Directors has consisted of eight members (including four independent outside directors), a reduction of one member. To further strengthen our governance system, we have increased the number of independent outside directors by one, with independent outside directors now accounting for half of the Board, and from the perspective of expertise and diversity, we have one non-Japanese director and two female directors. In addition to making decisions on matters prescribed by laws, basic management policies and strategies, and other important matters, the Board supervises business execution.

The Company has established an executive officer system, under which some of the business execution functions of directors are delegated to executive officers (20 persons), in order to strengthen the supervisory function of the Board of Directors and ensure speedy business execution.

Furthermore, by establishing a Management Strategy Committee, we have created a framework to ensure that discussion and decision-making on basic policies and priority measures concerning business management and operations

are conducted in a timely and accurate manner. Matters of particular importance are discussed by the Management Strategy Committee and then thoroughly discussed by the Board of Directors before a decision is made on whether or not to proceed.

Number of meetings held in fiscal 2022: 14 Attendance rate: 100%.

## Board of Corporate Auditors

The Company has adopted a corporate auditor system.

Corporate auditors hold meetings of the Board of Corporate Auditors to gather input on audits. In addition, corporate auditors monitor and verify the internal control system and its operating status and, where necessary, give advice, make recommendations to directors and executive officers, and take other required measures.

Furthermore, the four corporate auditors including, two outside corporate auditors, attend meetings of the Board of Directors, and the two full-time corporate auditors also attend important internal meetings, including Management Strategy Committee meetings, to give their input from a neutral perspective and audit business execution by directors and executive officers.

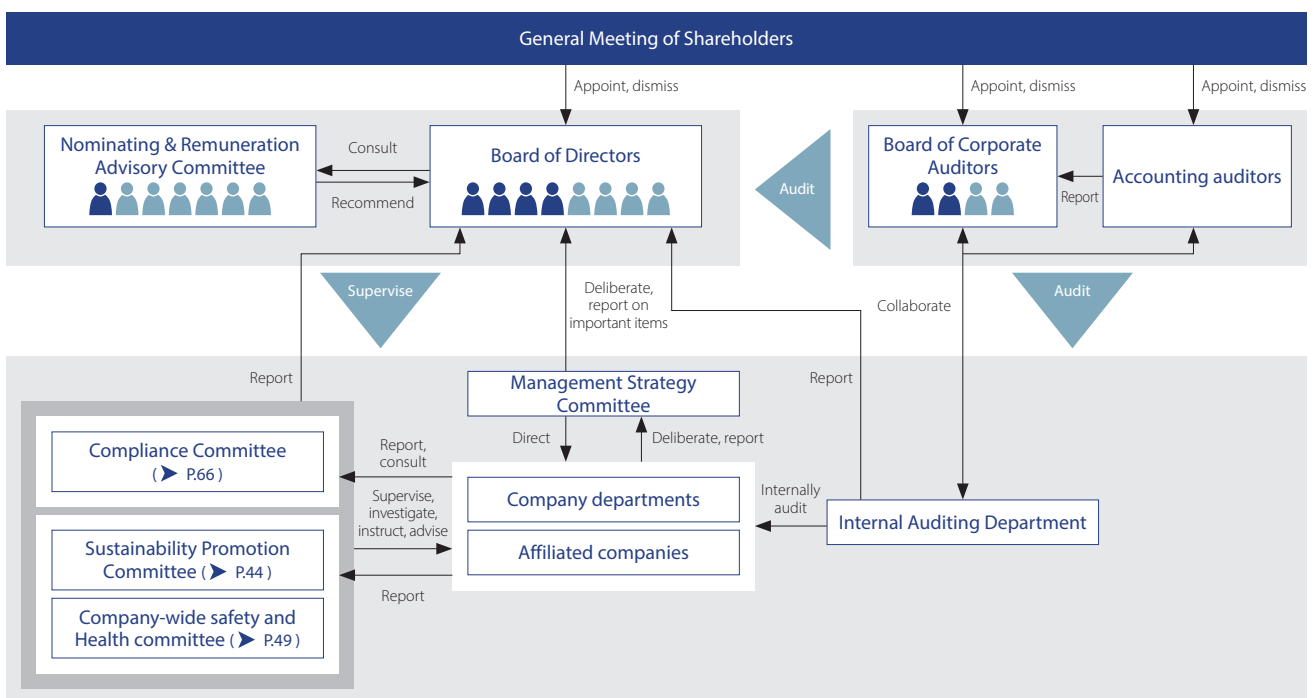
Number of meetings held in fiscal 2022: 8 Attendance rate: 100%.

## Nominating and Remuneration Advisory Committee

In 2018, the Nomination and Remuneration Advisory Committee, a voluntary advisory body, was established to ensure procedural objectivity, transparency, and accountability

## Corporate governance organization

Internal External



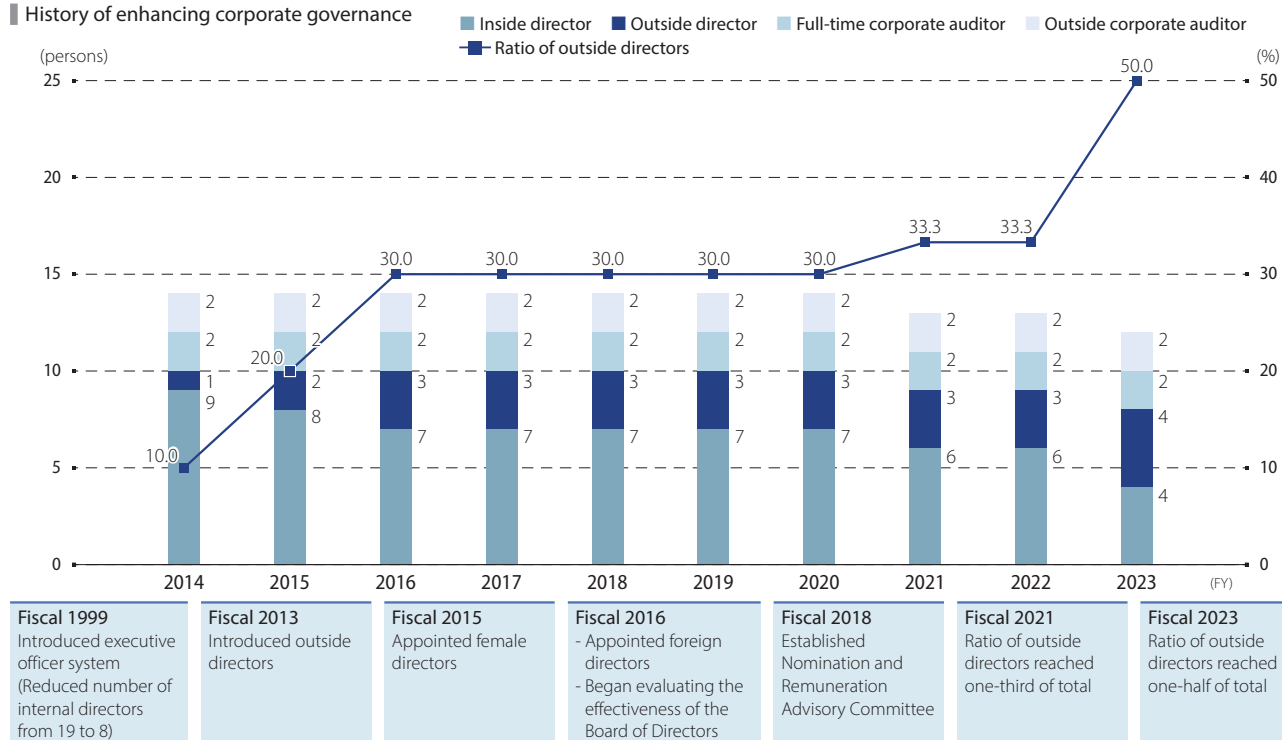
in the nomination of candidates for directors and corporate auditors, the appointment and removal of the president and representative director, and the discussion of important matters relating to the remuneration of directors. After discussing these matters, the Committee reports its findings to the Board of Directors for further discussion and decision.

The Committee consists of seven members—three independent outside directors, one of whom chairs the

Committee, two independent outside corporate auditors, and the President and CEO. The six outside officers provide input and advice that helps ensure transparency, suitability, and objectivity in executive appointments and director remuneration.

Number of meetings held in fiscal 2022: 5 Attendance rate: 100%.

History of enhancing corporate governance



Evaluation of the effectiveness of the Board of Directors

Objective

Since fiscal 2016 the Company has implemented an annual evaluation of the effectiveness of the Board of Directors. The evaluation seeks to identify and actively improve functional and operational issues with the Board, with the aim of enhancing corporate governance and increasing corporate value.

Evaluation method

The evaluation is conducted by administering a questionnaire to all directors and corporate auditors. See the Corporate Governance Report for detailed evaluation procedures and timelines.

Corporate Governance Report

▶ <https://www.hitachizosen.co.jp/ir/policy/pdf/20230713CG.pdf> (Available in Japanese only.)



Questionnaire items

There are several questions for each of the categories listed on the right, and the questions are either in the form of a rating on a five-point scale or open-ended.

The questions are selected based on the issues facing the Company and changes in the external environment.

- (1) Roles and responsibilities of the Board of Directors
- (2) Stimulation of discussions
- (3) Board composition and system
- (4) Optimizing the conduct of meetings
- (5) Roles of the Nomination and Remuneration Advisory Committee

Summary of fiscal 2022 evaluation results

The evaluation of the Company's Board of Directors indicated that sufficient time was allocated for deliberation, and materials and explanations were provided to stimulate lively discussions on important agenda items, including the review of the long-term vision, formulation of the new medium-term management plan, promotion of sustainability, selection of focused businesses through portfolio management, and development of executive leadership. We confirmed that the Board as a whole is effectively fulfilling its role, although some improvements and refinements in its operational methods are needed.

## Corporate Governance

### Initiatives to address issues related to the Board of Directors

The status of initiatives taken in fiscal 2022 to address the issues identified in the fiscal 2021 effectiveness evaluation and the opinions of the outside directors and auditors are as follows.

1 Expanding discussions on important themes at Board of Directors meetings	
<b>Fiscal 2022 action plan</b>	Incorporate the following important themes into the annual operational plan and make efforts to ensure sufficient time for discussion. <ul style="list-style-type: none"> <li>Discussion on long-term vision and next medium-term management plan</li> <li>Promotion of sustainability</li> <li>Establishment and promotion of human resources strategy</li> <li>Promotion of portfolio management</li> <li>Supervision of the management of important subsidiaries</li> </ul>
<b>Key actions taken in fiscal 2022</b>	Based on the annual operational plan, the above important themes were discussed with sufficient time for deliberation. (Key themes) <ul style="list-style-type: none"> <li>Formulated long-term vision 2030 Vision and medium-term management plan Forward 25</li> <li>Formulated the Sustainable Vision and the Seven Pillars of Success (Materiality)</li> <li>Launched Management Human Resources Training Program</li> <li>Alliances with other companies (marine diesel engines business, nuclear power-related business)</li> <li>Partial transfer of subsidiary shares (logistics business)</li> <li>Expanded business models (onshore wind power generation business, etc.)</li> </ul>
<b>Opinions of outside directors and corporate auditors</b>	<ul style="list-style-type: none"> <li>Active discussions were held on important themes such as the long-term vision and the next medium-term management plan, as well as promoting sustainability.</li> <li>Discussions on the development of medium- and long-term strategies (overseas strategy, human resources strategy, and decarbonization strategy) and the deliberation of investment projects will need to continue in fiscal 2023.</li> <li>Overseas strategies need to be discussed from multiple perspectives, including policies, governance, and risks.</li> <li>Safety and quality initiatives should also be reported more thoroughly.</li> </ul>
<b>Fiscal 2023 action plan</b>	Include the medium- to long-term human resources strategy, overseas strategy, DX strategy, sustainability promotion, and investment projects as key themes for further discussion in the annual operating plan.
2 Reinforcing governance framework	
<b>Fiscal 2022 action plan</b>	Work to strengthen the Nomination and Remuneration Advisory Committee function; promote discussion on succession planning, requirements for the appointment of directors and executive officers, executive remuneration system, etc.; and reinforce the governance framework.
<b>Key actions taken in fiscal 2022</b>	The Board of Directors strengthened the governance framework through deliberations on important themes. In addition, the Nomination and Remuneration Advisory Committee met five times to discuss the succession plan and the executive skills matrix, including those of executive officers, and launched the Management Human Resources Training Program.
<b>Opinions of outside directors and corporate auditors</b>	<ul style="list-style-type: none"> <li>The operation and function of the Board of Directors has consistently improved.</li> <li>The scope and quality of discussions have become more relevant as part of the supervisory role of the Board.</li> <li>The governance structure, succession planning, and executive remuneration system are themes that will require continued discussion in fiscal 2023 and beyond.</li> </ul>
<b>Fiscal 2023 action plan</b>	Include corporate governance (roles of the Board of Directors and the Management Strategy Committee, succession planning, executive remuneration system, etc.) as a key theme for further discussion in the annual operating plan.
3 Continuing to hold informal board meetings (optional meetings of directors, corporate auditors, and general managers)	
<b>Fiscal 2022 action plan</b>	Expand discussions in fiscal 2022, particularly those related to the creation of a long-term vision and the next medium-term management plan, while improving the selection of themes and material content.
<b>Key actions taken in fiscal 2022</b>	Discussions were focused on the Sustainable Vision and the Seven Pillars of Success (Materiality). Free and lively discussions at informal board meetings helped shape deliberations at the Board of Directors meetings and contributed to the decision-making process for the Sustainable Vision and the Seven Pillars of Success.
<b>Opinions of outside directors and corporate auditors</b>	Informal board meetings are useful as a forum for the open exchange of ideas and opinions. Consideration should be given to how time is allocated, what topics are discussed, and how to encourage lively discussion.
<b>Fiscal 2023 action plan</b>	Continue to hold informal board meetings in fiscal 2023, after careful consideration of the topics for the meetings, as they are an important complement to the Board of Directors meetings.
4 Enhancing the support system for outside officers	
<b>Fiscal 2022 action plan</b>	Enhance the quantity and quality of preliminary briefings for outside officers. Particularly important and urgent themes will be given more opportunities and time for explanation than in the past, and we will focus on ensuring that outside officers have sufficient understanding of these themes to encourage lively deliberations at the Board of Directors meetings.
<b>Key actions taken in fiscal 2022</b>	<ul style="list-style-type: none"> <li>Made efforts to provide opportunities for outside officers to gain sufficient information on the contents of the agenda of the Board of Directors' meetings and other important management matters, including background information and other relevant information.</li> <li>Shared information in advance regarding management information as well as the agenda for Board of Directors meetings.</li> <li>Held meetings with senior management and outside officers to exchange views.</li> <li>Organized factory tours for outside directors.</li> </ul>
<b>Opinions of outside directors and corporate auditors</b>	<ul style="list-style-type: none"> <li>The support system for outside officers has improved year by year.</li> <li>The volume and content of the materials could be improved to make it easier to understand the points to be discussed.</li> <li>There may be room for further enhancement of preliminary briefings.</li> </ul>
<b>Fiscal 2023 action plan</b>	Strive to share management information with outside officers, and to stimulate discussion by providing opportunities for outside officers to exchange opinions with each other.



## Board of Directors meetings, advisory committee meetings, and other meetings held in Fiscal 2022

(number of meetings held)

	2022									2023			Total
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
Board of Directors meetings	1	2	2	0	1	2	0	1	2	0	1	2	14
Board of Corporate Auditors meetings	0	2	2	1	1	0	0	0	1	0	0	1	8
Nominating & Remuneration Advisory Committee meetings	1	0	1	0	0	0	1	0	0	0	1	1	5
Informal board meetings	0	0	0	0	0	1	0	0	0	0	0	0	1
Opinion exchange meetings between outside officers and management	0	0	1	0	0	0	0	0	1	0	0	0	2
Management Strategy Committee	1	2	2	2	2	2	1	3	2	1	3	2	23

## Key themes for Board of Directors meetings

### 1 Medium- to long-term strategy (formulation of next medium-term management plan)

In reviewing the medium-term management plan Forward 22 (fiscal 2020–2022), the business execution department reported on changes in global social conditions and the market environment surrounding the Hitachi Zosen Group. In response to these changes, the department also proposed a new Sustainable Vision as a vision of what the Company aims to be by 2050, and to revise part of the existing long-term Hitz 2030 Vision as a milestone toward achieving the Sustainable Vision, as well as formulating a new medium-term management plan Forward 25 (fiscal 2023–2025) as the first step toward achieving these long-term management visions.

In response to these proposals, outside directors and outside corporate auditors discussed the feasibility of the financial targets of the long-term vision and the new medium-term management plan, the need to follow up and evaluate progress by setting KPIs for measures, specific policies for business investment strategies and risk management, and how to proceed with measures to strengthen human capital, a key issue for the entire company. Outside directors and outside corporate auditors offered their opinions from a wide range of perspectives based on their respective expertise, which led to a lively discussion. After a vote, the proposal was approved as proposed.

### 2 Promoting business portfolio management (spin-off of marine diesel engine business and collaboration with Imabari Shipbuilding)

The business execution department proposed the establishment of a new company to operate the marine diesel engine business with capital participation by Imabari Shipbuilding Co., Ltd. in order to improve the profitability of the business and reduce management risk. The business execution department reported the following three points as the reasons for cooperation with Imabari Shipbuilding: 1) Sales expansion by strengthening the sales and supply network, 2) profitability improvement through cost reduction and productivity enhancement by optimizing material procurement, and 3) Contribution to greenhouse gas (GHG) emission reduction by developing and supplying next-generation fuel-compatible engines.

In response to this proposal, outside directors and outside corporate auditors pointed out the need to rearrange the positioning of the marine diesel engine business in the business portfolio, the terms of cooperation with Imabari Shipbuilding, and the new company's policy for hiring and training personnel, which led to a lively discussion. After a vote, the proposal was approved as proposed.

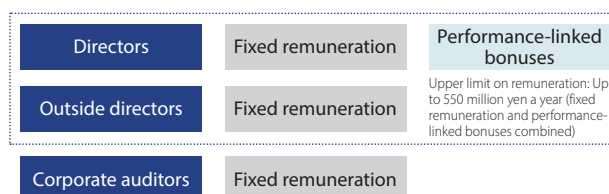
## Officer remuneration

Remuneration for directors comprises fixed remuneration and performance-linked bonuses and is decided for individual directors within the total amount of remuneration approved by a resolution of the General Meeting of Shareholders. So as to ensure their independence, remuneration for outside directors consists only of fixed remuneration.

In determining the remuneration for the senior management team and directors, the Nomination and Remuneration Advisory Committee reports to the Board of Directors on the remuneration provisions and levels, which are discussed by the Board before a decision is made. The Nomination and Remuneration Advisory Committee regularly reviews the remuneration provisions and levels to ensure that the remuneration provides a sound incentive for directors.

Retirement bonuses for officers have been abolished.

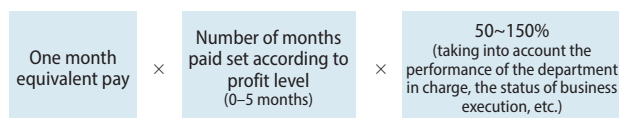
### Composition of officer remuneration



\* Fixed remuneration is determined by position.

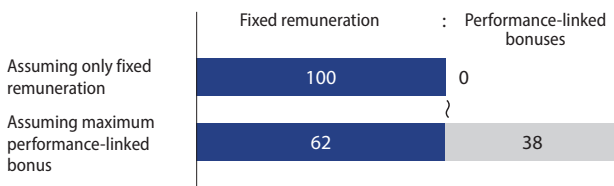
\* Performance-linked bonus index: Net income attributable to shareholders of the parent company

### Performance-linked bonus calculation



## Corporate Governance

### Composition of individual remuneration



### Policies and procedures for appointing senior management team and director candidates

To achieve sustainable growth and enhance our corporate value over the medium to long term, we believe that successor development, including for the CEO position, is one of the most important strategic decisions in our Group's management.

Senior management team members must possess a mindset, skills, and ability to act appropriate to lead the Group and implement the corporate philosophy. When appointing and removing senior management team members, the Nomination and Remuneration Advisory Committee discusses the issue, and then the Board of Directors conducts further discussions and decides on the issue.

Director and corporate auditor candidates must possess not only outstanding character and insight but also the knowledge, experience, and skills to appropriately execute the duties required of their position. Outside director and outside corporate auditor candidates must possess abundant experience, expertise, and broad insight related to corporate management and meet the Company's independence criteria.

As for the successor development plan, the policy was decided on by the Board of Directors in February 2020 after

### Skills matrix

The Board of Directors decided on the skills that the Board as a whole should have to ensure the sustainable growth of the Group and the achievement of its management objectives, following deliberations by the Nomination and Remuneration Advisory Committee.

#### Main approach

- As a company that advocates "technology and sincerity" in its corporate philosophy and claims to be a technology-driven company, technology-related skills are essential
- Skills to contribute to our management strategy of expanding overseas businesses and growing services that leverage ICT (stable sources of earnings)
- Skills to perform the corporate and governance functions necessary to promote the above

### Total amount of remuneration by officer category and remuneration type, and number of eligible officers (fiscal 2022)

(¥ million)

Officer category (number of people)	Total amount of remuneration	Total amount of remuneration by type	
		Fixed remuneration	Performance-linked bonuses
Directors (6*)	343	244	98
Corporate auditors (2*)	61	61	—
Outside officers (5)	53	53	—

\* Excluding outside directors and outside corporate auditors

consulting with the Nomination and Remuneration Advisory Committee. At the current time, we are moving forward with fostering CEO candidates based on this plan. The Nomination and Remuneration Advisory Committee receives regular reports on the state of development, and we will steadily move forward with training while receiving advice from the committee.

### The ideal CEO should have

- The ability to act in accordance with our corporate philosophy
- Enough energy and physical strength to fulfill the intense workload as a top executive
- Goals to achieve as a top executive (values, ambition, and persistence).
- Appropriate personality to be a top executive (character, dignity, integrity, and intelligence)
- Humanistic appeal in terms of aspirations, dreams, philosophy and trust of all employees
- The ability to strive to understand unfamiliar businesses and manage from a long-term perspective
- The ability to make calm and precise decisions and fulfill the responsibilities even under uncertain circumstances
- Sufficient knowledge and skills to assume the duties of a top executive
- The ability to maintain an innovative mindset and combine innovation with creation
- The ability to establish a vision as a top executive and lead all employees

### Skills matrix criteria

Corporate management	Experience as a top executive (e.g., full-time chairperson, president, vice president, or other representative directors) in the Company, its affiliates, or other companies
Sales, marketing, innovation	Experience as a line manager at or above the divisional level in sales* or as a sales planning manager
R&D	Technical executives (those with science and engineering backgrounds and experience in development departments)
Estimate, engineering, manufacturing, procurement	Technical executives (those with engineering or factory division experience), or experience as a procurement division manager
Finance and accounting	Experience as a line manager at or above the divisional level in finance and accounting*
Human resources development, diversity	Experience as a line manager at or above the divisional level in human resources and general affairs*
Legal affairs and risk management	Experience as a line manager at or above the divisional level in legal affairs or risk management*
ICT, digital	Experience as a line manager at or above the divisional level in ICT*
Global	Experience as an expatriate, project manager, or equivalent manager in overseas local construction

\* Excludes those who have experience only as a supervisor or director in charge.

## Executive skills matrix

## Directors and Corporate Auditors

Position (as of July 1, 2023)	Gender (● indicates female)	Corporate management	Sales, marketing, innovation	R&D	Estimate, engineering, manufacturing, procurement	Finance and accounting	Human resources development, diversity	Legal and risk management	ICT, digital	Global
Representative Director President & Chief Executive Officer Sadao Mino		●	●	●	●					
Managing Director Tatsuji Kamaya						●		●		●
Managing Director Tadashi Shibayama			●	●	●					●
Managing Director Michi Kuwahara		●				●	●	●		●
Outside Director Richard R. Lury								●		●
Outside Director Tetsuya Shoji		●	●				●		●	●
Outside Director Shinoi Sakata	●	●		●					●	
Outside Director Akiko Horiguchi	●	●					●		●	
Full-time Corporate Auditor Kazuhiya Yamamoto			●	●	●					
Full-time Corporate Auditor Masayuki Morikata			●			●		●		
Outside Corporate Auditor Hirofumi Yasuhara		●				●				●
Outside Corporate Auditor Makoto Araki		●	●					●	●	

## Executive Officers

Position (as of July 1, 2023)	Gender (● indicates female)	Corporate management	Sales, marketing, innovation	R&D	Estimate, engineering, manufacturing, procurement	Finance and accounting	Human resources development, diversity	Legal and risk management	ICT, digital	Global
Senior Managing Executive Officer Satoshi Kimura		●			●					
Hitoshi Kogi			●							
Yuichi Ohkura		●	●			●		●		●
Managing Executive Officer Mitsutoshi Tsukasaki		●			●					●
Tomonori Kawatsu			●			●		●		●
Munenobu Hashizume		●							●	
Shinji Shimamura		●		●	●				●	●
Executive Officer Takashi Ibe			●							●
Tetsuro Iwashita						●		●		
Toshihiko Yasuda				●	●					
Toshiki Nakamura						●				
Akira Kamaya					●					
Toshifumi Makihata							●			
Hiroshi Miyazaki						●		●		
Koichi Hinami				●	●					
Koichi Kaibuchi					●					●
Takashi Fujita			●	●	●					
Mamoru Kondo				●	●					
Tadashi Iwanaga						●		●		●
Takeshi Minemura			●							

# Compliance

## Basic approach

In order to conduct management in compliance with laws, regulations, and corporate ethics, and to fulfill our corporate social responsibilities, the Hitachi Zosen Group is actively working to ensure thorough compliance as one of our most important management issues. In addition to raising compliance awareness among officers and employees and implementing thorough compliance in daily business execution, our Group is moving forward with efforts to create an environment in which all employees can openly focus all their energy on their work with peace of mind, to increase society's trust in the Group, and to raise our corporate value.

We have also set the enhancement of corporate governance as one of the Seven Pillars of Success (Materiality) in our Sustainable Vision, and we will work to ensure effective corporate governance and compliance to achieve it. We have incorporated the following systems and mechanisms to ensure effectiveness.

## Compliance initiatives

### The Hitz Group Charter of Ethical Behavior

We established the Hitz Group Charter of Ethical Behavior as a guideline for compliance practices by all Group officers and employees. Every year, we distribute pocket-sized cards to all officers and employees of the Group, including those overseas. Officers and employees are encouraged to carry this card with them at all times or check it on the website to help them confirm their own behavior and ensure that they act in a

sensible and responsible manner in line with our corporate ethics.

### Corporate governance and compliance

Details ▶ <https://www.hitachizosen.co.jp/english/ir/policy/governance.html>



## Compliance promotion system

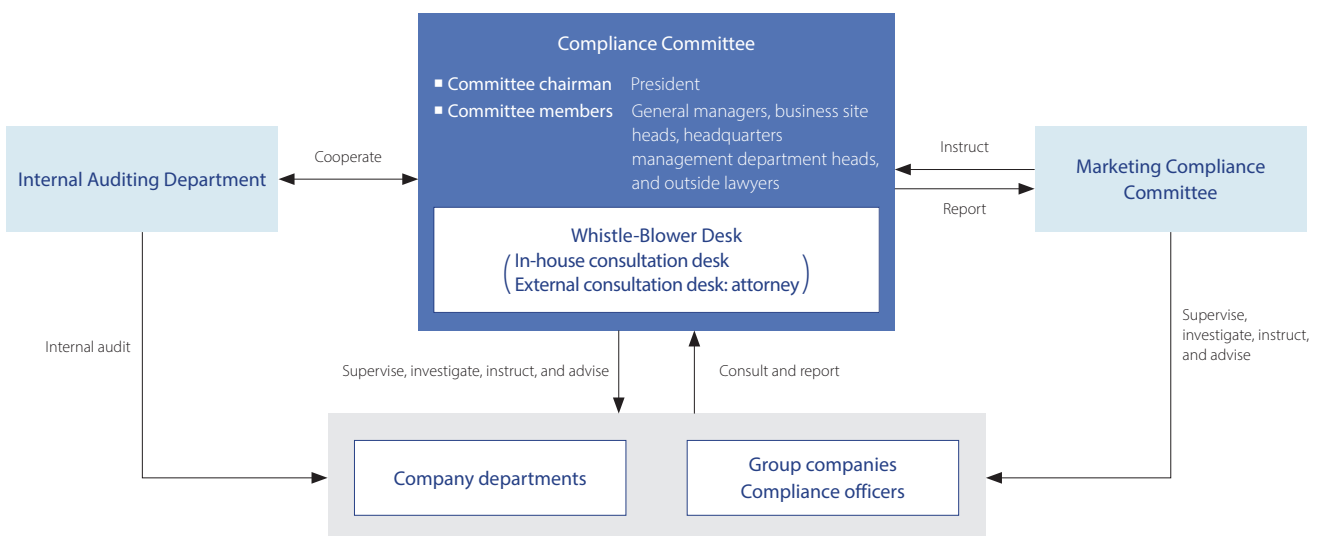
### Compliance Committee

Established as a Group-wide organization to promote compliance management, the Compliance Committee implements various measures to encourage adherence to and raise awareness of laws, regulations, and corporate ethics. It is chaired by the president and comprised of general managers, business site heads, headquarters management department heads, and outside attorneys. The committee meets once a year to report on activities during the year and discuss and decide on items such as future activity plans. The state of Compliance Committee activities is reported to and supervised by the Board of Directors.

### Marketing Compliance Committee

We have established the Marketing Compliance Committee as an organization that provides guidance and supervision to comply with laws, regulations, and corporate ethics in marketing activities and to promote appropriate order-taking activities. By conducting monthly monitoring of marketing departments (checks of physical items related to estimates, bids, and orders; interviews of department heads and the department responsible for creating the estimate, etc.), the

## Compliance organization



Committee verifies whether there were improper or illegal activities in the order-taking activities and provides supervision and guidance. In addition, its meetings, which are held twice a year, provide an opportunity to further educate and reaffirm the importance of compliance by sharing information on issues such as measures to be implemented throughout the Group and guidance for improvements in other departments.

### Education and training

We promote compliance awareness by providing compliance training through seminars for each level of employment, including training seminars for new employees and new managers. Since 2004, we have also conducted annual compliance training through e-learning for all officers and employees to familiarize them with the Hitz Group Charter of Ethical Behavior and to act with a correct understanding of compliance with competition-related laws, such as the Antimonopoly Act, prevention of bribery and harassment, and other issues.

#### Compliance training

	(participants)				
	Fiscal 2018	Fiscal 2019	Fiscal 2020	Fiscal 2021	Fiscal 2022
New recruit training	150	119	118	115	99
New managerial personnel training	204	205	244	222	256
e-learning	5,471	6,197	6,383	6,082	6,423
Compliance seminar	430	481	335	560	888

(Some also include Group companies)

### Whistle-blower system Hitz Helpline

We have established consultation desks for officers and employees (including temporary employees and seconded employees) of the Company and its Group companies and employees of business partners to consult with or report if they detect or suspect a compliance violation. Users may choose either the in-house consultation desk or external consultation desk (outside attorney).

Consultations and reports may be made anonymously. Upon receipt of a consultation or report, the Compliance Committee will investigate the matter and, if necessary, may

engage an independent expert or entity to conduct the investigation. After verifying the facts of the report, the Compliance Committee will consider and implement the necessary actions and responses. If it is determined that a compliance violation has occurred, corrective action will be taken and appropriate disciplinary action will be taken.

### Tax compliance

In addition to complying with the Hitz Group Charter of Ethical Behavior, the Hitachi Zosen Group complies with the tax laws and regulations of each country and region in which it operates, as well as the OECD Transfer Pricing Guidelines, Base Erosion and Profit Shifting (BEPS), and other action plans, to pay appropriate taxes and contribute to their respective economic and social development.

In addition to receiving advice from external tax experts on the execution of tax matters, we are strengthening our business execution structure to reduce tax risks by appointing certified tax accountants.

In addition, in order to raise awareness of tax compliance, we conduct education and awareness activities within the company on appropriate accounting procedures and tax reporting.

### Security export control

We have established the Security Export Control Regulations in order to appropriately implement export control for the purpose of international security. Under the supervision of the representative director, who is the chief executive officer, we have established an export control system consisting of the export control division (Legal department) and each business unit, and strictly control exports in each individual case. Moreover, in order to maintain the above export control system, we conduct annual training and audits.

We have also established a system for the export control division to appropriately share information on changes in the export control environment, including the latest and ever-changing trends in the revision of export regulations and economic sanctions in each country and the impact on business, with relevant internal personnel, including management and Group companies. Through these measures, we have established a system to respond quickly and accurately to changes in the environment.

# Risk Management

## Basic approach

In the Hitachi Zosen Group, risks related to compliance, the environment, safety, disasters, information security, and other potential operational risks are continually assessed and monitored by the divisions responsible for each type of risk. These divisions also carry out related training and guidance programs. Risks with the potential to materially affect the financial position or operating results of the Company or any

Group company are reported to the Board of Directors. The Company has established systems in advance, including rules for communication and response methods and management systems, to enable a prompt and appropriate response in the event that a major risk materializes. The Company's internal audit division audits the effectiveness and adequacy of these systems and regularly reports its findings to the Company's Board of Directors.

## Major operational risks recognized and managed by the Company

Type of risk	Potential impact	Our response
<b>■ Risks potentially arising during normal business activities</b>		
<b>Violation of laws and regulations</b>	Risks arise from ignorance of, or unwillingness to comply with, laws, regulations and socially accepted norms. Since public works projects account for a certain percentage of the Group's sales volume, in the event of bid-rigging or other violations of the Antimonopoly Act, the Group could be penalized with fines, damages, suspension of nominations, or loss of social credibility, which could result in losses that would materially affect its financial position and operating results.	The Hitachi Zosen Group upholds compliance as a basic business policy and regards strict compliance as one of its critical management tasks. Accordingly, the Group continuously implements a wide range of measures to promote compliance management. To prevent violations of the Antimonopoly Act, we established the Marketing Compliance Committee as a subordinate organization of the Compliance Committee to provide guidance and supervision for marketing activities. In 2021, we revised our "Antimonopoly Act Compliance Guidebook (for officers and employees)" while continuously implementing internal training programs to ensure compliance with the law. <b>Details ▶ Compliance P.66</b>
<b>Environmental pollution</b>	The natural and human environments of the communities in which our business operations are located may be severely affected by the release of pollutants or noise.	Based on the Environmental Conservation Promotion Plan, our Group is working to conserve the environment in the regions where each of our offices and factories are located and at the sites where construction and other work is carried out. In addition to laws and regulations, we set voluntary standards for the management of air, water, and soil pollutants, as well as noise, vibration, and odor, and monitor them for preventive maintenance in environmental protection activities at each of our offices and factories. <b>Details ▶ Environmental Management P.52</b>
<b>Accidents and workplace injuries</b>	As the Hitachi Zosen Group's business activities involve engineering and manufacturing, we face the risk of causing personal injury to third parties and occupational accidents to employees directly or indirectly as a result of lack of safety measures, unsafe practices, incorrect operation, or equipment failure.	Under the basic policy of "Safety first and a compassionate, pleasant workplace for everyone," we continuously monitor the conditions of our workplaces in order to implement appropriate measures to ensure that safety comes first in our business operations. Furthermore, we promote various events and measures to protect the mental health of our employees in order to maintain their health and prevent illnesses. <b>Details ▶ Safety and Health P.49</b>
<b>Information security incidents</b>	Information security risks include tampering with corporate websites, destruction or alteration of data, information leaks, denial-of-service (DoS) attacks due to virus infections, unauthorized access, and account hijacking.	We have ensured the security of our information assets by establishing the Hitachi Information Security Policy. We conduct regular training of officers and employees to prevent information leakage from within. For attacks from outside our organization, we implement various preventive measures for each of our networks, servers, and clients, and practice multi-layered defense. We have conducted an assessment of external threats and are promoting understanding of cybersecurity risks and measures to deal with the consequences. We are also consolidating our Computer Security Incident Response Team (CSIRT) infrastructure and addressing appropriate post-incident responses.
<b>■ Risks that cannot be managed by conventional systems</b>		
<b>Natural disasters and terrorism</b>	Human casualties and property damage caused by earthquakes, typhoons, or pandemics may adversely affect the business performance and financial condition of the Hitachi Zosen Group.	In order to minimize human casualties and property damage in the event of a disaster, we have established a business continuity plan (BCP) and carry out inspections and training to respond to such a disaster. We also maintain emergency communication systems. In addition, we are working to commercialize both remote monitoring and operation support technology and unattended operation technology.

\* Please refer to the 126th Annual Securities Report for information on other risks (lower order prices due to price competition, higher material prices, higher interest rates, exchange rate fluctuations, etc.).

## 126th Annual Securities Report

▶ [https://ssl4.eir-parts.net/doc/7004/yo\\_ho\\_pdf/S100R105/00.pdf](https://ssl4.eir-parts.net/doc/7004/yo_ho_pdf/S100R105/00.pdf) (Available in Japanese only)

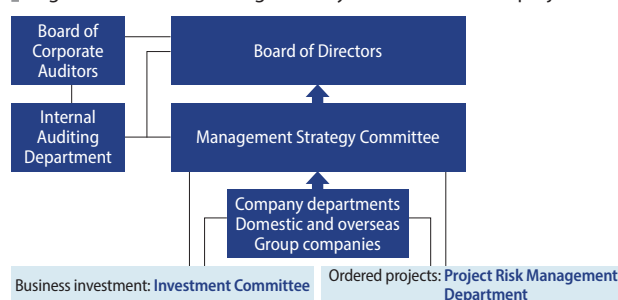


## Risk management system for individual projects

The Hitachi Zosen Group primarily engages in build-to-order manufacturing and emphasizes risk management for individual construction projects. If actual costs exceed estimated costs, this will affect the Group's operating performance, financial condition, and cash flows.

In addition, under the new medium-term management plan Forward 25, we are planning business investments of approximately ¥75.0 billion, and we newly established the Investment Committee with the aim of ensuring thorough risk management specific to business investment projects.

## Organization of risk management system for individual projects



### Risk management for ordered projects

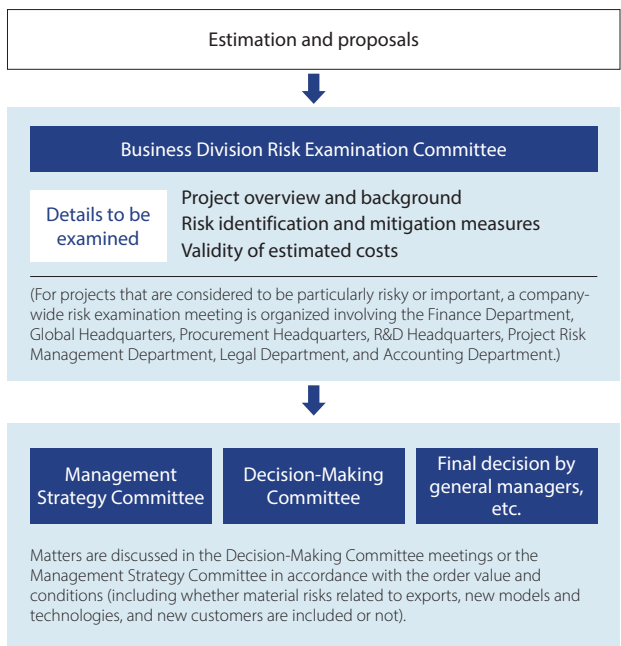
#### Order acceptance decision-making and risk management process

In order to realize the expected profit after receiving an order, the relevant department in charge of estimation identifies and evaluates risks related to technologies, estimation, delivery dates, and contracts, takes appropriate measures, and thoroughly implements risk management when accepting orders for individual projects through risk review meetings and other means.

- 1 Identify and evaluate all potential risks associated technology, delivery, business, and customer credit
- 2 Examine risk avoidance measures
- 3 Envision residual risks after implementing risk avoidance measures and propose to decision-maker whether the risk is tolerable

For example, we add potential pre-order risks for new products and new technologies as well as products without long-term track records as targets for consideration, applying lessons learned through previous difficulties.

#### Risk management process up to order acceptance



#### Risk management process after accepting an order

As part of the risk management of individual projects, we are working on the profitability management of major large-scale projects of all Group companies and affiliated companies.

- 1 Each business division holds monthly follow-up meetings and conducts continuous monitoring of the progress status and profitability forecasts of important projects. Proposals for improvement and advice are made by the participants, including those in the risk management division.

- 2 Follow-up and reports on countermeasure implementation conditions and profitability status; expansion to other projects
- 3 Reports on three to five important matters every month to the Top Management Review Meeting chaired by the president
- 4 Meetings for completed projects are held to share project results, including the positive aspects, areas for improvement, challenges, and lessons learned for the future, including those prior to receiving the order. This information is then utilized to strengthen profitability and preemptively mitigate issues in ongoing and future projects.

#### Risk management of individual construction projects of overseas Group companies

Decision-making regarding orders received by major overseas Group companies is delegated depending on the amount and conditions of the order, but for large-scale projects and those requiring attention to risks, approval by Hitachi Zosen management is mandatory. In particular, for projects with high risks, the final decision is made by the Management Strategy Committee. In 2018, Hitachi Zosen Inova established a dedicated department to strengthen risk management for individual projects. Objective analysis and evaluation based on numerical data has led to higher income margins on large projects, increased market confidence, and further orders.

#### Risk management for business investment projects

In April 2023, we established the Investment Committee for the purpose of risk management of business investment projects and timely investment decisions and monitoring.

The Investment Committee examines various risks associated with investment projects, advises the relevant department, and makes decisions and recommendations on whether or not to invest based on the investment amount. Such risks include sponsor risk, completion risk, offtake risk, raw material supply risk, operational risk, market risk, cash flow risk, financial risk, country risk, and withdrawal risk.

#### Interim monitoring process

For projects in which investments have already been made, we examine the profitability and cash flow of the business on a semi-annual basis, focusing on whether there are any conflicts with the withdrawal conditions, and if there is a foreseeable conflict with the withdrawal conditions or a problem with the profitability of the business, we examine measures to remedy the situation.

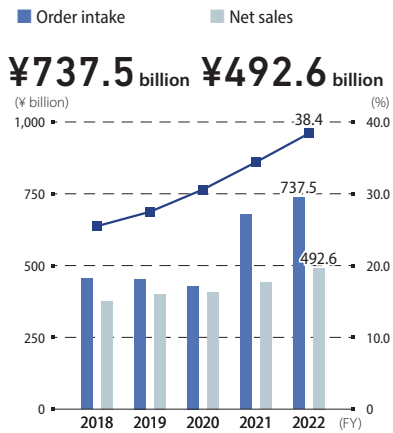
#### Withdrawal decision process

The final decision to withdraw is made by the Management Strategy Committee or the Board of Directors.

# Financial and Non-Financial Highlights

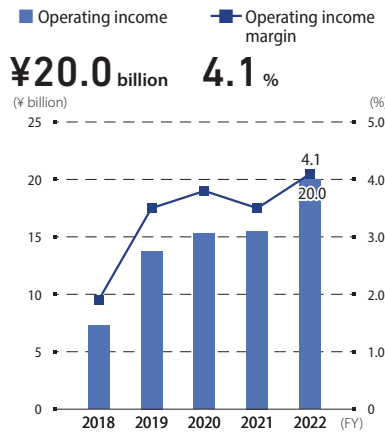
## Financial information

### Order intake / Net sales / Overseas sales ratio



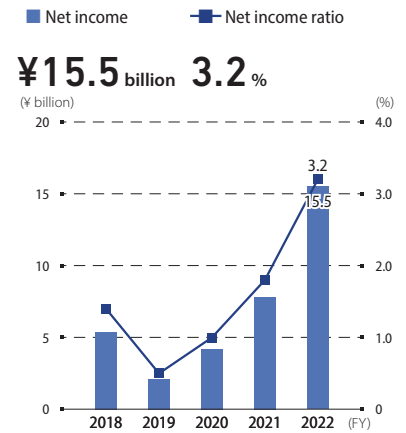
Order intake reached the highest level since the separation of shipbuilding, and sales in all segments increased year on year.

### Operating income / Operating income margin



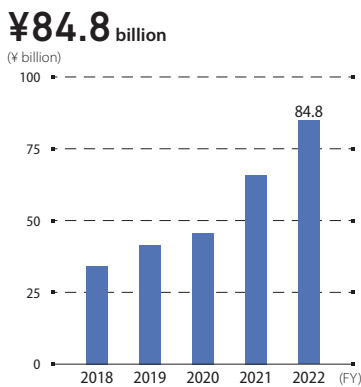
Operating income margin improved to 4% for the first time in 12 fiscal years, primarily due to improved margins and revenue growth at Inova Group.

### Net income / Net income ratio



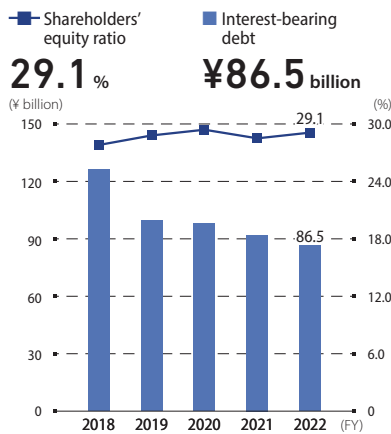
Due in part to extraordinary income, net income increased sharply from the previous fiscal year to ¥15.5 billion, and the net income ratio improved to the 3% level for the first time in 11 fiscal years.

### Cash and cash equivalents at end of period



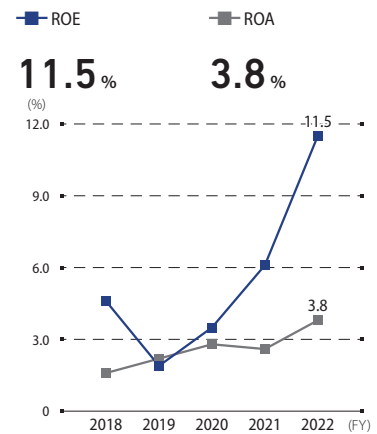
Maintained high levels of cash and cash equivalents to prepare for the creation and expansion of growth businesses and to secure liquidity.

### Shareholders' equity ratio / Interest-bearing debt



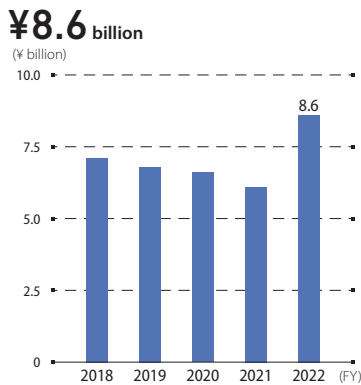
The equity ratio recovered to the 29% level due to an increase in shareholders' equity, and interest-bearing debt decreased for four consecutive years.

### ROE/ROA



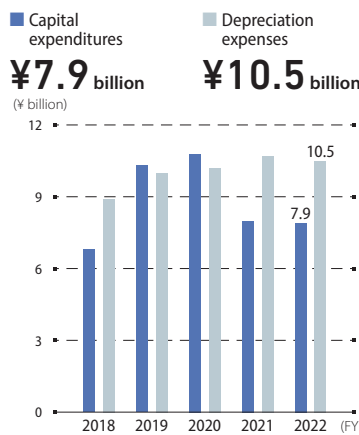
ROE improved to 11.5%, exceeding 10% for the first time in 11 fiscal years, due to an improved net income ratio.

### Research and development expenses



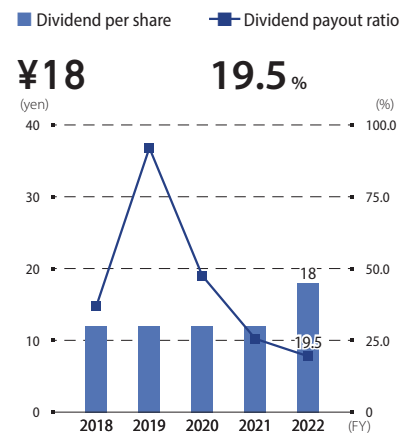
R&D expenses were ¥8.6 billion, an increase of ¥2.5 billion mainly in the waste and water treatment fields in the Environment business.

### Capital expenditures / Depreciation expenses



Both capital expenditures and depreciation expenses remained at the same level as in the previous fiscal year.

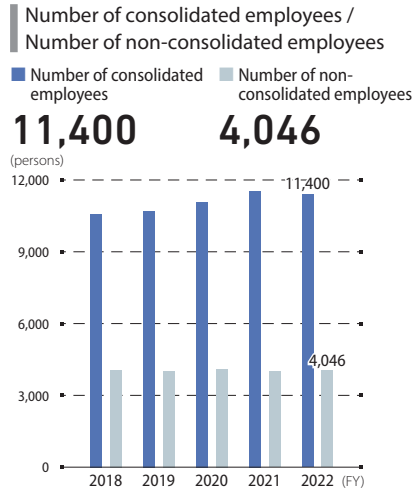
### Dividend per share / Dividend payout ratio



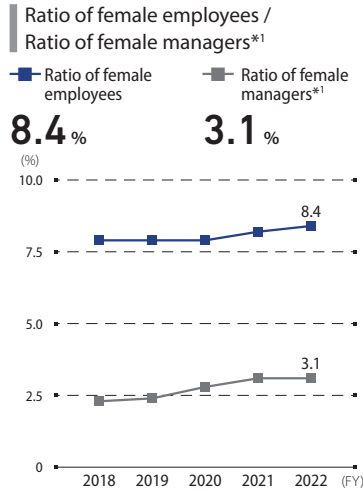
An increase of ¥6 from the previous fiscal year to ¥18, taking into account the increase in profits and future business development.



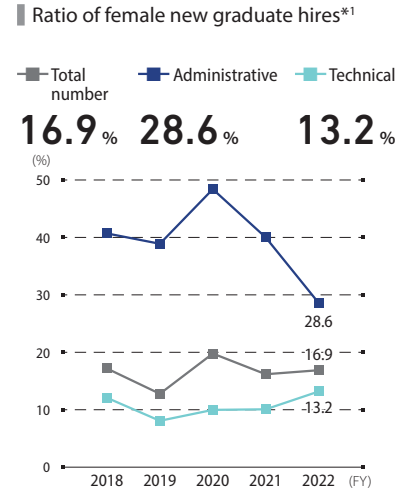
## Non-financial Information



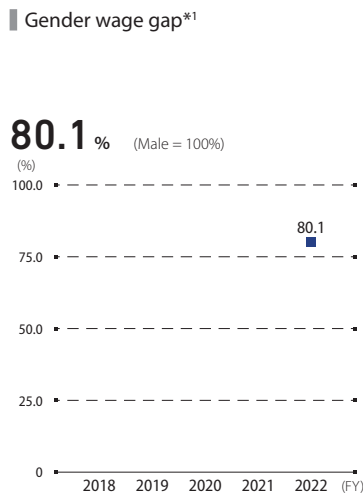
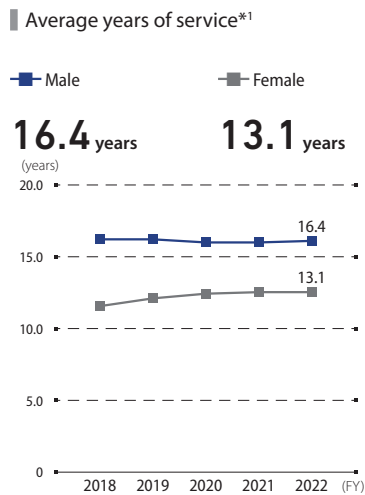
The number of consolidated employees decreased due to the transfer of shares and the deconsolidation of certain consolidated subsidiaries.



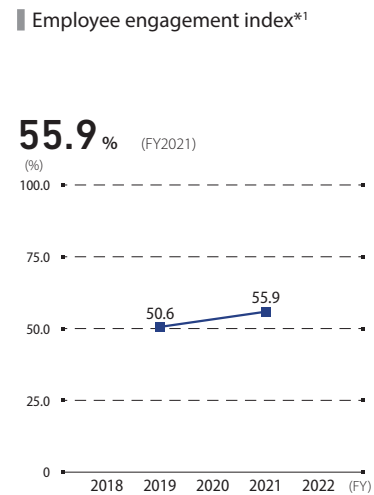
Continued to promote career development and fostered sponsorship among managers, aiming for a 4% ratio of female managers.



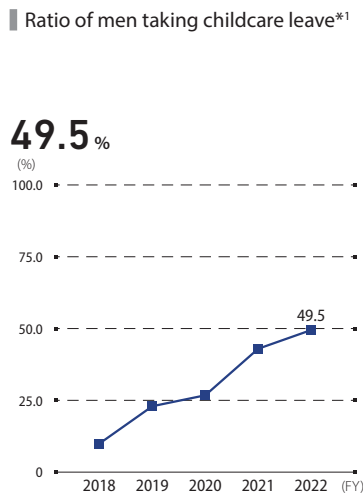
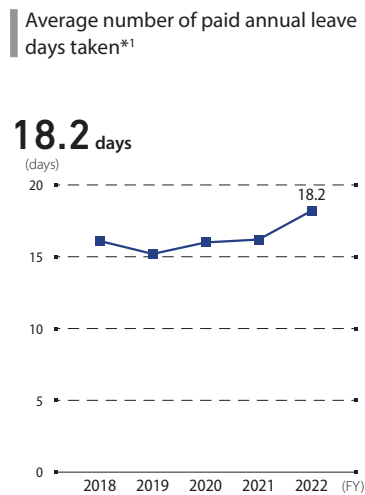
The goal is to increase the ratio of female hires to 50% for administrative jobs and 10% for technical jobs, but the goal for administrative staff was not achieved in fiscal 2022.



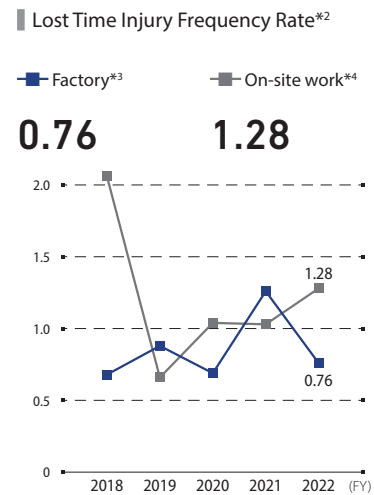
Calculated from fiscal 2022. Reasons include the low ratio of female managers and the high ratio of women taking childcare leave.



The Company has conducted an employee awareness survey every other year. It is implemented every year from fiscal 2023, focused on initiatives to achieve the goal of 70%.



Promoted educational activities such as e-learning for all employees and seminars for managers to achieve 100% utilization.



To improve the level of safety management, a company-wide Health and Safety Committee was established in July 2023. The Committee reports to the Board of Directors.

\*1 Hitachi Zosen non-consolidated

\*2 (Number of fatalities and injuries due to occupational accidents requiring 1 day or more absence from work ÷ cumulative hours worked) x 1,000,000

\*3 Domestic factories and group companies that conduct business activities on these premises in accordance with the principles of consolidated financial statements.

\*4 Total of domestic construction work (for projects where Hitachi Zosen was the prime contractor, including subcontractors).

# Environmental Data

## Approach to environmental data disclosure

To realize zero environmental impact as set forth in the Sustainable Vision, the Hitachi Zosen Group sets effective targets and implements various measures based on an understanding of the environmental impact of each Group company. In fiscal 2022, we expanded the scope of disclosure of environmental data from Hitachi Zosen and certain subsidiaries to the consolidated Group and continue to gradually expand the scope. We disclosed the ratio of total sales of the group companies included in the scope of disclosure to consolidated sales as the coverage ratio.

We disclosed environmental data based on various global standards for ESG information disclosure, and aim to further enhance the content of our disclosures through dialogue with stakeholders in Japan and overseas.

## Achieving carbon neutrality

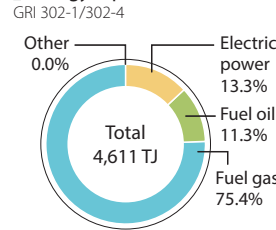
Carbon neutrality is one of the Pillars of Success (Materiality) that we have set in our Sustainable Vision. Based on greenhouse gas (GHG) emissions in fiscal 2013, we have set a target of a 50% reduction by fiscal 2030 and carbon neutrality in fiscal 2050.

The Hitachi Zosen Group calculates GHG emissions throughout the entire value chain based on the standards of the GHG Protocol.

In fiscal 2022, GHG emissions for Scope 1 and 2 were 224.5 kt-CO<sub>2</sub>e, representing a 39.3% decrease from the base fiscal year, due to a decrease in LNG input on lower demand in the electric power sales business and promotion of the introduction of green power.

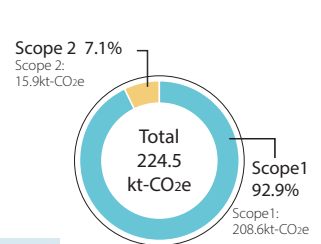
Regarding GHG emissions in the supply chain (Scope 3), we are preparing to disclose them in fiscal 2023, and the current figures are for reference only.

### Energy input in fiscal 2022



Scope of data disclosure: Hitachi Zosen and 19 consolidated subsidiaries  
Coverage ratio: 82.5%

### GHG emissions in fiscal 2022



Applicable GRI Standard number: GRI 305-1/305-2/305-3/305-5  
Unit: (kt-CO<sub>2</sub>e)

GHG	Fiscal 2013 (base fiscal year)	Fiscal 2021	Fiscal 2022
Scope 1 + Scope 2 (compared to base fiscal year)	369.9	265.6 (down 28.2%)	224.5 (down 39.3%)
Scope 1* <sup>2</sup>	336.9	251.0 (down 25.5%)	208.6 (down 38.1%)
Scope 2* <sup>3</sup>	33.0	14.6 (down 55.9%)	15.9 (down 52.0%)
Scope 3* <sup>1,4</sup>	—	2.6 (—)	7.2 (—)

\*1 Scope 3 is a reference value  
\*2 Direct emissions from in-house fuel use and manufacturing processes  
\*3 Indirect emissions from the use of electricity and heat purchased by the Company  
\*4 Category 4 Consigned domestic transportation in which the Company is the consignee

Scope 1, Scope 2  
Scope of data disclosure in fiscal 2022: Hitachi Zosen and 19 consolidated subsidiaries  
Coverage ratio: 82.5%

Scope 3  
Scope of data disclosure in fiscal 2022: Hitachi Zosen and 3 consolidated subsidiaries  
Coverage ratio: 47.6%

## Water resource input and water effluents discharged in business activities

### 1) Water resource input

Water resource input in fiscal 2022 was 1,426 thousand m<sup>3</sup>. Until fiscal 2021, we disclosed data from Hitachi Zosen and certain subsidiaries, but from fiscal 2022, we expanded the scope of disclosure to include the consolidated group.

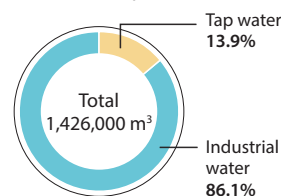
Going forward, we will gradually expand the scope of data disclosure and strive to reduce the amount of water intake.

### 2) Water effluents discharged

In fiscal 2022, the amount of wastewater was 773 thousand m<sup>3</sup>, of which 91.1% was discharged to public waters such as rivers and seas.

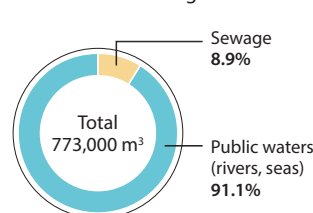
For wastewater, we have set voluntary standards that are stricter than those stipulated by laws and regulations, and we thoroughly implement water quality control.

### Water resource input in fiscal 2022



Scope of data disclosure: Hitachi Zosen and 18 consolidated subsidiaries  
Coverage ratio: 80.5%

### Water effluents discharged in fiscal 2022



Scope of data disclosure: Hitachi Zosen and 18 consolidated subsidiaries  
Coverage ratio: 80.5%

## Amount of raw material inputs and amount of waste and valuable resources generated in business activities

### 1) Amount of raw material inputs

The amount of raw material inputs in fiscal 2022 was 22,204 tons (up 1,712 tons from fiscal 2021) due to an increase in production volume. Paper consumption was 53 tons (up 32 tons from fiscal 2021), and paper consumption per employee was 12.0kg (up 7.1 kg from fiscal 2021). The main reason for the increase was that many employees worked from home due to COVID-19 in fiscal 2021 and paper consumption was extremely low.

### 2) Amount of waste and valuable resources generated

The amount of waste and valuable resources generated in fiscal 2022 was affected by an increase in production, but thanks to initiatives to reduce waste in manufacturing processes and the promotion of recycling, the amount generated was 8,091 tons, the amount landfilled was 192 tons, and the landfill rate was 2.4%, all of which were lower than in fiscal 2021.

In addition to the above, the amount of waste generated from construction work undertaken by our Group was 4,217 tons.

## Amount of chemical substances handled, released, and transferred in business activities

### 1) Amount of chemical substances handled

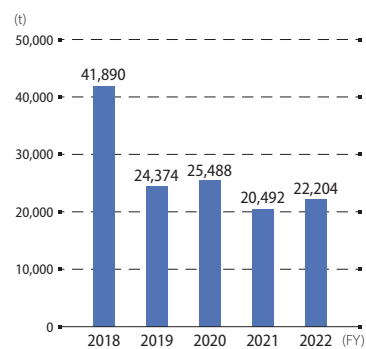
In fiscal 2022, the amount of chemical substances subject to the PRTR system\* was 84.0 tons. The amount of GHG substances handled was 5.7 tons (up 0.3 tons from fiscal 2021) and the amount of ozone-depleting substances handled was 1.7 tons (flat against fiscal 2021).

### 2) Amount of chemical substances released and transferred

In fiscal 2022, the amount of chemical substances subject to the PRTR system\* that were released and transferred was 57.1 tons. Substances subject to the PRTR system are mainly released and transferred in the painting and welding processes. Sulfur oxides and nitrogen oxides are emitted during fuel use. For all of these cases, we are systematically improving work processes and methods, introducing new equipment, and collaborating with customers and suppliers to consider review of raw materials.

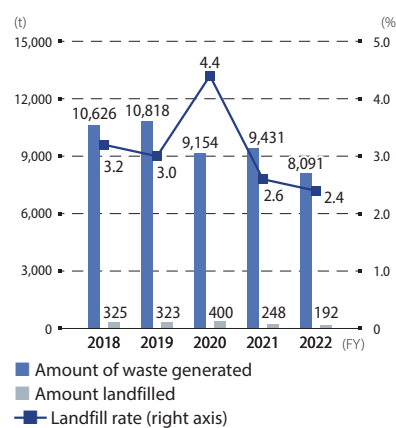
\* PRTR (Pollutant Release and Transfer Register) system: An arrangement whereby business operators estimate and report to government authorities the amounts of chemicals potentially hazardous to human health and ecosystems that are released into the environment (air, water, soil) and the amounts of those chemicals that are transferred off-site. Government authorities then compile and publish the emissions and transfer amounts based on the estimates using reports from business operators and statistical data.

Amount of raw material inputs GRI 301-1



Scope of data disclosure: Hitachi Zosen and 1 consolidated subsidiary  
Coverage ratio: 43.1%

Amount of waste generated GRI 306-1/306-2/306-3/306-4/306-5



Scope of data disclosure: Hitachi Zosen and 1 consolidated subsidiary  
Coverage ratio: 43.1%

GRI 305-1/305-6/305-7

Scope of disclosure of PRTR data: Hitachi Zosen and 3 consolidated subsidiaries  
Coverage ratio: 45.1%  
Scope of other data disclosure: Hitachi Zosen only  
Coverage ratio: 41.7%

GRI 305-1/305-6/305-7

Scope of data disclosure: Hitachi Zosen and 3 consolidated subsidiaries  
Coverage ratio: 45.1%

## Eleven-Year Financial Summary

Operating results	2012	2013	2014	2015	
Order intake (¥ million)	382,847	328,433	452,757	435,435	
Net sales (¥ million)	296,792	333,433	359,332	387,043	
Overseas sales ratio (%)	24.2	34.8	34.0	33.3	
Operating income (¥ million)	11,362	7,878	12,818	15,112	
Operating income margin (%)	3.8	2.4	3.6	3.9	
Ordinary income (¥ million)	11,246	6,220	7,568	12,272	
Net income attributable to shareholders of Hitachi Zosen (¥ million)	7,410	3,719	5,100	5,848	
Research and development expenses (¥ million)	7,043	6,285	6,181	6,526	
Capital expenditures (¥ million)	5,864	5,307	11,882	8,194	
Depreciation expenses (¥ million)	8,285	8,198	8,196	8,428	

Cash flows					
Cash flows from operating activities (¥ million)	9,648	299	9,085	8,147	
Cash flows from investing activities (¥ million)	(13,487)	(8,697)	(14,680)	(3,666)	
Cash flows from financing activities (¥ million)	(7,818)	(513)	12,178	(15,948)	
Cash and cash equivalents at end of period (¥ million)	56,413	49,961	60,769	49,671	

Financial position (year-end)					
Total assets (¥ million)	366,346	379,414	408,803	401,648	
Shareholders' equity (¥ million)	98,414	100,322	108,766	114,158	
Interest-bearing debt (¥ million)	102,643	104,326	119,054	105,133	

Financial indicators					
Return on equity (%)	7.6	3.7	4.9	5.2	
Return on assets (based on ordinary income) (%)	3.0	1.7	1.9	3.0	
Shareholders' equity ratio (%)	26.9	26.4	26.6	28.4	

Per share data					
Net income (¥)	46.78	23.77	30.52	34.96	
Net assets (¥)	627.85	641.16	651.24	677.24	
Dividend (¥)	2	10	10	12	
Dividend payout ratio (%)	21.4	42.1	32.8	34.3	

(Fiscal year)

	2016	2017	2018	2019	2020	2021	2022
	398,943	400,461	455,051	454,121	429,421	677,949	<b>737,530</b>
	399,331	376,437	378,140	402,450	408,592	441,797	<b>492,692</b>
	32.8	27.2	25.5	27.5	30.6	34.4	<b>38.4</b>
	14,947	5,907	7,358	13,891	15,396	15,541	<b>20,056</b>
	3.7	1.6	1.9	3.5	3.8	3.5	<b>4.1</b>
	11,225	3,365	6,720	9,429	11,792	11,783	<b>17,834</b>
	5,864	2,171	5,445	2,197	4,258	7,899	<b>15,577</b>
	7,089	7,411	7,162	6,897	6,664	6,136	<b>8,581</b>
	8,174	9,973	6,896	10,302	10,831	8,057	<b>7,945</b>
	8,536	9,115	8,940	10,090	10,241	10,663	<b>10,515</b>

	17,304	(3,373)	(5,428)	32,808	22,680	26,858	<b>28,008</b>
	(6,998)	(10,725)	(7,574)	6,179	(13,847)	943	<b>(2,462)</b>
	(8,417)	(4,018)	14,982	(31,364)	(5,271)	(8,759)	<b>(7,841)</b>
	50,848	32,743	34,394	41,595	45,812	65,956	<b>84,874</b>

	393,587	391,860	429,040	409,531	429,336	461,161	<b>479,682</b>
	115,692	116,894	119,479	118,003	126,330	131,299	<b>139,619</b>
	109,167	107,249	126,343	99,588	98,149	91,880	<b>86,465</b>

	5.1	1.9	4.6	1.9	3.5	6.1	<b>11.5</b>
	2.8	0.9	1.6	2.2	2.8	2.6	<b>3.8</b>
	29.4	29.8	27.8	28.8	29.4	28.5	<b>29.1</b>

	34.79	12.88	32.31	13.04	25.26	46.87	<b>92.43</b>
	685.83	693.53	708.89	700.15	749.58	779.08	<b>828.47</b>
	12	12	12	12	12	12	<b>18</b>
	34.5	93.2	37.1	92.0	47.5	25.6	<b>19.5</b>

# Investor Information / Corporate Information (as of March 31, 2023)

## IR activities

In accordance with the Hitz Value (corporate philosophy, management stance, and standards of business behavior), we strive to disclose information in a timely and appropriate manner based on laws and regulations. We also strive to enhance corporate value by actively engaging in dialogue with shareholders and investors to gain sufficient understanding of our management policies and plans, and by reflecting opinions and requests obtained through such dialogue in our management.

### General Meeting of Shareholders

In order to enable more shareholders to participate, we are seeking to improve the environment by setting dates for General Meetings of Shareholders that avoid concentrated days, sending and disclosing convocation notices as early as possible, adopting an online system for exercising voting rights, and issuing English translations of convocation notices for overseas investors.

### Dialogue with institutional and individual investors

Our Group strives to disclose information on management policies, business conditions, and other matters in a timely and appropriate manner. We aim to enhance our long-term corporate value by actively engaging in dialogue with investors, including through briefings for analysts and institutional investors at the time of the announcement of quarterly and annual financial results and the release of management plans, and the disclosure of information using various means such as our corporate website and integrated reports.

## Dialogue with stakeholders

### Dialogue with employees

Management information and messages are disseminated by senior management through the Company's internal newsletters and intranet. In addition, in order to make the best use of the voices of the front-line employees in management, we are deepening mutual understanding between senior management and employees by holding round-table meetings with the president and mid-career, young, non-Japanese, and various other employees, following up on the strategies and measures in the medium-term management plan, and holding dialogue meetings with the heads of each division and employees for the formulation of the next medium-term plan.

Since fiscal 2009, we have conducted an employee awareness survey biennially to measure ease of work and satisfaction with the work environment in order to create a rewarding workplace. Also, since fiscal 2023, we have been working to improve employee engagement and the engagement survey we now conduct annually comprehensively measures each employee's level of satisfaction and well-being, and the level of empathy with the direction of the Company.

### Dialogue with shareholders and investors

In order to actively engage in dialogue with investors, senior management and the investor relations division hold approximately 200 dialogues annually with institutional investors and securities analysts in Japan and overseas, as well as with individual investors through the General Meeting of Shareholders and other means. In addition, factory tours are conducted, and information on our Group's management policies and plans, IR briefings and related materials for the General Meeting of Shareholders, and videos (or audio) are provided on our Group's corporate website.

Opinions and requests regarding management obtained through dialogue with shareholders and investors are shared with the Board of Directors and reflected in management to sustainably increase corporate value.

### Dialogue with local communities

Through its Group's products and services, the company actively contributes to solving social and environmental issues and other sustainability issues, and engages in a variety of activities closely linked to local communities. In addition to Adopt Forest (forest conservation activities) and cleanup activities around the head office and factories, our STEAM education initiatives include facility tours and hands-on craft workshops for elementary school students, career classes for junior high school students, and a permanent exhibition for children at the OSTECH Exhibition Hall. We also hold lectures on environmental awareness for university students in Laos and sponsor and participate in local events, aiming to coexist harmoniously with local communities.



A factory tour



Permanent Exhibition at OSTECH Exhibition Hall

## Stock data

Number of shares authorized	400,000,000
Number of shares issued	170,214,843 (including 1,687,175 treasury shares)
Number of shareholders	74,480

## Major shareholders (Top 10 shareholders)

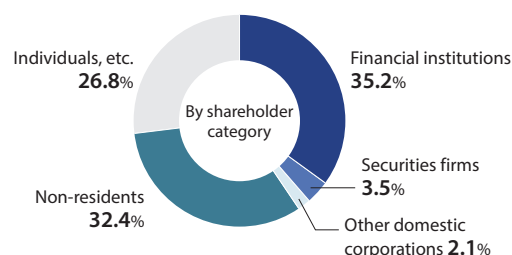
Name of shareholder	Number of shares held (Thousands of shares)	Share holdings ratio (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	29,418	17.5
Custody Bank of Japan, Ltd. (Trust Account)	14,017	8.3
MUFG Bank, Ltd.	5,291	3.1
STATE STREET BANK AND TRUST COMPANY 505019	4,067	2.4
STATE STREET LONDON CARE OF STATE STREET BANK AND TRUST, BOSTON SSBTC A/C UK LONDON BRANCH CLIENTS- UNITED KINGDOM	3,215	1.9
Hitachi Zosen Employee Shareholding Association	2,658	1.6
STATE STREET BANK AND TRUST COMPANY 505001	2,445	1.5
STATE STREET BANK WEST CLIENT - TREATY 505234	2,373	1.4
Sompo Japan Insurance Inc.	2,358	1.4
JP MORGAN CHASE BANK 385632	2,305	1.4

Note: The holding ratio does not include treasury stock (1,687,175 shares).

## Corporate data

Date of founding	April 1, 1881
Date of establishment	May 29, 1934
Representative	Sadao Mino, President and Chief Executive Officer
Capital	45,442,365,005 yen
Number of employees	11,400 (consolidated) / 4,046 (non-consolidated)
Business	Design, construction and manufacture of Waste to Energy plants, desalination plants, water and sewage treatment plants, marine diesel engines, press machines, process equipment, precision machinery, bridges, hydraulic gates, and equipment for use in disaster prevention/mitigation
Number of Group companies	154 (124 consolidated subsidiaries and 30 affiliates)

## Distribution of shareholdings



## Shareholder information

Business year	April 1 to March 31
Annual General Meeting of Shareholders	Late June
Final date for voting right registration	March 31
Dividend record date (term-end)	March 31
Dividend record date (interim)	September 30
Public notices	Via Company's website <a href="https://www.hitachizosen.co.jp/ir/publication.html">https://www.hitachizosen.co.jp/ir/publication.html</a> (Japanese)
Share trading unit	100 shares
Shareholder registry administrator and special account custodian	Mitsubishi UFJ Trust and Banking Corporation 4-5, Marunouchi 1-chome, Chiyoda-ku, Tokyo
Stock listing	Tokyo Stock Exchange

### Publication of the Integrated Report 2023

As a solution partner for realizing a sustainable, safe, and secure society, the Hitachi Zosen Group endeavors to enhance corporate value by taking full advantage of the technical capabilities, track record, and relationships with customers and society that we have cultivated to date to solve problems for customers and markets.

The Integrated Report 2023 was created with reference to the framework of the International Integrated Reporting Council (IIRC) with the aim of deepening understanding of how the Hitachi Zosen Group creates social value and enhances corporate value, as well as of the Group's vision.

In addition to messages from the general managers of each headquarters, this Integrated Report features information on the new medium-term management plan that started this fiscal year, the long-term vision that was partially revised based on the current situation, and the newly formulated Sustainable Vision, as well as explanations on human capital.

We intend to continue our active dialogue with you and listen sincerely to your frank opinions in order to enhance our corporate value. We also hope for your continued kind support for our Group.

**Satoshi Kimura**

Senior Managing Executive Officer  
General Manager of Corporate Planning Headquarters



## Hitachi Zosen Corporation

<https://www.hitachizosen.co.jp/english/>

### Head Office

7-89, Nankokita 1-chome, Suminoe-ku, Osaka 559-8559, Japan  
Phone: +81-6-6569-0001 Fax: +81-6-6569-0002

### Tokyo Head Office

15th Floor, Omori Bellport D-Wing, 26-3, Minamioi 6-chome,  
Shinagawa-ku, Tokyo 140-0013, Japan  
Phone: +81-3-6404-0800 Fax: +81-3-6404-0809

---

### Investor Relations Information

<https://www.hitachizosen.co.jp/english/ir/>



### Corporate Information

<https://www.hitachizosen.co.jp/english/>



---

### Corporate Web Site "Sustainability"

<https://www.hitachizosen.co.jp/english/sustainability/>

---

### YouTube

**Hitachi Zosen Group Channel**

