



Hitachi Zosen Group  
Integrated Report 2020



Technology for People,  
the Earth, and the Future

# 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 nearly 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 the environmental fields of energy and water, 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.

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**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 sincerity to contribute to a prosperous future.**

### Our management stance

#### Stakeholder satisfaction

- Enhancing employee satisfaction
- Enhancing customer satisfaction
- Enhancing shareholder satisfaction

#### Attitude toward work

- Thorough safety-first ethos
- Thorough implementation of compliance
- Pursuit of quality

### Standards of business behavior

**Strive boldly to achieve success**

**Communicate with sincerity**

**Learn widely, think deeply**

### 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.



## I N D E X

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### 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 refer to our Environmental Databook (URL given on back cover) for detailed information, including numerical data, regarding measures taken by the Group for environmental conservation and protection. For financial information and further details of our other corporate activities, please visit the Group's website.

### 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.

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

By exploring new terrestrial businesses, we have transformed our portfolio while maintaining our roots in shipbuilding technology. Our goal is to create value for society by continuing to take on social issues, even as those issues change with the times.

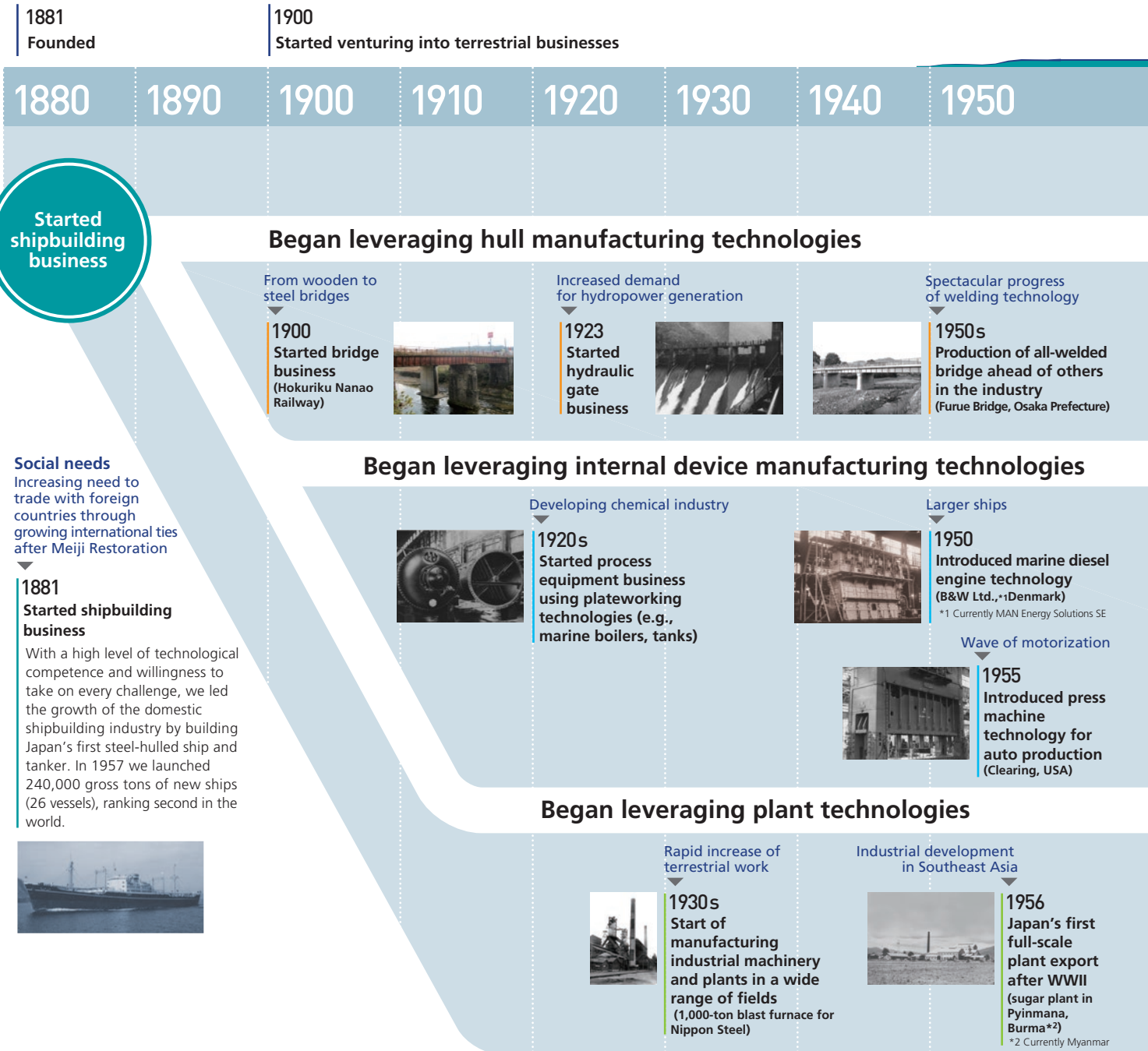
1949  
Listed on the Tokyo and Osaka Stock Exchanges  
¥5.6 bil.

S : T ▶ 8 : 2

## Changes in sales structure

■ Shipbuilding (S) ■ Terrestrial (T)

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).



**Social needs**  
Increasing need to trade with foreign countries through growing international ties after Meiji Restoration

**1881**  
**Started shipbuilding business**  
With a high level of technological competence and willingness to take on every challenge, we led the growth of the domestic shipbuilding industry by building Japan's first steel-hulled ship and tanker. In 1957 we launched 240,000 gross tons of new ships (26 vessels), ranking second in the world.



2017  
 Launching the Long-term Vision—  
 “Hitz 2030 Vision”  
 Acquired Australian company Osmflo

2013  
 Acquired US company NAC

1960  
 Technological collaboration with Swiss company Von Roll Environmental Technology Ltd.\*3  
\*3 Currently Hitachi Zosen Inova

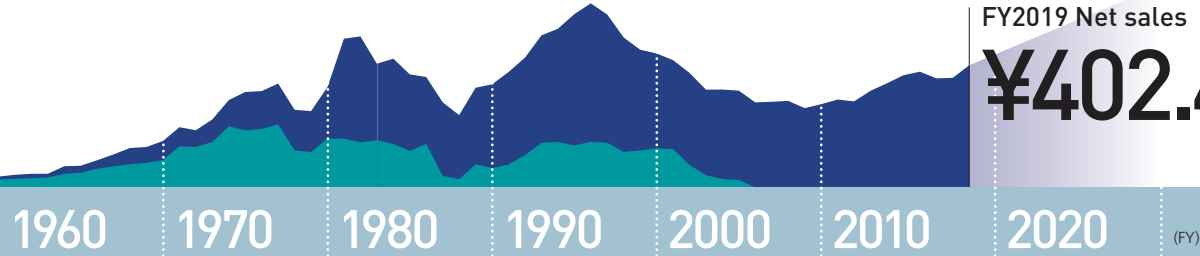
1977  
 Record-high net sales in shipbuilding  
 ¥358.5 bil.  
 6 : 4

1996  
 Record-high net sales  
 ¥635.2 bil.  
 2 : 8

2002  
 Separated shipbuilding business  
 ¥395.2 bil.  
 2 : 8

2010  
 Acquired Swiss company Inova\*3  
\*3 Currently Hitachi Zosen Inova

FY2019 Net sales  
**¥402.4 billion**



Current business segments



Increased demand for sewerage development



1967  
 First shield-tunneling machine delivered  
 (Nissan Construction Co., Ltd., Yokohama City's sewerage installation)

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 generation system

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 Beer\*)  
\*4 Currently Asahi Breweries, Ltd.

Increase of nuclear power plants



1978  
 First nuclear casks delivered  
 (for power company)

Prevention of oceanic air pollution



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

Increasing waste, increasing air pollution



1965  
 Japan's first energy-from-waste plant delivered  
 (Nishiyodo Plant, Osaka)

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 Kompogas plant in the United States  
 (California)

## The Value Creation Process

We aim to be a solution partner that contributes to the realization of a sustainable, safe, and secure society.

At the Hitachi Zosen Group, we address social issues by drawing on the sources of our value creation—willingness to take on every challenge and human resources—and by leveraging our diverse management capital and our three strengths. We are committed to the creation of new value, along with our aim to realize our long-term vision.

### Major management capital (FY2019 figures)

#### Human capital

- Highly environmentally conscious personnel with a willingness to take on every challenge and a high level of technological competence.

Number of employees in group companies: 10,707

#### Intellectual capital

- Technological competence developed since its establishment and continuous challenges to new technologies
- Intra-Group cross-organizational research and development system
- Active open innovation

Research and development expenses: ¥6.8billion

#### Social and relationship capital

- The Hitz Brand
- Relationship of trust built on 139 years of experience (customers, business partners, communities)

#### Financial capital

Shareholders' equity: ¥118billion  
Shareholders' equity ratio: 28.8%

#### Manufactured capital

- Production system focused on products individually designed and manufactured to accommodate diversified needs

Capital expenditures: ¥10.3billion

Major manufacturing bases: 8 locations in Japan

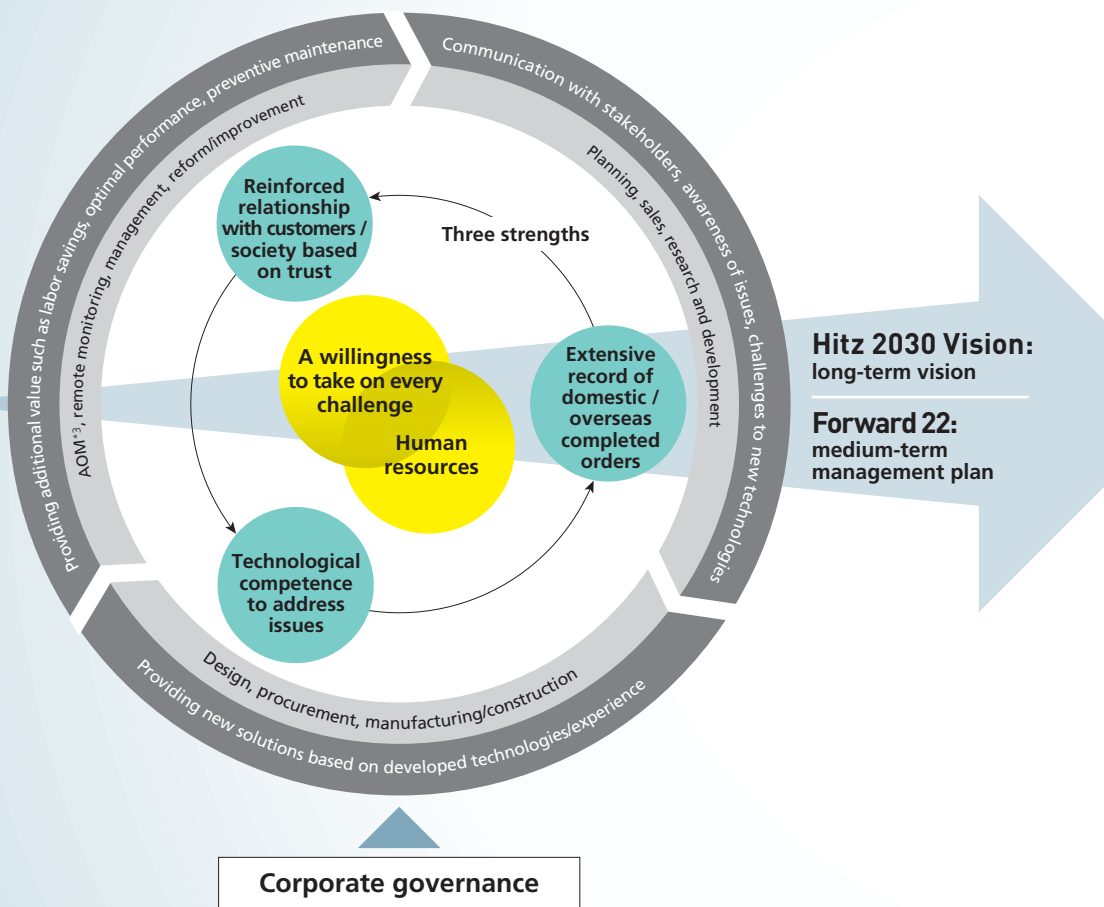
#### Natural capital

- Wind, biomass, solar power, seas, minerals, water, energy

Energy consumption: 5,684TJ<sup>\*1</sup>

Water consumption: 1.07million t<sup>\*2</sup>

### Business model



<sup>\*1</sup> Hitachi Zosen non-consolidated (mandated reporting items under the Act on the Rational Use of Energy)

<sup>\*2</sup> Eight plants in Japan, Head Office, and group companies that engage in business activities in conformity with the principles of consolidated financial statements

<sup>\*3</sup> After-sales service, Operation and Maintenance

## Social issues identified by our company

### Worsening environmental pollution

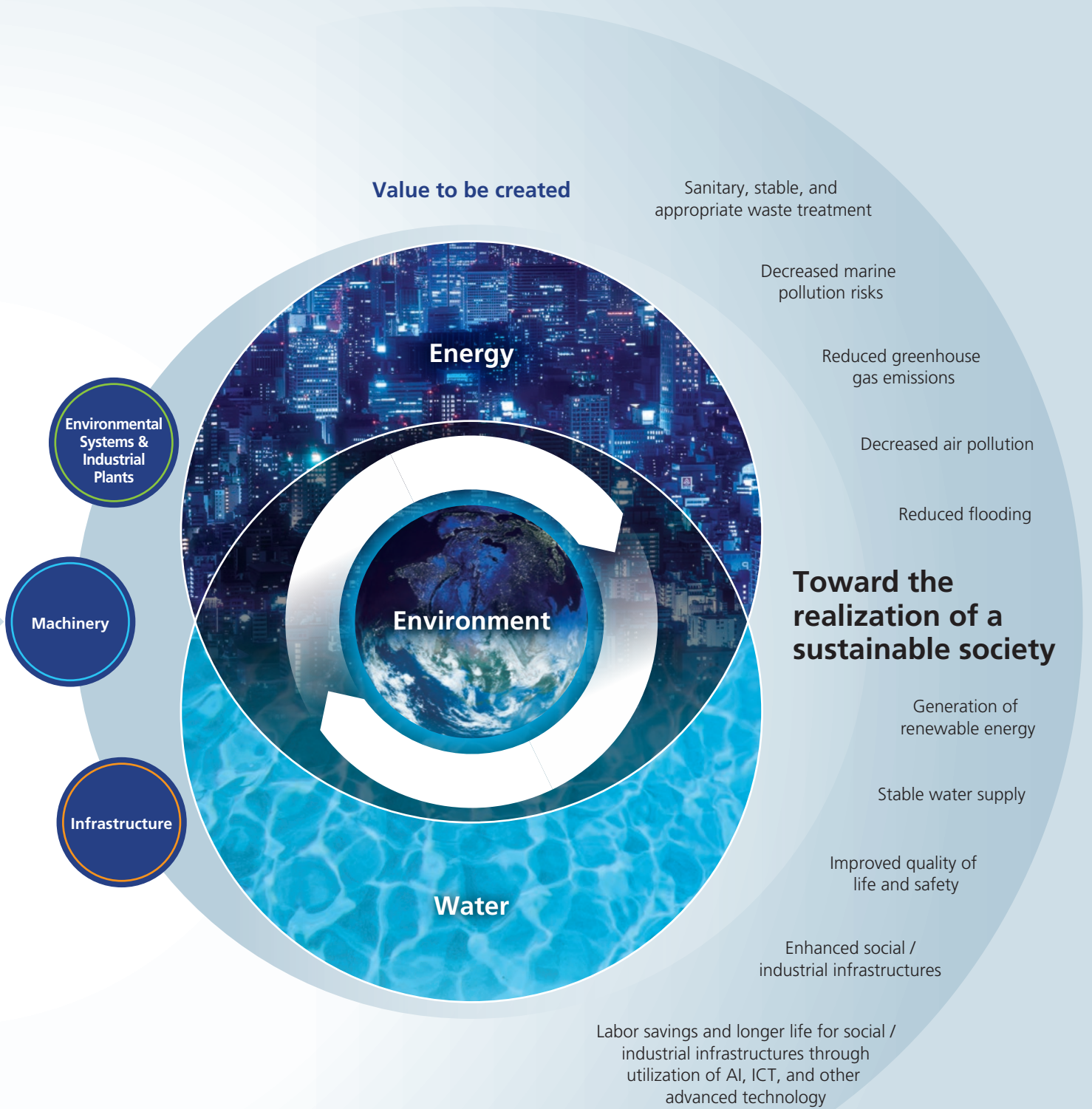
- Increasing wastes
- Water crisis
- Air pollution
- Global warming

### Shortage of food, water and energy

- Population growth and urbanization in emerging and developing countries
- Changing energy demand structure
- Insufficient and aging social and industrial infrastructures

### Abnormal weather, natural hazards

- Storm surges, tsunamis
- Massive earthquakes
- Typhoons, heavy rains
- Droughts, desertification



### Contribution to SDGs

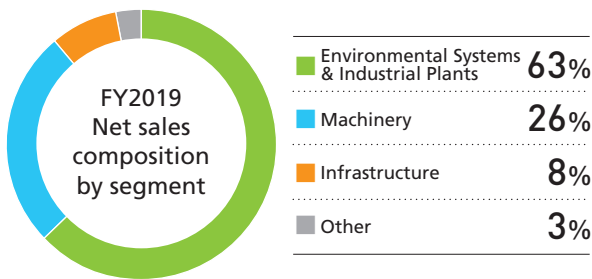
The orientation of the business policies and activities of the Hitachi Zosen Group is in line with the SDGs adopted at the United Nations Summit in 2015. We believe that through our products and services we can contribute to the construction of sustainable societies. As the target year 2030 for SDGs coincides with the period for the realization of the future vision set forth in our Group's long-term vision, the "Hitz 2030 Vision," we are committed to continue contributing by mobilizing the collective efforts of Hitachi Zosen Group.



## Creating Value with Three Businesses

We develop businesses focusing on “provision of clean energy and water,” “environmental protection,” and “creation of prosperous, disaster-resilient cities.”

The Hitachi Zosen Group is currently engaged in developing businesses in the three areas of Environmental Systems and Industrial Plants, Machinery, and Infrastructure. Amid the growing seriousness of various social issues, including environmental pollution and shortages of energy and water, we are committed to our goals of supplying “clean energy” and “clean water” and realizing “environmental protection and the creation of prosperous, disaster-resilient cities” with the aim of achieving a sustainable society.



### Environmental Systems & Industrial Plants

FY2019 Net sales  
**¥254.3 billion**

#### Responding to increasing waste treatment and water demand due to global population growth

This segment focuses on the EPC (Engineering, Procurement, and Construction) of energy-from-waste plants and stable business and builds various energy-related facilities, including biomass plants, and water-related facilities, including sludge recycling centers and desalination plants, in Japan and overseas. We seek to differentiate ourselves by enhancing additional value in terms of power generation efficiency, treatment capacity, and environmental performance. In the field of stable business, we are working on 24/7 remote monitoring as well as optimal operation management and are promoting technologies and development for longer use or longer life of facilities and equipment. In incinerators and recycling facilities, we have taken on after-sales service contracts for more than 140 facilities, more than 50 contracts for operational services, and more than 30 contracts for comprehensive operational services.

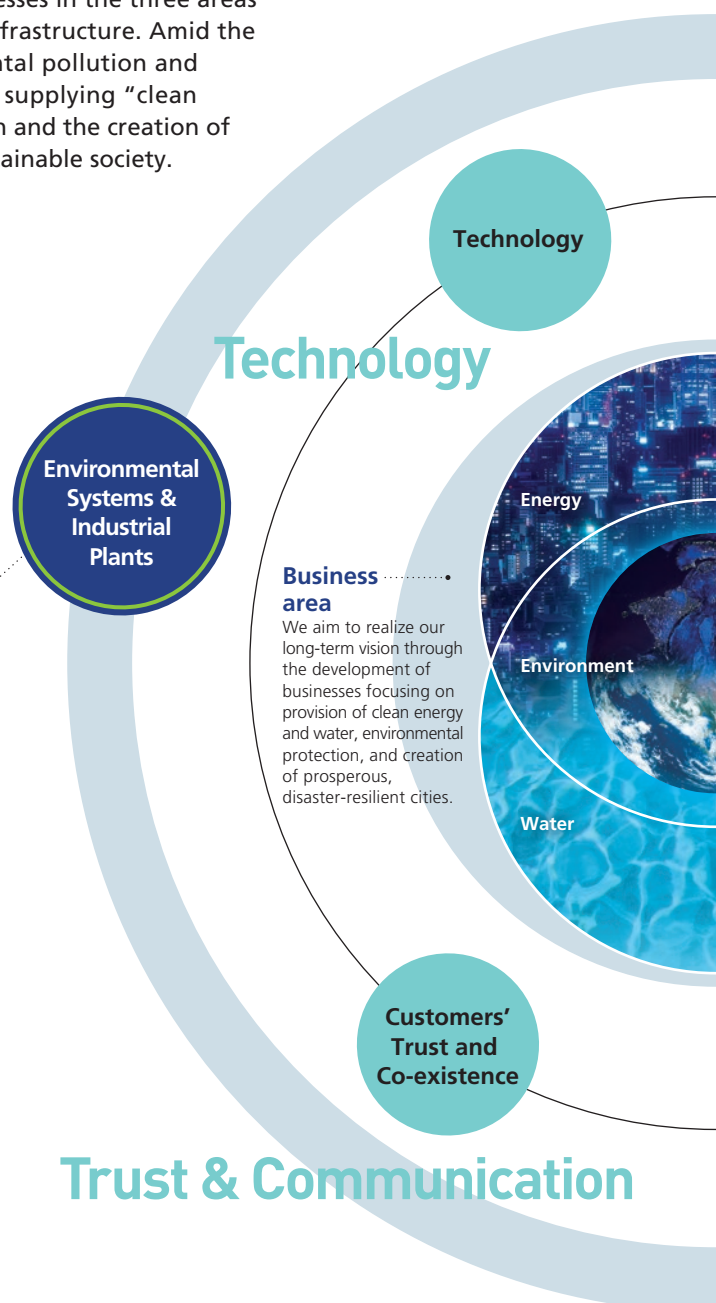


● Energy-from-waste plants ● Biomass plants



● Desalination plants ● Sludge recycling treatment plants etc.

- Biogas plants
- Power generation plants
- Recycling facilities
- Water and sewage treatment plants
- AOM
- Long-term operation business (Private Finance Initiative [PFI] and Public Private Partnerships [PPP])
- Remote monitoring, operation support
- Independent power producers (IPPs)
- Power producer and supplier (PPS), etc.





Machinery

Diversity & Globalization

Diversity & Globalization

Infrastructure

## Machinery

FY2019 Net sales

¥103.2 billion

### Contributing to reduction of environmental burden and ensuring of safety based on manufacturing excellence

With a wide variety of product families including marine diesel engines, press machines for automobiles, pressure vessels for petrochemical plants and other process equipment, and various types of precision machinery including semiconductor, food and medical related equipment, and hydrogen generation systems, we tackle the problems of our customers in various industries, such as mitigating environmental burdens and streamlining manufacturing processes for higher efficiency, and provide consistent support services ranging from development to servicing.



● Marine diesel engines



● Press machines

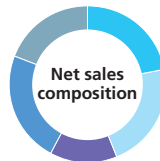


● Process equipment

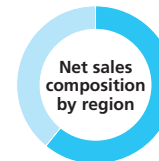


● Vacuum equipment

- SCR systems for marine engines
- Deck machinery for ships
- Spent nuclear fuel casks
- Various types of precision machinery (mainly for electronics, semiconductor, food, medical-related sectors)
- Filter presses
- Various types of industrial equipment



Category	Percentage
Marine diesel engines	22%
Press machines	22%
Process equipment	14%
precision machinery	23%
Other	19%



Region	Percentage
Japan	61%
Overseas	39%

## Infrastructure

FY2019 Net sales

¥33.5 billion

### Realization of a comfortable social life and a society capable of disaster prevention and mitigation in emergencies

We have a 100-year history and track record in building bridges and hydraulic gates for dams and rivers, and have worked on extending their useful life through monitoring, maintenance, repair, and seismic strengthening. We have been contributing to the creation of prosperous, disaster-resilient cities with our cutting-edge technology and development capabilities, including shield tunneling machines for construction of underground motorways and subway tracks, and flap-gate type seawalls against flood disaster due to tsunamis or storm surges.



● Bridges



● Hydraulic gates



● Flap-gate type seawall against flood disaster



● Shield tunneling machines

- Steel stacks
- Marine civil engineering
- Maintenance technology, earthquake-resistant technologies
- GPS comprehensive oceanographic monitoring system
- GPS remote monitoring system
- Wind power generation
- Electric discharge impulse crushing system, etc.

## 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. We have a delivery record of 490 EfW plants (including licensees)\*1, and 237 desalination plants\*2.

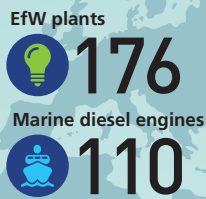
\*1 Including heat recovery other than power generation (such as steam, hot water, etc.)

\*2 Including treatment of brackish water and mine drainage.

- Environmental Systems & Industrial Plants
- Machinery
- Infrastructure

### Europe

- EfW plants
- Biogas plants
- Marine diesel engines
- Press machines
- Process equipment
- Spent nuclear fuel casks



### Africa

- Desalination plants
- Marine diesel engines
- Press machines
- Process equipment



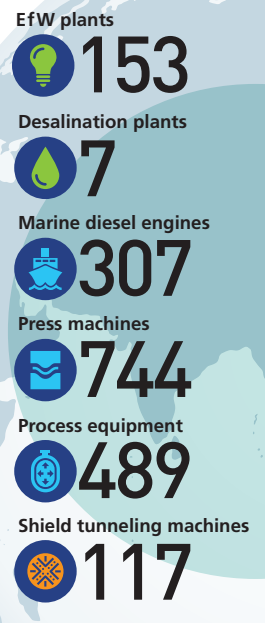
### Middle East

- EfW plants
- Desalination plants
- NOx removal system
- Marine diesel engines
- Press machines
- Process equipment
- Shield tunneling machines



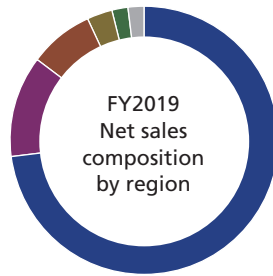
### Asia

- EfW plants
- Desalination plants
- Chemical plants
- NOx removal system
- Marine diesel engines
- Press machines
- Process equipment
- Spent nuclear fuel casks
- Precision machinery
- Bridges and hydraulic gates
- Shield tunneling machines

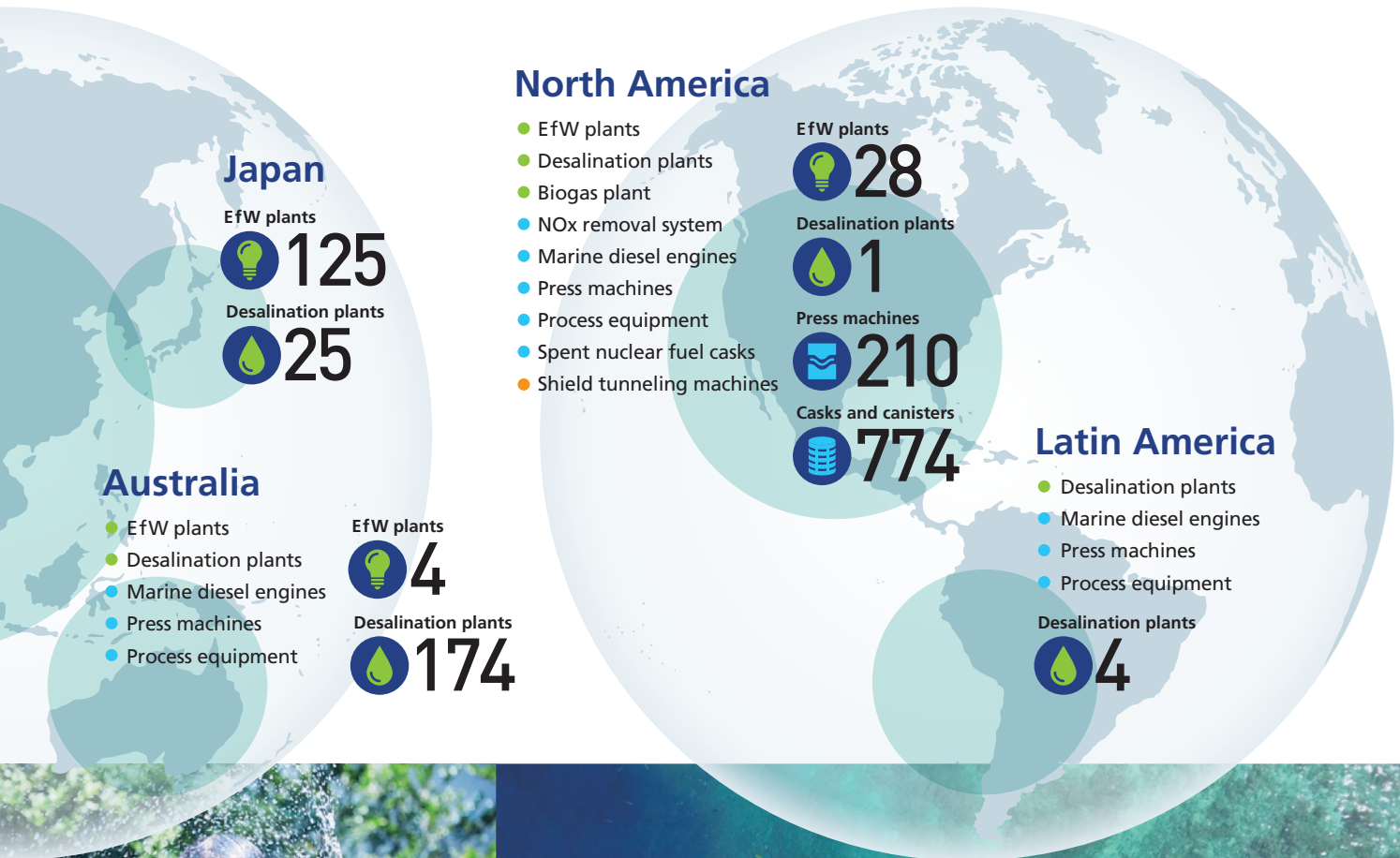


For a beautiful earth

For a comfortable life



Japan	73%	North America	3%
Europe	12%	Middle East	2%
Asia	8%	Other	2%



For a healthy life



## Financial and Non-Financial Highlights

Financial	Operating results	(Fiscal year ended March)				
		2015	2016	2017	2018	2019
	Order intake (¥ million)	435,435	398,943	400,461	455,051	454,121
	Net sales (¥ million)	387,043	399,331	376,437	378,140	402,450
	Overseas sales ratio (%)	33.3	32.8	27.2	25.5	27.5
	Operating income (¥ million)	15,112	14,947	5,907	7,358	13,891
	Operating income margin (%)	3.9	3.7	1.6	1.9	3.5
	Ordinary income (¥ million)	12,272	11,225	3,365	6,720	9,429
	Profit attributable to shareholders of Hitachi Zosen (¥ million)	5,848	5,864	2,171	5,445	2,197
	Research and development expenses (¥ million)	6,526	7,089	7,411	7,162	6,897
	Capital investments (¥ million)	8,194	8,174	9,973	6,896	10,302
	Depreciation expenses (¥ million)	8,428	8,536	9,115	8,940	10,090
	<b>Cash flows</b>					
	Cash flows from operating activities (¥ million)	8,147	17,304	-3,373	-5,428	32,808
	Cash flows from investing activities (¥ million)	-3,666	-6,998	-10,725	-7,574	6,179
	Cash flows from financing activities (¥ million)	-15,948	-8,417	-4,018	14,982	-31,364
	Cash and cash equivalents at end of year (¥ million)	49,671	50,848	32,743	34,394	41,595
	<b>Financial position</b>					
	Total assets (¥ million)	401,648	393,587	391,860	429,040	409,531
	Shareholders' equity (¥ million)	114,158	115,692	116,894	119,479	118,003
	Interest-bearing debt (¥ million)	105,133	109,167	107,249	126,343	99,588
	<b>Per share data</b>					
	Net income (yen)	34.96	34.79	12.88	32.31	13.04
	Net assets (yen)	677.24	685.83	693.53	708.89	700.15
	Cash dividends (yen)	12.00	12.00	12.00	12.00	12.00
	Dividend payout ratio (%)	34.3	34.5	93.2	37.1	92.0
	<b>Financial indicators</b>					
	Return on equity (%)	5.2	5.1	1.9	4.6	1.9
	Return on assets (Ordinary income/Average total assets) (%)	3.0	2.8	0.9	1.6	2.2
	Shareholders' equity ratio (%)	28.4	29.4	29.8	27.8	28.8

Non-financial		(Fiscal year ended March)				
		2015	2016	2017	2018	2019
	Amount of energy consumption*1 (TJ)	5,887	6,991	6,384	6,130	5,684
	Amount of water consumption*2 (10 thousand tons)	135	128	122	118	107
	CO <sub>2</sub> emissions*1 (tons)	41,478	37,542	30,854	28,877	35,013
	Reduction in CO <sub>2</sub> emissions compared to FY2005*1,3 (%)	-11.2	-19.6	-33.9	-38.2	-25.0
	Amount of waste reduced*2					
	Waste volume (tons)	9,311	9,182	9,935	10,626	9,916
	Recycling rate (%)	91.9	93.1	94.1	93.1	92.1
	Number of employees	9,825	10,131	10,377	10,580	10,707
	Ratio of female employees*4 (%)	7.4	7.8	7.8	7.9	7.9
	Ratio of female managers*4 (%)	1.7	1.9	2.2	2.3	2.4
	Average number of years of continuous attendance*4					
	Male (year)	17.4	16.9	16.8	16.5	16.5
	Female (year)	11.9	12.1	12.3	12.2	12.7
	Frequency rate of accidents causing absence from work*4,5 (%)	0.40	0.23	0.92	0.68	0.88

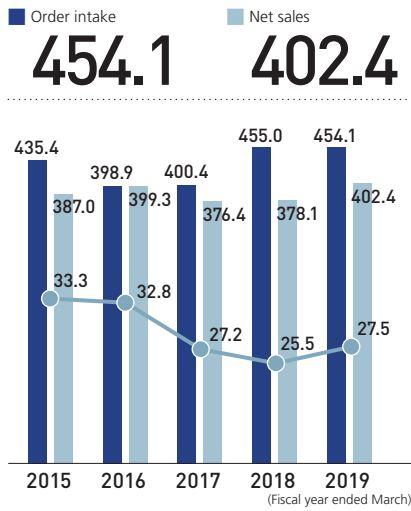
\*1 Hitachi Zosen non-consolidated (mandated reporting items under the Act on the Rational Use of Energy)

\*2 Eight plants in Japan, Head Office, and group companies that engage in business activities in conformity with the principles of consolidated financial statements

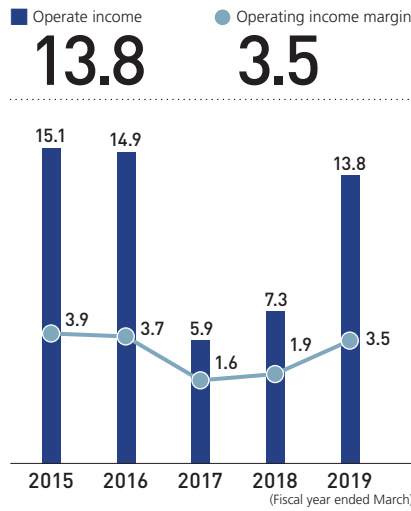
\*3 Calculated using standards for fiscal year ended March 31, 2017 \*4 Hitachi Zosen non-consolidated

\*5 (Number of fatalities and injuries due to industrial accidents requiring 1 day or more absence from work ÷ cumulative hours worked) x 1,000,000

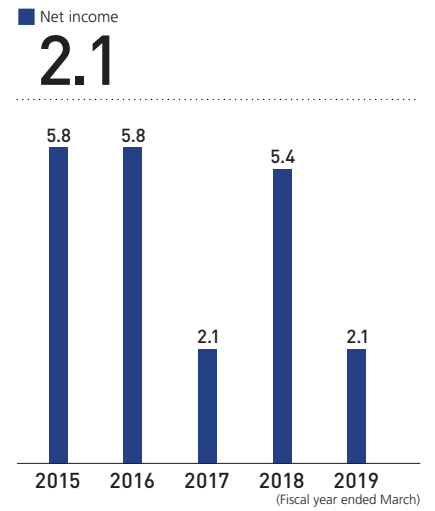
**Order intake (¥ billion) / Net sales (¥ billion) / Overseas sales ratio (%)**



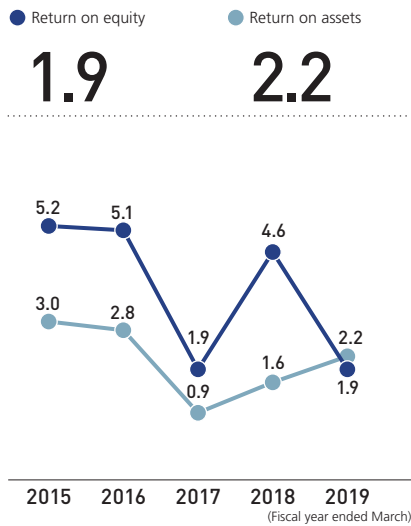
**Operate income (¥ billion) / Operating income margin (%)**



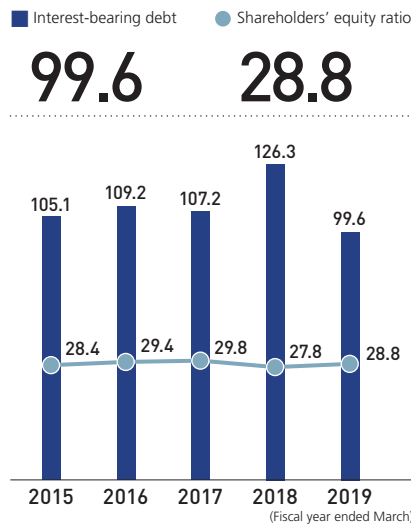
**Net income (¥ billion)**



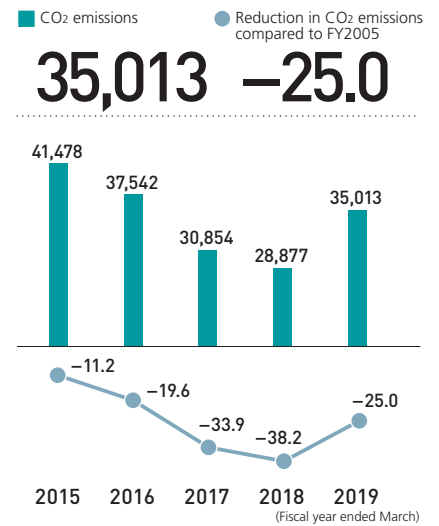
**Return on equity and return on assets (%)**



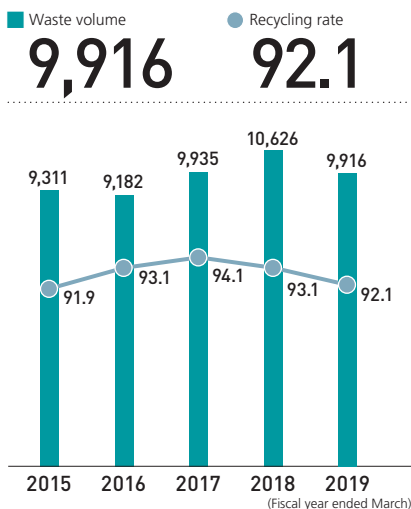
**Interest-bearing debt (¥ billion) / Shareholders' equity ratio (%)**



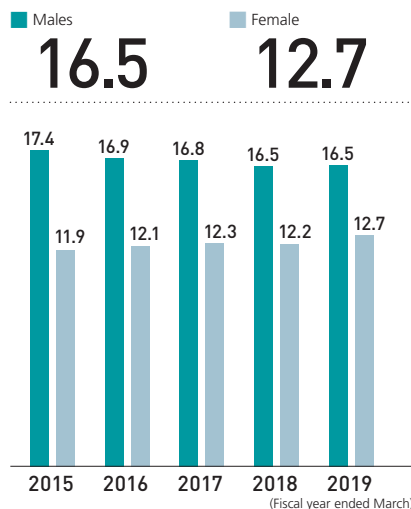
**CO2 emissions\*1 (tons) / Reduction in CO2 emissions compared to FY2005\*1,3 (%)**



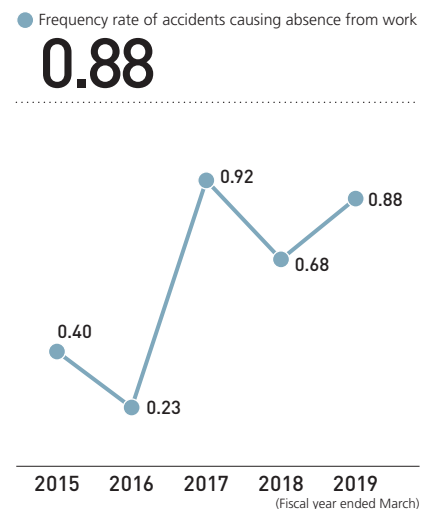
**Amount of waste reduced\*2 Waste volume (tons) / Recycling rate (%)**




**Average number of years of continuous attendance\*4 (years)**



**Frequency rate of accidents causing absence from work\*4,5 (%)**



A portrait of Takashi Tanisho, an elderly man with grey hair and glasses, wearing a dark blue pinstriped suit, a white shirt, and a blue patterned tie. He is looking directly at the camera with a neutral expression. The background is a solid dark blue. A small, colorful circular logo is pinned to his lapel.

We are leveraging our leading technologies and human resources to help make a more sustainable society

**Takashi Tanisho**

Chairman, chief executive officer,  
and representative director

### A rewarding company for all employees

Since its founding 140 years ago, Hitachi Zosen has brought countless benefits to society by conducting its business with sincerity and a dedication to technology. As chairman of this technology-driven company, I recognize our deep commitment to the Hitachi Zosen Group's diverse stakeholders and its vital mission to help make society more sustainable.

For the Hitachi Zosen Group, employees have the longest-lasting bonds among stakeholders and are its most important assets. Accordingly, ensuring that work is meaningful and rewarding for employees is a basic principle of management. Highly motivated employees can make customers and shareholders more satisfied and are the source of a company's growth. I believe that job satisfaction leads to a more fulfilling life and a sense of being useful in society. Indeed, through their work for the Hitachi Zosen Group, our employees can become involved in various issues confronting the world today, such as reducing waste, providing cleaner energy, and maintaining food and water resources, thereby contributing to the achievement of the United Nations Sustainable Development Goals.

To encourage employees to directly observe the value of our work, I always tell them to closely observe the value created by their respective workplaces. I do not only mean production plants and engineering departments, but also sales and administrative offices where our upstream operations happen. Employees can learn from all of our different work environments. I ask employees to study these diverse workplaces while making their work more relevant to issues we are trying to solve, which contributes to the evolution of our businesses. Then the Company will continue being a rewarding place to work for all employees.

### Taking on challenges with a priority on boosting profitability

In 2017, amid major shifts in our business environment, we created the Hitz 2030 Vision as a set of long-term aspirations for all members of the Group to share. Under this vision, we are working to achieve several financial targets by 2030, with priority on achieving an operating income margin of 10%. If the Group is to contribute to sustainability around the world, it must achieve this level of profitability to ensure its own sustainability.

To boost the profitability of the Group's businesses, we will need to increase its sales and market shares. Rather than imprudently expanding operational scale, however, we are focusing on improving the Group's profit structure. In our Environmental Systems & Industrial Plants Division, while facility operation and maintenance services already provide a stable source of most profits, we are actively working to make the shift from products to after-sales services in our Machinery Division as well as our Infrastructure Division. Moreover, we have been increasing operational efficiency and enabling the creation of highly profitable new businesses by promoting a digital transformation, led by our Hitz Advanced Information Technology Center, which opened in 2018.

Major changes are now unavoidable in society due to the worldwide COVID-19 pandemic. Under such circumstances, we will remain committed to our spirit of challenge that has been handed down since the Company's founding, and the entire Hitachi Zosen Group will work to sustainably create new value needed by society today.

Chairman, chief executive officer,  
and representative director



A professional portrait of Sadao Mino, the President of Hitachi Zosen Group. He is an older man with short, dark hair, wearing glasses, a dark blue suit jacket, a white shirt, and a blue patterned tie. He is looking directly at the camera with a neutral expression. The background is a light blue gradient.

We are aiming for the Group's sustainable growth while giving top priority to boosting profitability

**Sadao Mino**

President, chief operating officer,  
and representative director



## Fiscal 2019 financial results and accomplishments over the past three years

### New operational platform established during the three years of Change & Growth

In fiscal 2019, ended March 31, 2020, Hitachi Zosen posted solid consolidated financial results. The total value of order intake exceeded the ¥450-billion mark for the second consecutive fiscal year. Net sales surpassed ¥400 billion for the first time since the Company sold off its shipbuilding business. This result was mainly due to large-scale construction projects implemented by the Environmental Systems & Industrial Plants Division. On the profit front, both operating income and ordinary income were up year on year, reflecting reduced losses from foreign subsidiaries and lower costs incurred by large-scale construction projects in Japan. Finally, the Company posted net income of ¥2,197 million despite recording a loss on devaluation of marketable securities and other extraordinary losses.

Fiscal 2019 was the final year of our medium-term management plan, Change & Growth. Looking back on the three years of the plan, we made steady progress in carrying out each of our three basic strategies. We were particularly successful in expanding the scope of profitable service businesses in each of the Company's business divisions (for details, please refer to the section about the new medium-term management plan page 21). Moreover, we opened the Hitz Advanced Information Technology Center and started up new enterprise resource planning systems, providing an operational

platform for raising efficiency and productivity across the entire Hitachi Zosen Group.

Despite these successes, however, not all of our goals were achieved. In terms of profitability, the cumulative total of operating income over the three years of the plan amounted to only 51% of our initial target. Furthermore, facility operation and maintenance services provided by the Environmental Systems & Industrial Plants Division still account for a substantial portion of the Group's income, as we were unable to reduce this dependence as planned. Therefore, we will need to transform our business portfolio by restructuring manufacturing operations and optimally allocating operational resources going forward.

### New medium-term management plan and outlook for fiscal 2020

#### Moving forward with structural reforms while giving top priority to boosting profitability

In April 2020, we launched our new medium-term management plan, Forward 22. When formulating this plan, management reached a consensus on the priority of improving profitability after taking into consideration the Company's performance under the previous plan. Accordingly, we set a target for operating income margin of 10% and informed all members of management that it is the most important financial target among those in our long-term guidance, Hitz 2030 Vision.

We specified three basic objectives to accomplish under the Forward 22 plan. The first

#### Financial results under Change & Growth and targets of Forward 22

	Results during the Change & Growth plan					Targets of the Forward 22 plan				
	(Billions of yen)	FY2017	FY2018	FY2019	3-year total	Growth rate	FY2020 forecast	FY2021 target	FY2022 target	FY2030 target
Order intake		400.4	455.0	454.1	1309.6	102%	410.0	Order intake and net sales around ¥400 billion		Operating margin of 10%
Net sales		376.4	378.1	402.4	1157.0	97%	400.0			
Operating income (Operating margin)		5.9 (1.6%)	7.3 (1.9%)	13.8 (3.5%)	27.1 (2.3%)	55%	11.0 (2.8%)	Operating margin of 5% by FY2022		

## Message from the President

is to add more value to our products and services. In each of our businesses, we are re-examining our product lineups and target markets by closely engaging with our customers to pinpoint what they need and expect. Through that process, we intend to develop products and services with even more value and to revamp our business model.

Our second objective is to optimally allocate operational resources to businesses with strong potential for growth. We have set quantitative targets and performance indicators for each of our businesses, and will aim to boost their profitability by implementing a plan-do-check-action cycle to systematically and continuously make improvements. We also set up company-wide committee to devise ways to shift human resources and facilities from businesses deemed as unprofitable to businesses that can be expected to grow.

Thirdly, we are aiming to improve operational efficiency and productivity by enhancing workplace processes. We have already made progress in utilizing information and communications technology in workplaces throughout the Group, including the installation of new enterprise resource planning systems during the period of our previous management plan. We also opened the Hitz Advanced Information Technology Center in October 2018, and are actively promoting it as a hub for open innovation and collaboration with organizations outside the Group.

In addition to these initiatives, we plan to reorganize the Company's administrative departments with a view to better leverage the Group's collective strengths, create group-wide organizations to provide specialized services and manage the Group as a whole, reduce personnel to streamline operations, and optimally reassign human resources to operations that will expand.

Looking ahead, while the global COVID-19 pandemic is seriously affecting the domestic and global economy, we expect only a moderate, albeit mixed, impact on the Company's financial results in fiscal 2020, ending March 31, 2021. Our Machinery Division supplies products to the automotive and precision machinery industries, so it could be affected by lower demand caused by the pandemic. In contrast, the Environmental Systems & Industrial Plants Division and Infrastructure Division are mainly engaged in

public works projects and have received a substantial amount of orders. Therefore, we have already secured a large portion of net sales for the fiscal year and production plants are operating at high capacity. Based on these factors, our fiscal 2020 forecast includes order intake of ¥410 billion, net sales of ¥400 billion, operating income of ¥11 billion, and net income of ¥4 billion. Our assumptions underlying this forecast could change depending on the COVID-19 pandemic, so we will closely monitor its impact while executing various countermeasures.

### Our ESG-related initiatives

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#### Reducing CO<sub>2</sub> emissions and enhancing corporate governance across the Group

I recognize the importance of environmental, social, and governance (ESG) criteria for our ongoing efforts to enhance corporate value. Accordingly, we have taken a wide range of related initiatives.

Starting with the environment, the Hitachi Zosen Group provides a broad range of solutions through its business activities, such as recycling and treating waste as well as generating clean energy. On the other hand, our business activities also place a burden on the environment, so we have been working to decrease that impact. Specifically, we are focusing on systematically reducing CO<sub>2</sub> emissions from the Group's operations.

Among social concerns, we have been giving serious attention to improving workplace conditions for employees, the Group's most important resources. Having hired a growing number of women and foreign nationals in recent years, the Company has made dedicated efforts to foster a corporate culture that values diversity. Admittedly, we still lack enough personnel that can keep up with the rapid globalization of the markets we operate in, so we are proactively recruiting and training global human resources across the Group with a long-term outlook. Moreover, given the prolonged impact of the COVID-19 pandemic, we will give top priority to the safety of employees and the people they deal with in our business operations.

Meanwhile, we have been implementing measures to strengthen corporate governance

at subsidiaries outside Japan. We initiated these measures following problems at a construction project handled by the Company's Swiss subsidiary, Hitachi Zosen Inova AG, during the period of our previous management plan. Specifically, the profitability of the project deteriorated significantly, mainly as a result of delegating too much decision-making authority to local management. In response, we took steps to diversify the subsidiary's revenue sources and improve its risk management system. For large projects involving greater risks, we adopted a system through which sales quotes must be examined and finally approved by Hitachi Zosen, itself.

In addition, we make sure to thoroughly manage risks associated with international mergers and acquisitions by executing a post-merger integration process, including a 100-day plan, and dispatching senior managers from Japan as necessary. When a new company joins the Group, we strive to facilitate synergy effects through various means, such as sharing expertise and human resources, and jointly procuring materials and supplies.

### My message to stakeholders

#### Aiming for sustainable growth over the medium and long terms

The Hitachi Zosen Group has struggled to maintain profit growth over the past several years, but it has solved the main issues that had dragged down profits and put an end to the major problems it confronted in the past. Management has been revamping the business models of each of the Group's businesses, expanding into new businesses, and steadily executing reforms to improve profitability. We intend to accelerate these initiatives over the next three years of our new medium-term management plan with the goal of ensuring that the Group can continue to grow while contributing to the sustainability of society.

When I was a school boy in the late 1960s, environmental pollution was a serious problem all across Japan. Even then, I wanted to help clean up the environment in the future, which led me to studying sanitary engineering in university. I joined Hitachi Zosen aspiring to realize my



dream of fighting pollution and helping improve the environment. The Company's environmental systems business accounted for less than 5% of total sales at that time, so, since it was not a core business, I had room to take chances and pursue challenges together with my co-workers and supervisors, who all shared the same aspiration to fight pollution. I established myself as a professional by analyzing various aspects of the things I worked with, and listening closely to other people's ideas so I would not become opinionated and inflexible. Eventually, after a slump in Japan's shipbuilding industry forced management to envision a new business portfolio from a long-term perspective, environmental systems evolved as the Company's main business. This is a good example of why developing businesses and technologies with a long-term outlook is so important. Today, too, based on a vision of the years ahead, I will lead our efforts to execute structural reforms and develop global human resources while working to continue creating new businesses and technologies.

"Take the initiative with a step toward a better future" is the slogan of our new medium-term management plan. With that in mind, I am committed to leading all members of the Group down a path of sustainable growth by executing our strategies and measures. Indeed, all stakeholders can look forward to a brighter future for the Hitachi Zosen Group.

President, chief operating officer,  
and representative director

*Sadao Tino*

# Long-term vision: Hitz 2030 Vision

In 2017 the Hitachi Zosen Group established the Hitz 2030 Vision as a long-term vision outlining our desired image in the year 2030, which will mark the 150th anniversary of the company's founding. The vision indicates the directions of our business in the years to come and promotes efforts toward their realization. While contributing to the achievement of a sustainable society through our business, the Hitachi Zosen Group aims to enhance its earning capacity. In addition, through Hitz 2030 Vision, we are endeavoring to share our image of the future and further improve communication with our stakeholders.

## Desired image and core business areas

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Such issues as climate change, sanitary waste treatment, water shortages, and natural disasters have become increasingly evident in recent years. In response to these social problems, the Hitachi Zosen Group believes that it is the mission of our Group, which aims to become a solution partner contributing to the realization of a sustainable, safe, and secure society, to supply such solutions as clean energy, clean water, environmental preservation, and the building of prosperous communities strong against natural disasters, the need for which is increasing worldwide. Furthermore, since the business

policies and activities of the Hitachi Zosen Group are in line with the Sustainable Development Goals (SDGs) adopted at a United Nations summit in 2015, we also believe that through our products and services we can contribute globally to the construction of sustainable societies.

## Efforts toward realization of Hitz 2030 Vision

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Toward the realization of Hitz 2030 Vision, the Hitachi Zosen Group emphasizes dialogue with customers and markets and recognizes the importance of tackling the solution of issues with all our might. By understanding the problems of customers as quickly as possible and pursuing solutions, we can continue to supply products and services that are of true value to customers. And that outcome leads to both the solution of social problems and income for our Group. Efforts manifesting the Hitz Value, our management stance proclaiming that the enhancement of added value in a way that satisfies multiple stakeholders will in turn lead to the improvement of our Group's operating income margin, are the premise for the setting of long-term management goals.

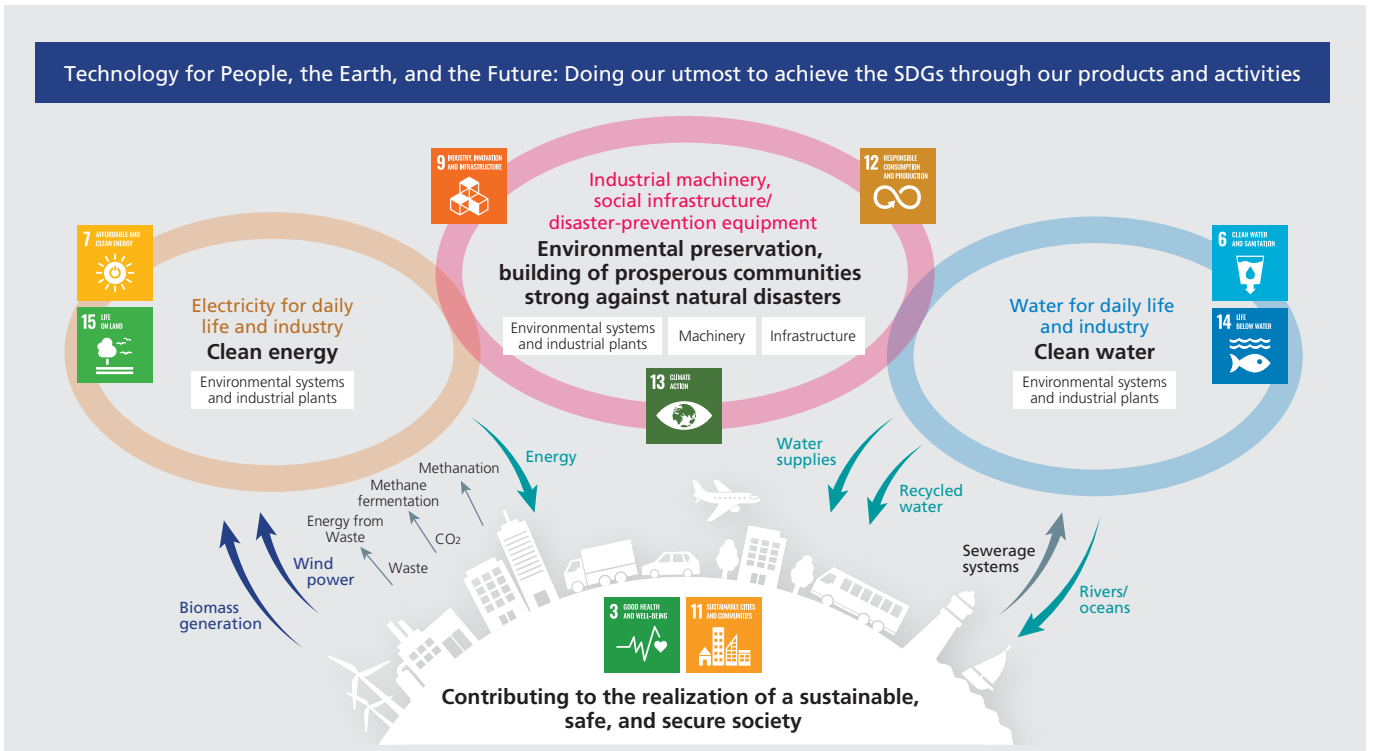
### Action plan and direction of business activities

In the three years up to fiscal 2019 we recorded harsh business results mainly due to the unprofitable projects of overseas group companies. At the same time, however, during this period we were able to build the foundations for generating income, including the strengthening of governance in overseas group companies, the strengthening of collaboration on the work side between them and our company in Japan, and establishment of the Hitz Advanced Information Technology Center (AI/TEC).

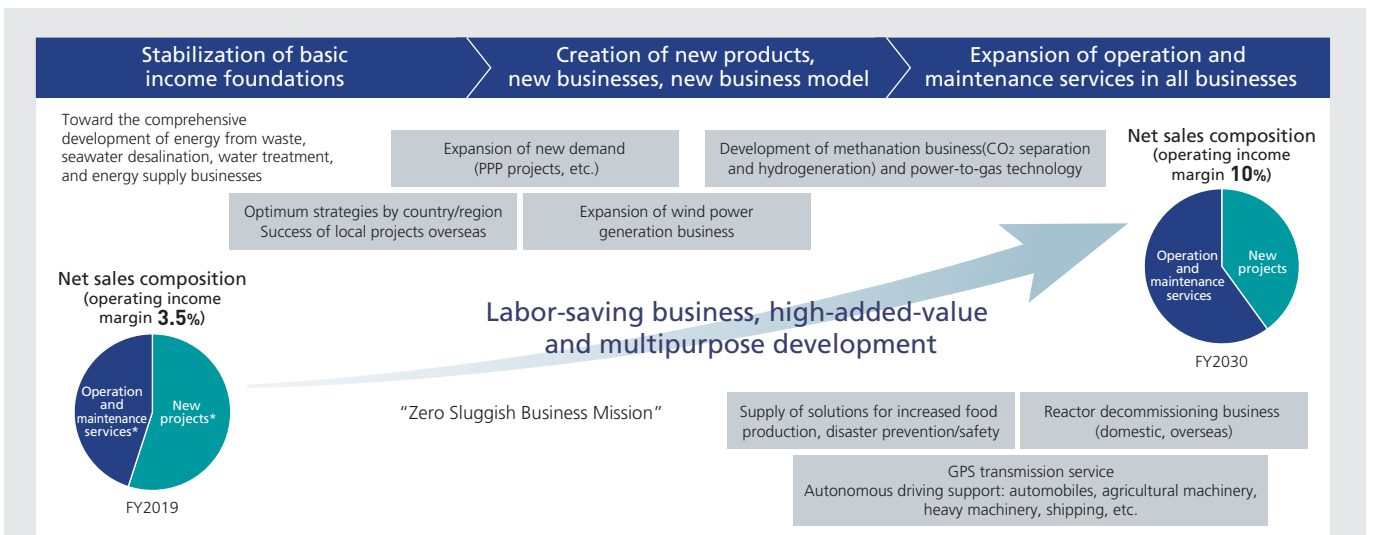
Regarding the direction of our business activities toward 2030, on the basis of these foundations, we will strive to strengthen our earning capacity through the creation of new products, new businesses, and a new business model and also aim to expand operation and maintenance services in not only the environmental but all businesses. Regarding specific product and business strategies, in addition to existing EfW plants, desalination plants, we will channel efforts into the expansion of public-private partnership (PPP) projects, as well as projects of methanation and power-to-gas, wind power generation, food security, nuclear power plant decommissioning, support for highly accurate autonomous driving through GPS transmission, and other lines of business. In addition, we will optimize the value supplied to customers by utilizing the IoT and AI in all businesses.

As a result of these efforts, we aim to increase our operating income margin, which was 3.5% in fiscal 2019, to 10% by fiscal 2030.

[Hitz 2030 Vision] — Overall Business Policy



Hitz 2030 Vision: direction of business activities toward 2030



**Action plan**

- 1** We will promote dialogue with customers and markets and optimize the value supplied to customers by installing IoT and AI in all products and services.
- 2** We will promote open innovation, alliances, and M&As to create new products and new businesses. We will select and concentrate businesses, shifting to the focusing of management resources on growing areas, so as to improve earnings and achieve sustained growth.
- 3** We will improve our income margin by expanding operation and maintenance services in not only the environmental business but other businesses as well.

\*New projects: Projects to hand over new assets to customers in the fields of construction, manufacturing and sales.  
 Operation and maintenance services: Incidental projects after the handover of plants or products, such as maintenance, operation, management, and other services, and projects based on long-term contracts, such as power generation.

# Promote “boosting of profitability” over a period of three years and secure strong results

## Review of “Change & Growth,” our previous medium-term

### Management plan

Strengthening the business foundation, including expanding the scale and scope of the business and utilization of ICT, implementing management reforms in low-profit overseas group companies

In the three years of the previous medium-term management plan “Change & Growth,” in order to realize our long-term vision—the Hitz 2030 Vision, we were able to strengthen the business foundation for improving operational efficiency and boosting profitability by expanding the scale and scope of the business, establishing the Hitz Advanced Information Technology Center (A.I / TEC), and launching the operation of our new enterprise resource planning system (SAP). On the other hand, although we have seen some progress in each of the initiatives under “maximize the Hitz Group’s comprehensive strengths” and “promote portfolio management,” we are committed to continue working on “Forward 22,” the new medium-term management plan, to achieve further results.

We have succeeded in stabilizing order intake, maintaining it in the range of ¥400 billion, and net sales have exceeded ¥400 billion for the first time since the separation of the shipbuilding

business in 2002, but profit levels and ROE were below target. Even with respect to overseas businesses which were the main cause for this, we implemented measures to restore profitability, including local management reforms and strengthening of governance by Hitachi Zosen, focusing on the overseas group companies.

## The new medium-term management plan

### Basic policy

**Boost profitability based on the business foundation established through “Change & Growth”**

The Hitachi Zosen Group aims to be a continuously growing, vigorous corporate group that contributes to the realization of a sustainable, safe, secure society through business under “Hitz 2030 Vision,” its long-term vision.

The three-year term starting in fiscal 2020 has been positioned as a period for boosting profitability to ensure that results are achieved, and the new medium-term management plan has been named “Forward 22” signifying that we shall move forward toward fiscal 2022.

The basic policies of “Forward 22” include **1** enhancing

### Review of “Change and Growth”

Evaluation: Progress status (progress made:○ / issues remain:△)

<b>Basic strategies 1</b> Restructure business foundation and improve productivity	1 Expand business area ⇒Expand service business utilizing manufacturing	○
	2 Use ICT⇒Run SAP and AI / TEC	○
	3 Reinforce the structure of risk management	△
	4 Take specific measures to increase profitability	△
	5 Strengthen financial condition and increase investment capacity for growth	△
<b>Basic strategies 2</b> Maximize the Hitz Group’s comprehensive strengths	1 Form collective business groups to maximize synergies	△
	2 Promote consolidated management and operation	△
	3 HRD by job rotation	△
<b>Basic strategies 3</b> Promote portfolio management	1 Clarify position of each office by portfolio ⇒Closed overseas bases in New York, London, and Seoul, withdrawal of Cumberland, NAGAOKA Hitachi Zosen Equipment (Dalian)	△
	2 Prioritize resource allocation to growing and new businesses	△
	3 Revisit and assess possibilities of revitalizing low-profit products	△

### Basic policies of “Forward 22”

- Contribute to the realization of a sustainable, safe, and secure society through all our corporate activities
- Boost our own profitability and aim to be a corporate group that can achieve sustainable growth

- 1 Enhance the added value of products and service**
- 1 Use cutting-edge technologies
  - 2 Shift business locations and promote interaction with customers and markets
  - 3 Maximize the Group’s comprehensive strengths

- 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

- 3 Realize work style reforms by improving operational efficiency and productivity**
- 1 Improve operational efficiency through changes in the group management system
  - 2 Review the state of manufacturing businesses
  - 3 Promote human resource development and work style reform

# Forward 22

the added value of products and services, **2** promoting selection and concentration of businesses and allocating resources to growth areas, and **3** realizing work style reforms by improving operational efficiency and productivity. By implementing every measure in accordance with these policies and making steady progress, we aim to achieve an operating margin of 5% or more in fiscal 2022, the final year of the plan.

## Numerical targets

“Boosting profitability,” positioning it as a period of achieving results, and moving forward steadily and vigorously.

In fiscal 2020, the first year of Forward 22, we expect results to include order intake totaling ¥410 billion, net sales of ¥400

billion, and operating income of ¥11 billion.

With regard to the business performance forecast for fiscal years 2021 and 2022, we have decided to forgo announcement of numerical forecasts as, at present, it is difficult to predict the impact of the COVID-19 on business performance in the medium to long-term. However, considering our long-term target of an operating margin of 10% in 2030, we aim to maintain an order intake and net sales level of ¥400 billion. In terms of profit, we aim to achieve an operating margin of 5% in fiscal 2022, the final year of the plan.

### Change & Growth achievements and Forward 22 targets

	Change & Growth achievements					Forward 22 targets			
	(FY)	2017	2018	2019	Three-year total	Achievement rate	2020	2021	2022
Order intake (¥ billion)		400.4	455.0	454.1	1,309.6	102%	410.0		
Net sales (¥ billion)		376.4	378.1	402.4	1,157.0	97%	400.0		
Operating income (¥ billion)		5.9	7.3	13.8	27.1	55%	11.0		
Ordinary income (¥ billion)		3.3	6.7	9.4	19.5	46%	6.5		
Net income (¥ billion)		2.1	5.4	2.1	9.8	40%	4.0		
Interest-bearing debt (¥ billion)		107.2	126.3	99.6			110.0		
Shareholders' equity ratio		29.8%	27.8%	28.8%			30.0%		
Return on equity		1.9%	4.6%	1.9%			3.4%		

	Change & Growth achievements					Forward 22 targets			
	(FY)	2017	2018	2019	Three-year total	Three-year average	2020	2021	2022
Scale of investment									
Research and development expenses (¥ billion)		7.4	7.1	6.8	21.3	7.1	8.0		
Capital investments (¥ billion)		9.9	6.8	10.3	27.0	9.0	7.0		
M&A and business investment (¥ billion)		0.3	2.2	2.4	4.9	1.6	—		
Total (¥ billion)		17.6	16.1	19.5	53.2	17.7	15.0		

# Specific measures and contribution to sustainability in “Forward 22”

## Specific measures

### 1 Enhance the added value of products and services through the utilization of cutting-edge technology

We aim to expand the knowledge and expertise of the AI / TEC and the Technology Development Headquarters in product life and condition monitoring, predictive maintenance, and automated operations, and expand it to a wide range of other products and services in addition to energy-from-waste facilities. Our aim is to realize labor savings, economizing on manpower, and adding value along with the growth of our IoT & AI business in new generation products and services, including in our GPS remote monitoring business. We also seek to accelerate business innovation through the introduction of our new enterprise resource planning system (SAP) while promoting the use of robot AI and IoT innovation at production sites for a shift to smart factories.

### 2 Improving goal achievement monitoring and portfolio management

In order to improve the achievement rate of management plans and business plans, we aim to enhance the “Check” and “Action” functions in the plan-do-check-action (PDCA) cycle. To do this, we will systematically monitor the key goal indicators (KGIs) in each business along with the key performance indicators (KPIs) and key success factors (KSFs) to achieve the KGIs, and review appropriate strategies and measures. In addition, we will conduct quantitative and qualitative screening of projects, while the Management Strategy Committee and the Board of Directors deliberate on countermeasures for businesses that face problems of profitability, strategy, and risk, and allocate corporate resources to businesses with potential for growth.

### 3 Human resource development and work style reform

The year 2020 is a milestone year as it marks the 140th anniversary of the founding of our company. We share the “willingness to take on all challenge” of our founder, Edward Hazlett Hunter, aiming to raise awareness and reform our corporate culture. At the same time, we will promote diversity management and enhance workplace processes by establishing KPIs related to human resource development and work style reforms via three priority measures, including ① recruiting and securing human resources, ② appropriate placements and strategic development, and ③ retention of human resources. We are committed to progress by ensuring the growth of our personnel, of our organization, and of our company as it equates to increased corporate value.

## Contributing to sustainability

### Initiatives for clean energy

Our energy-from-waste plant, which is also our main product, conducts sanitary waste treatment and generates electricity at the same time, contributing to the reduction of greenhouse gas emissions. In addition, we are also working on power generation from biomass, onshore and offshore wind power, and solar power, and on technologies such as Power to Gas that use the surplus power from these renewable energy sources to generate hydrogen and methane. Our aim is to expand the use of renewable energy and contribute to the reduction of CO<sub>2</sub>.

### Clean water, environmental conservation, and building a disaster-resilient, prosperous community

In our water businesses, we are engaged in actively responding to the needs of public-private partnerships in Japan and are promoting the utilization of reverse osmosis membrane technology from Osmoflo (Australia), one of our overseas group companies, for water and sewage treatment as well as the utilization of mobile equipment. In terms of environmental protection, we are working to promote the marine SCR system technology to clear NOx emission regulations for ships, and land-based aquaculture technologies to ensure food safety. Further, we are also actively engaged in responding to the needs of social foundations, including reinforcement and renovation of infrastructure such as aging expressways, special shield tunneling machines for urban areas, and flap-gate type seawalls to protect against flood disasters caused by tsunamis or storm surges.

### Contribution to CO<sub>2</sub> emission reduction

Clean energy facilities designed and constructed by our company including our energy-from-waste and our biomass, wind, and solar power generation facilities, contribute to the reduction of CO<sub>2</sub> emissions through our customers’ business activities. As of the end of fiscal 2019, our products have reduced CO<sub>2</sub>\* by 15 million tons per year, equivalent to 4.9% of Japan’s reduction target for the fiscal year 2030. We seek to continue contributing to CO<sub>2</sub> reduction through our products, and we aim to reduce CO<sub>2</sub> emissions by 22 million tons per year by the end of fiscal 2022 and about 40 million tons per year by the end of fiscal 2030.

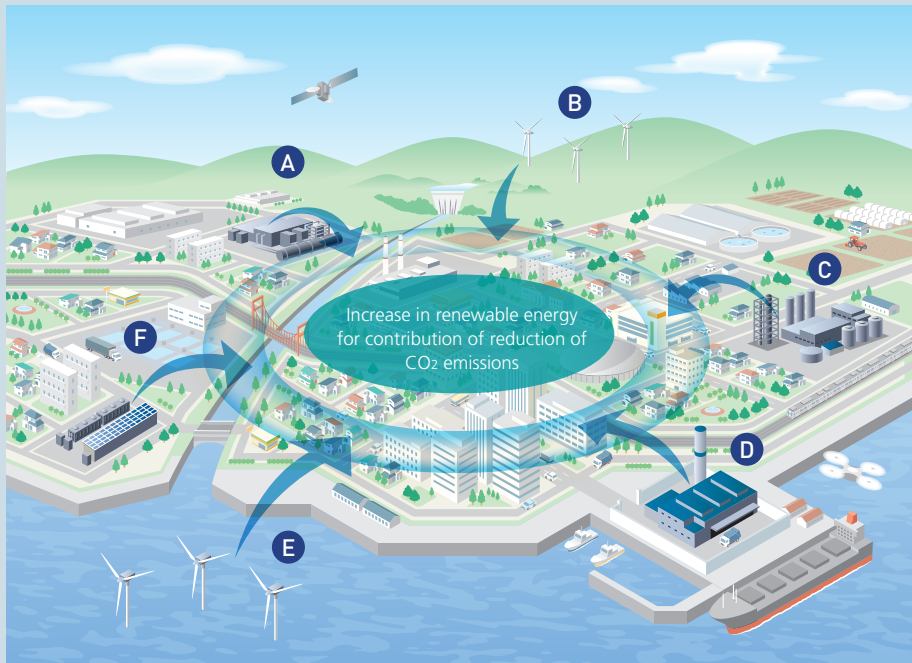
	End of FY2019 (current status)	FY2022 (target)	FY2030 (target)	Cumulative total for FY2020-2030
Amount of CO <sub>2</sub> reduction (including licenses)	15.18 million tons of CO <sub>2</sub> /year	22.06 million tons of CO <sub>2</sub> /year	About 40.00 million tons of CO <sub>2</sub> /year	About 320 million billion tons of CO <sub>2</sub>

\* Based on “The Method of Calculating Greenhouse-Gas Emissions and List of Emission Coefficients” issued by the Japanese Ministry of the Environment, and for the emission coefficients of other countries, on the “Global Warming” issued by Japan’s Agency for Natural Resources and Energy. These estimates of the amount of CO<sub>2</sub> reduction are based on the power generation capacity of working facilities (expected in 2022) excluding decommissioned facilities, and does not include heat utilization in the facilities. Targets for fiscal 2023 and thereafter were calculated proportionally based on the results up to fiscal 2019. The target reduction of approximately 308 million tons of CO<sub>2</sub>/year was calculated from the amount of energy-derived CO<sub>2</sub> emissions indicated in the “Submission of Japan’s Intended Nationally Determined Contribution (INDC)” issued by the Ministry of the Environment, and was used to estimate the Group’s contribution rate.

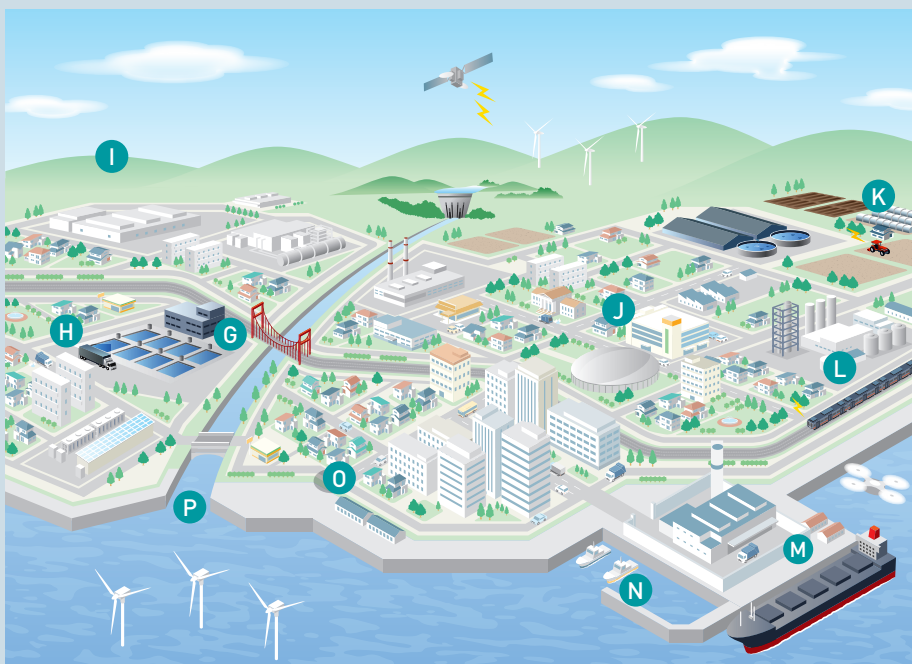


# Forward 22

## Examples of clean energy initiatives



## Examples of initiatives for clean water, environmental conservation, and building a disaster-resilient, prosperous community



- A Biogas conversion**  
Convert organic waste such as food waste, human waste, and waste cooking oil to biogas, and utilize it as energy (hydrogen gas and electricity)
- B Onshore wind power generation**
- C Biomass generation**  
Biomass generation does not cause any change to CO<sub>2</sub> concentrations in the atmosphere.
- D Energy from Waste**  
Further development of domestic business, overseas PPP business
- E Offshore wind power generation**  
Promoting offshore wind power generation, which is expected to be the leading force of renewable energy in Japan
- F Power to Gas**  
Excess power by renewable energy such as wind power and solar power to produce hydrogen gas or methane gas
- G Lack of financial resources of local governments for water businesses**  
Responding to requests from public institutions for public-private partnerships
- H Emergency water demand in the event of a disaster**  
Quick response through use of rental equipment
- I Ensuring safety in storage of spent nuclear fuel**  
Proposing metal casks and concrete casks that have proved to be successful in dry storage of spent nuclear fuel in Japan and overseas
- J Aging of infrastructure, and natural disasters**  
Maintenance and remote monitoring of bridges, expressways, hydraulic gates, chimneys, and plant equipment
- K Labor shortages in agriculture and food industries and insufficient fish catches**
  - Automatic steering service for agricultural machinery through utilization of satellite positioning data
  - Labor savings service through utilization of AI
  - Promoting land-based aquaculture
- L Ensuring the safety of railways**  
Providing services for prevention of crime in railway cars through the utilization of on-board cameras
- M Air pollution due to increased ship transportation**  
Extensively promote incorporation of SCR systems as an environmental regulation countermeasure
- N Measures against tsunamis and storm surges**  
Promote the introduction of seabed-mounted flap-gate type seawall against flood disaster
- O Limitations in new development of urban underground networks**  
Aggressive proposals for the utilization of large shield tunneling machines

## Message from the managing director in charge of finance



### Strengthening the Company's financial structure and investing in strategic businesses to realize our long-term vision

**Tadashi Shibayama**

Managing director in charge  
of the Corporate Planning Headquarters

#### Progress in improving asset efficiency and strengthening the financial structure as operations steadily expand

Our previous medium-term management plan, Change & Growth, was concluded in fiscal 2019, ended March 31, 2020. Looking back on that plan, the Company largely achieved its three-year cumulative targets for order intake and net sales, which reflected the expanded scale of its operations. Regrettably, however, net income amounted to about half of the level we had targeted. The reasons included losses from construction projects handled by the Company's Swiss subsidiary, Hitachi Zosen Inova AG, and a deteriorating performance by the Machinery and Infrastructure business segments. Furthermore, a lawsuit in the United States concerning a past tunnel boring project resulted in legal expenses and the payment of a final settlement. The Company also recorded losses incurred from previous assets on its balance sheet, including impaired assets associated with its former shipbuilding business. To offset these losses, management decided to sell off production facilities, real estate, and other assets.

On the other hand, increases in operating income and the working capital ratio led to a turnaround in operating cash flow from negative amounts in fiscal 2017 and 2018 to a substantial surplus in fiscal 2019. We also made progress in repaying interest-bearing debt by improving operational processes, which included the adoption of a group-wide financing system and a common sales database for enabling the prompt collection of accounts receivable.

	FY2017	FY2018	FY2019
Cash flows from operating activities (Billions of yen)	-3.4	-5.4	32.8
Interest-bearing debt (Billions of yen)	107.2	126.3	99.6

From a long term perspective, the Company has been steadily improving asset efficiency, with the asset turnover ratio improving over the years to 0.96 in fiscal 2019. This progress reflected changes in net sales results and the Company's operational scale. Net sales reached an all-time high of ¥635.2 billion in fiscal 1996, but after the Company substantially reduced its operations by carving out its shipbuilding business in fiscal 2002, net sales contracted to ¥273.5 billion in fiscal 2009. The Company then focused on building energy-from-waste plants, providing plant operation and maintenance services, and operating machinery- and infrastructure-related businesses. By rebuilding its business portfolio and acquiring companies outside Japan, Hitachi Zosen expanded and boosted net sales over the ¥400 billion mark in fiscal 2019. From the current fiscal year, our goals under the new medium-term management plan, Forward 22, are to boost profitability and strengthen the financial structure by continuing to improve cash flows and asset efficiency.

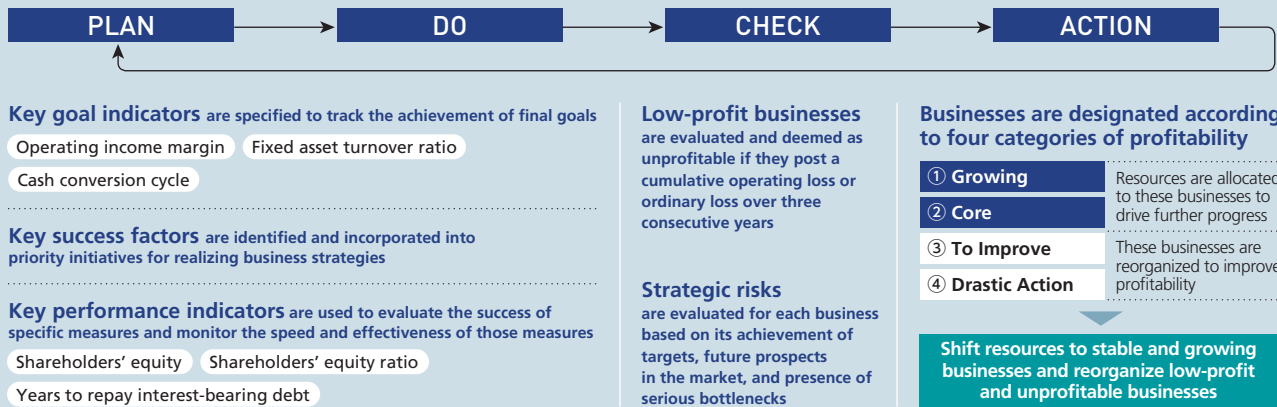
	FY1996	FY2009	FY2019
Net sales(Billions of yen)	635.2	273.5	402.4
Total assets*(Billions of yen)	720.6	358.4	419.3
Asset turnover ratio(times)	0.88	0.76	0.96

\* Average of totals as of the fiscal year start and end dates

#### Channeling resources into strategic businesses to realize our long-term vision leading up to 2030

Since the 1990s, financial crises have occurred several times in countries around the world. In Japan, approaches to corporate financing have transformed following changes to accounting systems, the revision of the country's Companies Act, and the establishment of the Corporate Governance Code. More

Applying a PDCA cycle to measure the profitability of businesses over time



changes are expected to pick up pace in the future.

Against that backdrop, we have been implementing initiatives for improving the Company's financial structure under our new Forward 22 medium-term management plan. For example, we implemented a goal achievement monitoring system based on a plan-do-check-action (PDCA) cycle that starts from a set of key goal indicators (KGIs). Under this system, common goals have been set for the KGIs of operating income margin, fixed asset turnover ratio, and cash conversion cycle in each of our businesses. For the Company as a whole, we set targets for our key performance indicators (KPIs) of shareholders' equity, shareholders' equity ratio, and average number of years to repay interest-bearing debt. These KPIs have also been integrated in the PDCA cycle to measure the outcomes of specific initiatives designed to improve the financial structure and for verifying their speed and effectiveness.

In addition, the value of its assets change depending on factors such as economic trends, product demand, and product lifecycles. Accordingly, when considering ways of utilizing owned assets and the pertinence of acquiring new assets, Hitachi Zosen places importance on assessing the value of such assets based on the latest forecasts of cash flows generated by specific assets and confirming whether they can generate sufficient returns on a cash basis.

Management has also clarified its long-term vision, originally announced as the Hitz 2030 Vision in 2017, to reflect market and industry trends that emerged during the three years of the previous medium-term management plan. By 2030, we envision the Hitachi Zosen Group as a solutions partner that contributes to the sustainability and safety of society. To realize that vision, the Group will maximize the value it provides by promoting dialogue with customers and markets, and based on that outcome, aim to achieve an operating income margin of 10% by 2030.

The Company is now focusing on expanding its businesses involved in clean energy, water purification, environmental conservation, and the development of advanced disaster-prepared communities. Designating these areas as strategic businesses to develop going forward, we will strategically invest in and channel resources to these businesses in order to bolster R&D, build new facilities, expand operations, and pursue mergers and acquisitions. Specifically, over the three years of Forward 22, while taking into account the impact of the COVID-19 pandemic and other external factors, we plan to invest in the following:

- Wind power and other renewable energy development projects along with related R&D
- Energy-from-waste plant operations
- Water treatment and supply operations
- Semiconductor, electron beam sterilization equipment, and medical equipment manufacturing facilities
- Disaster preparedness-related R&D
- Global positioning system (GPS) applications
- R&D related to IoT and AI applications
- Rationalization measures for raising productivity
- Expansion of maintenance services and related R&D

Each business division and relevant corporate department will, based on their own specific criteria, monitor and assess the outcomes of these investments at every stage, using the internal rate of return and weighted average cost of capital as indicators for evaluating the operational investments, and payout time and other indicators for evaluating investment returns. We expect this framework, itself, to evolve as the PDCA cycle is implemented. We will aim for an optimal balance between maintaining financial discipline and pursuing proactive investment strategies as we continue striving to realize our long-term vision.

## Message from the managing director in charge of research and development



### Contributing to the Company's earnings growth through technological applications and open innovation

**Kazuhisa Yamamoto**

Managing director and general manager of the Business Planning & Technology Development Headquarters

#### Applying our technologies to develop new products and businesses for the changing times

At the Business Planning & Technology Development Headquarters, our most important mission is to contribute to the Company's earnings growth and develop new products and businesses. The success of Hitachi Zosen depends on how well it adapts to changes in the business environment, and the Business Planning & Technology Development Headquarters plays a key role in enabling the Company to adapt. To fulfill our mission, it is essential to continually identify needs in the market and effectively apply the Company's technologies to meet those needs. Enhancing those capabilities is essential especially now that digitalization is accelerating throughout society.

In this regard, we have been making major progress in our new land-based aquaculture systems business. In February 2019, we reached an agreement with the Nippon Suisan Group, a leading seafood producer in Japan, to jointly develop the country's first large-scale, land-based recirculating aquaculture facility for farming chub mackerel. We completed construction of a land-based aquaculture facility in the city of Yonago, Tottori Prefecture, in May 2020. By applying our advanced water treatment technologies in this project, we are confident that the Company can successfully enter the land-based aquaculture industry and jointly develop more projects in the years ahead.

#### Actively promoting open innovation as we work to create a unique marketing model

Management set an operating income margin target of 10% in its long-term Hitz 2030 Vision, with a view to reinforce the Company's earnings platform. To achieve this target, it will be essential for the Business Planning & Technology Development Headquarters to develop new products and businesses. We focused

on creating new businesses over the three years of our previous medium-term management plan, Change & Growth, based on its basic policy of expanding into new markets. For example, we gained a foothold in the land-based aquaculture industry, as I described above, as well as the power-to-gas industry, which will be vital for building renewable energy systems in the future. We also developed new AI-equipped products in an effort to expand after-sales services for process equipment and hydraulic gates. In addition, we set up a task force to facilitate open innovation and explore opportunities to team up with venture firms and invest venture capital.

One of the main objectives of our new medium-term management plan, Forward 22, is to add more value to our products and services. To that end, it will be important for us to more effectively target markets with strategic products while closely engaging with customers and other relevant players in the market. We have been formulating our marketing strategies on that basis. Moreover, given the importance of more quickly integrating IoT and AI technologies, the Business Planning & Technology Development Headquarters is collaborating with the Information and Communications Technology Promotion Headquarters along with other relevant departments to facilitate open innovation and apply leading-edge technologies to develop new products.

As the business environment changes at an increasingly rapid pace, how we obtain information and collaborate with companies and organizations outside the Hitachi Zosen Group will be very important for promoting innovation going forward. We will closely consider those factors while working to formulate a new marketing model for the Company as soon as possible.

## Message from the managing director in charge of information and communications technology



### Leveraging our IoT platform to increase customer satisfaction and shift to a high-earnings service menu

#### Munenobu Hashizume

Executive officer and general manager of the Information and Communications Technology Promotion Headquarters, and general manager of the Advanced Information Technology Center

#### New enterprise resource planning system upgraded Hitz Advanced Information Technology center begins full operations

As the Company's organization in charge of ICT, the Information and Communications Technology Promotion Headquarters is responsible for digitalizing businesses and business processes. In the first case, we are aiming to raise the level of customer service by applying digital technologies, and in the second, we are installing ICT platforms throughout the Hitachi Zosen Group.

Looking back on fiscal 2019, our efforts to digitalize services processes took a big step forward with the full opening of the Hitz Advanced Information Technology Center, the Company's main facility for utilizing IoT and AI. The center has made surefooted progress in enhancing the surveillance services we offer, allowing us to expand the use of remote video monitoring systems from energy-from-waste plants—the Company's mainstay business—to gas-fired power plants, wind power plants, and food processing plants. It has also made use of ICT to improve the efficiency of our energy-from-waste plant after-sales services and more quickly offer solutions to customers. In addition, wearable devices and video monitors are being used by plant workers to manage occupational health and safety. In the past, we had developed IoT-based services individually, but now we are putting a framework into place to provide business divisions with a secure IoT-based platform for all of the Company's services so they can completely switch to IoT-compatible equipment in the future.

With respect to digitalizing operational processes, we enhanced the functions of our new enterprise resource planning system, which went online in fiscal 2018, and installed it at the Company's subsidiaries. By centralizing and allowing real-time access to operational data that is essential for management, the

system provides a solid foundation for administering our businesses. We also installed a robotic process automation system that uses software robots to automatically handle office work that had previously been performed manually. This system has raised office productivity by reducing labor.

#### Working with business divisions to digitalize services and boost earnings

Adding more value to our products and services is one of the main objectives of Forward 22, our new medium-term management plan. Accordingly, the Information and Communications Technology Promotion Headquarters is channeling a higher proportion of the Company's IT investment into the digitalization of services, and working together with each business division to offer a high level of added value to customers and end-users by making the most of the secure IoT platform I described above. Concretely, we are collecting product data through IoT, analyzing the operations and control of those products, and applying the findings to design more satisfying services. Based on that approach, we are working to shift to a high-earnings service menu that will generate growth going forward. To carry out these activities, we are ramping up training for our IT personnel to improve their skills and handle more systems development in-house, while also building stronger ties with our IT partners outside the Group.

As we strive to realize our long-term vision by 2030, I believe it will be important to provide venues for our business, ICT, and R&D departments to work together toward digitalizing services. Toward that end, we have been jointly organizing design thinking workshops with members of business departments at the Hitz Advanced Information Technology Center. While stepping up such initiatives, we will strive to develop an organizational culture—spanning across the entire Company—that can create new solutions and innovative services.

# Message from the managing director in charge of the Environmental Systems & Industrial Plants business



Tapping diversifying demand by stepping up collaboration with the Group’s network of subsidiaries around the world

**Toshiyuki Shiraki**

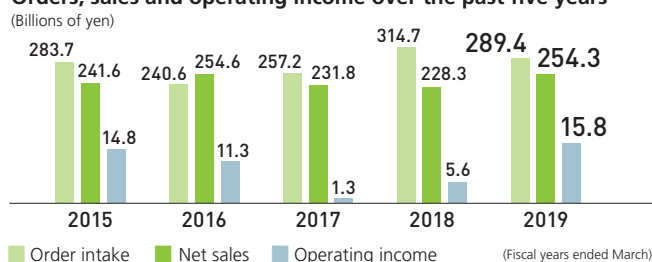
Managing director and general manager of the Environment Business Headquarters

## Overview of fiscal 2019

### Hitachi Zosen Inova’s profits improve following the conclusion of an unprofitable construction project in the U.K.

In fiscal 2019, ended March 31, 2020, consolidated financial results in the Environmental Systems & Industrial Plants business segment were uneven. Order intake decreased by ¥25.3 billion year on year to ¥289.4 billion. This was mainly due to a decline in orders for engineering, procurement, and construction (EPC) projects and large, long-term operation contracts in Japan, which offset orders for EPC projects for energy-from-waste (EfW) plants in various countries, including Russia, Australia, and the United Kingdom, which have been steadily secured by Swiss subsidiary Hitachi Zosen Inova AG since fiscal 2018. On the other hand, net sales increased by ¥26.0 billion to ¥254.3 billion, mainly as a result of steady progress in the construction of large-scale EfW plants in Japan and other countries. Operating income amounted to ¥15.8 billion, a substantial increase over the previous fiscal year. This was largely due to improved profits posted by Hitachi Zosen Inova following the conclusion of an unprofitable construction project in the United Kingdom that had seriously affected its performance over several years, as well as successful cost cuts in EfW plant projects in Japan.

### Orders, sales and operating income over the past five years

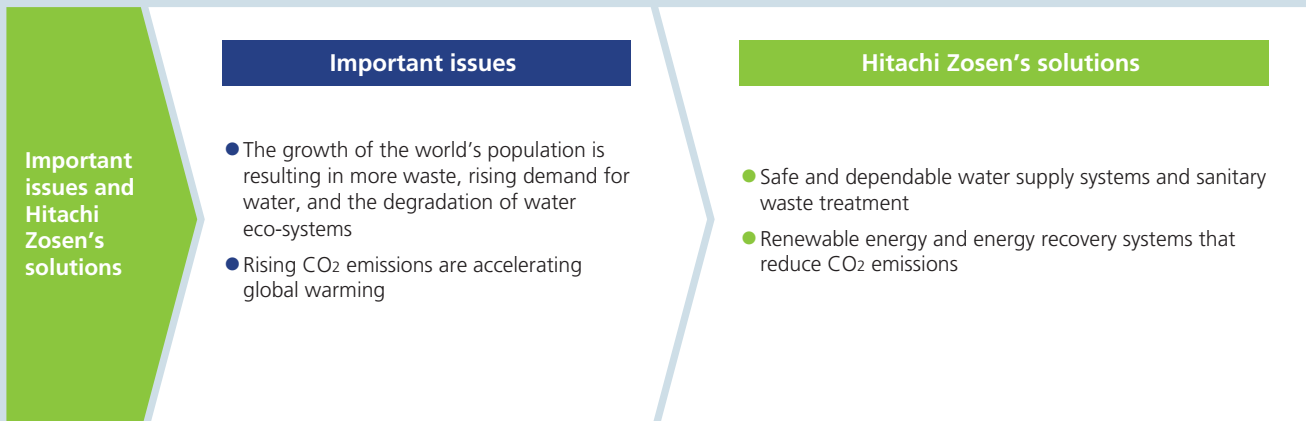


## Review of results under the previous medium-term management plan and strategies going forward

### Promoting resource-circulating around the world through the segment’s three main businesses

Outside Japan, operations of the EfW business are led by Hitachi Zosen Inova. It posted major losses in its in fiscal 2017 and 2018 as a result of spiraling costs associated with certain EPC projects. Since then, however, its management has been reorganized and regional management teams have improved their supervision of order approval processes, individual project management and cost controls. Hitachi Zosen has also taken steps to strengthen the subsidiary’s corporate governance. To establish a stable profit structure, Hitachi Zosen Inova is working to expand its after-sales service business and biogas business as second and third pillars alongside its energy-from-waste plant EPC business. To handle more orders and sales, which have been growing each year, we are working to expand its operational resources by recruiting professionals from outside the Group and pursuing mergers and acquisitions. Indeed, together with Hitachi Zosen Inova, the Company is aiming to establish the energy-from-waste plant business as a global leader, secure the top market share in China, expand after-sales services, operation, and maintenance (AOM) services internationally, and make a full-fledged market entry into India and Southeast Asian countries.

In Japan, our targets for order intake and net sales were largely achieved, as we secured stable orders for EPC and AOM projects by leveraging the Group’s strong track record in the domestic market while utilizing artificial intelligence (AI) and information and communications technology (ICT). As a result, we exceeded our targets for operating income over the three-year period of our previous medium-term management plan. Looking ahead, we expect design-build-operate (DBO) projects for publicly



built and privately operated facilities to increase, and the adoption of waste treatment facilities by private sector companies to pick up pace. Therefore, to differentiate Hitachi Zosen from its competitors and ensure high profitability across all projects, we are focusing on adding even more value to our services by increasing maintenance efficiency and reducing manpower through IoT and other digitalization applications.

In the water treatment business, results were mixed over the three years of the previous medium-term management plan. In fiscal 2018, order and sales targets for wastewater treatment projects were largely achieved following orders for two large DBO projects, including a sludge recycling center. In fiscal 2019, however, sales and targets for water utility and private sector projects were unachieved mainly due to a relatively small number of orders for large-scale projects. Nevertheless, the business had notable successes in fiscal 2019, as its water treatment technologies were applied in a major land-based aquaculture project, and its drinking water treatment technologies were widely adopted by private sector businesses. Going forward, we will aim to maintain a stable source of earnings in Japan by aggressively promoting water treatment DBO projects while expanding our product lineup in the water solutions business in collaboration with the Hitz Advanced Information Technology Center.

Outside Japan, the water treatment business is led by Australia-based subsidiary, Osmoflo Holdings Pty Ltd. With its acquisition of this company, Hitachi Zosen decided to switch from the desalination plant evaporation method it had deployed in the past to the reverse osmosis method. Our strategy going forward will be to have Osmoflo Holdings handle small and medium-sized projects that include services that continue to generate earnings, such as leasing and build-own-operate-transfer (BOOT)\* services.

Finally, in our power plant business, we have been promoting biomass power generation and other forms of renewable energy in Japan with the goal of helping realize a low-carbon economy. The business received a series of orders to construct large-scale wood biomass power plants in fiscal 2018 and 2019. While serving as a biomass power plant operator in Ibaraki and Akita prefectures, the business has also expanded as a retail electricity supplier to nine areas of Japan over the past few years. Comprised mainly of municipal EfW plants, Hitachi Zosen's electric power portfolio stands out for its low CO<sub>2</sub> emissions, allowing it to ease the burden on the environment while meeting the needs of communities. We will continue to proactively promote projects that benefit the environment in an effort to help make a low-carbon economy a reality.

\* BOOT is a system for transferring facilities built, owned, and operated by the private sector to the public sector at the end of a contracted period.

### Fiscal year highlights

#### First order to construct an EfW facility in Russia

In Russia, landfills and garbage dumps have been recognized as a serious problem in recent years. Consequently, there has been growing demand for waste incineration plants capable of both cleanly processing waste and generating electricity. Tapping that demand, Hitachi Zosen Inova won an order to construct an EfW facility in Moscow together with a Russian engineering firm. Based on the latest plan (disclosed in a news release), the facility will be comprised of four plants with a combined capacity of about 2.8 million tons of waste annually, providing electricity for around 1.5 million consumers.



Artist's rendition of the completed facility

# Message from the managing director in charge of the Machinery business



Expanding after-sales and solution-driven services to lay a stable foundation for generating earnings

Tatsuji Kamaya

Managing director and general manager of the Machinery Business Headquarters

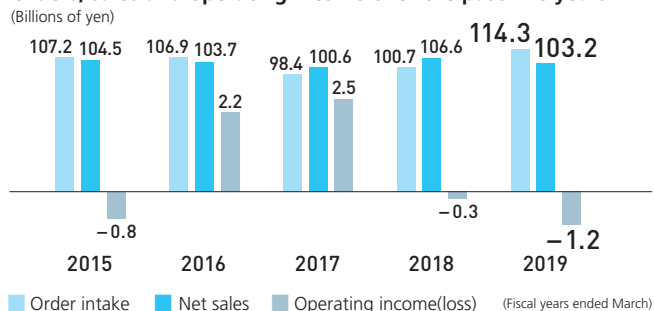
## Overview of fiscal 2019

### Order intake up but worsening operating loss highlights the priority task of securing stable profits

In fiscal 2019, ended March 31, 2020, consolidated financial results in the Machinery business segment were mixed. Order intake increased by ¥13.6 billion year on year to ¥114.3 billion. This was mainly the result of large orders in the process equipment business for spent nuclear fuel transportation casks in Japan, which more than offset decreasing orders for press machines and precision machinery.

On the other hand, net sales decreased by ¥3.4 billion to ¥103.2 billion, largely reflecting a lower amount of order intake in the process equipment business compared with the previous fiscal year. Meanwhile, the segment posted an operating loss of ¥1.2 billion, exceeding the ¥0.3 billion loss posted in the previous fiscal year. This was largely due to spiraling costs associated with delays in a major construction project overseas handled by the process equipment business. In light of this result, management is giving the highest priority to restoring stable profits in this segment.

### Orders, sales and operating income over the past five years



## Review of results under the previous medium-term management plan and strategies going forward

### Leveraging the Group's track record to expand the solutions business and boost profitability

Over the three-year period of our previous medium-term management plan, Change & Growth, we generally achieved our targets for order intake and net sales amid sluggish new demand in the petrochemical, automobile, and shipbuilding industries. The segment posted operating losses, however, due to rising costs related to various issues, so improving profitability remains as an urgent task for management.

Under our new medium-term management plan, Forward 22, we are aiming to create a stable foundation for generating earnings by increasing the services we provide to many plants and facilities previously delivered by the Group, namely after-sales services and solution-driven services, which include remote monitoring and preventative maintenance. We are also working to transform manufacturing facilities into smart factories that can optimally manage production and immediately respond to any problems that arise. At the same time, the Company is developing new businesses by investing heavily in technologies that can help solve environmental issues. For example, methanations provide a means to reduce CO<sub>2</sub> emissions and hydrogen generation systems enable the use of renewable energy.

The Machinery business segment is divided into four main businesses: marine diesel engines, press machines, process equipment, and precision machinery. In the marine diesel engines business, our targets for order intake and net sales were achieved overall. On the profit front, however, although we made efforts to reduce production costs, the value of orders was relatively low, reflecting an ongoing slump in this market. The outlook for demand from the shipping industry is increasingly



### Important issues and Hitachi Zosen's solutions

#### Important issues

- Ships are required to reduce their emissions of NOx, SOx, and CO<sub>2</sub>
- Industrial infrastructure is deteriorating with age
- Disposal of liquid sterilizers is causing pollution
- Ensuring food safety and security is an ongoing challenge

#### Hitachi Zosen's solutions

- Selective catalytic reduction (SCR) systems and two-stroke dual fuel engines that reduce emissions from ships
- AI- and ICT-based inspection and diagnostic services along with maintenance services that extend the life of plants and equipment
- Provision of electron beam sterilization systems as an initiative for reducing environmental impact
- Production line video monitoring and other systems for improving quality control and ensuring food safety and security at food processing plants

uncertain now that economic activity has slowed down due to the COVID-19 pandemic. Nevertheless, having supplied over 3,000 engines to the industry, we will build on that success to expand after-sales services in an effort to ensure the profitability of this business. Specifically, we intend to meet the needs of ship operators by applying ICT to improve the economic viability of their vessels and prevent breakdowns, and by offering engines in combination with vessel SCR systems to help them meet stricter environmental regulations.

In the press machines business, order intake and net sales results exceeded our targets, backed by solid orders for new products. Operating income results fell short of targets, however, as efforts to deal with various problems led to spiraling costs. We expect orders for press machines to decline as automakers hold back on capital investment due to the impact of the COVID-19 pandemic. Nonetheless, we will aim to secure stable earnings by allocating operational resources into after-sales services to expand our offerings, drawing on our track record of delivering over 3,000 press machines.

In the process equipment business, we did not reach our targets for order intake and net sales, as petrochemical plant operators held back on new investment due to low crude oil

prices. The business also recorded an operating loss as substantial costs were incurred as a result of delays in installing process equipment for a customer outside Japan. Although the outlook for crude oil prices remains unclear, plants and facilities continue to age and deteriorate, especially in Japan, so we expect growing demand for equipment replacements and after-sales services, including inspections, assessments, and maintenance. Accordingly, we will make every effort to capture that demand and win favorable orders. We are also working closely with the Company's U.S.-based subsidiary, NAC International Inc., to secure more orders for spent nuclear fuel storage and transport casks in Japan and other countries around the world.

Finally, in the precision machinery business, our targets for order intake, net sales, and operating income were achieved on the whole. While demand for certain types of machinery could fall temporarily due to the impact of the COVID-19 pandemic, we expect growing demand from the food and medicine industries since they increasingly require product safety and security. Therefore, we are confident that this business can continue securing profits from diverse sources of earnings.

### Fiscal year highlights

#### Farm machinery guidance system with automatic steering function developed using satellite positioning technology

In Japan, the number of people involved in agriculture is declining as farmers grow older and successors are in short supply. In response to this issue, the Hitachi Zosen Group developed a farm machinery guidance system with an automatic steering function by making use of the highly advanced satellite positioning technology and services it has provided to the Geospatial Information Authority of Japan for over 30 years. Easy and safe to set up and operate, the system enables hands-free and ultra-low speed driving of tractors and other farm machinery. It also makes field markers unnecessary and can be operated at night during busy work periods, thereby reducing workloads and improving efficiency. The Group is aiming to help solve agricultural issues in Japan through this new product.



The farm machinery guidance system

# Message from the managing director in charge of business strategies for the Infrastructure business



## Meeting demand for ICT-based maintenance services and expanding the offshore wind power business to boost earnings

**Munekazu Shima**

Managing executive officer and general manager of the Infrastructure Business Headquarters

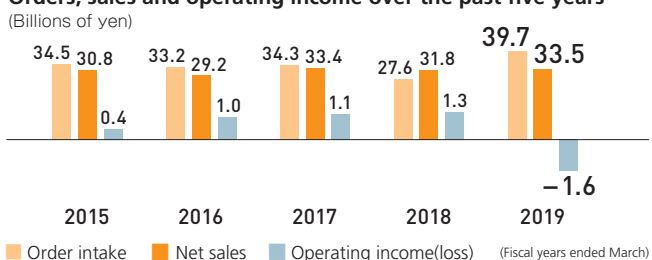
### Overview of fiscal 2019

#### Order intake and net sales increase but high costs for compensation for defective new products lead to an operating loss

In fiscal 2019, ended March 31, 2020, consolidated financial results in the Infrastructure business segment were mixed. Order intake increased by ¥12.1 billion year on year to ¥39.7 billion as we secured a steady stream of projects. For example, we handled large-scale maintenance work for Hanshin Expressway Co., Ltd., and Central Nippon Expressway Co., Ltd., and received an order to construct a seabed-based flap-gate breakwater from the Hyogo prefectural government, as well as an order for an earth pressure balance shield tunnel machine for constructing a bullet train tunnel in Hokkaido Prefecture.

On the back of these large orders, net sales rose by ¥1.7 billion to ¥33.5 billion. In the shield tunnel business, in particular, sales and profits exceeded targets despite order intake falling short of our target. Despite these results, however, the segment posted an operating loss in fiscal 2019 after being in the black in the previous fiscal year. This was mainly due to high costs for paying out compensation resulting from problems caused by defective new products.

#### Orders, sales and operating income over the past five years



### Review of results under the previous medium-term management plan and strategies going forward

#### Demand for maintenance services to grow in Japan Expectations rise for large-scale floating offshore wind power projects

The Infrastructure business segment is divided into three main businesses: the disaster-prevention infrastructure business; shield tunnel machine business; and wind power generation business. Beginning with the disaster-prevention infrastructure business, we mostly achieved our order intake and net sales targets over the three years of our previous medium-term management plan, Change & Growth. Nevertheless, these results fluctuated considerably with each fiscal year, so we are exploring ways to secure more stable orders and sales in the future. To maintain stable operating income, we are doing all we can to eliminate product defects, which have been a serious issue for the Group.

Our maintenance services have been growing, so we are focusing on securing profits and boosting sales, especially of ICT-equipped inspection and assessment services, by leveraging the Group's competitive advantages as a comprehensive manufacturer and service provider. While we do not foresee market growth for new building projects in Japan, we can expect growing demand for seismic reinforcement work and solutions that extend the service life of aging infrastructure. Therefore, we are promoting our ICT-based services for inspecting and assessing floodgates and our broad range of bridge maintenance solutions.

In the shield tunnel machine business, financial results were well below targets over the three years of Change & Growth, but they have been steadily picking up since the business became profitable in fiscal 2018. We expect to receive numerous orders over the next few years for large and specialized machines to build tunnels in the greater Tokyo area, as well as planned new

### Important issues and Hitachi Zosen's solutions

#### Important issues

- Japan's aging infrastructure needs to be upgraded
- Infrastructure is needed to prevent damage from tsunamis, torrential rain, and floods
- Urban transportation and sewage systems must be maintained and upgraded to reduce traffic jam and handle torrential rain
- Renewable energy usage needs to be increased

#### Hitachi Zosen's solutions

- Construction, seismic reinforcement and maintenance of technically advanced infrastructure, including bridges, dams, and river floodgates
- Construction of unmanned, automatically closing flap-gate seawalls that reduce both flood damage and risks of harm to operators
- Shield tunnel machines that enable the construction of road and railway tunnels, utility tunnels, and underground canals
- Ability to handle all aspects of renewable energy projects, including the development, engineering, procurement, construction, operation, and maintenance of wind power plants

subway lines. Demand is also growing in connection with the World Expo scheduled to be held in Osaka in 2025. Beyond Japan, demand for subway systems is growing in South and Southeast Asia, emerging countries are importing equipment and facilities for infrastructure, and countless official development assistance projects are being planned. Taking advantage of these trends, the Group is making the most of its extensive track record to offer relevant technologies, practical solutions, and technical assistance. We are striving to eliminate product defects and modularize materials to facilitate standardization and reduce construction costs with the goal of boosting the earnings power of this business.

In the wind power generation business, we are looking forward to growing demand in the future. Globally, wind power output surpassed nuclear power output in 2017 when it reached 400 gigawatts, and is forecast to exceed 1,000 gigawatts within the next five years. In Japan, offshore wind farms have excellent potential, and with the enactment of a law aimed at promoting maritime renewable energy in April 2019, this market is expected to expand rapidly.

Reflecting these trends, we achieved all of our targets for order intake, net sales, and operating income during the three years of our Change & Growth medium-term management plan.

Moreover, the Group has established a leading position in Japan, having already built three barge-type substructures for floating offshore wind power generators. One of these substructures is being used for a floating offshore wind power generation system demonstration project conducted by Japan's New Energy and Industrial Technology Development Organization. After being put into operation off the coast of Kitakyushu in May 2019, the substructure has been highly evaluated in the wind power market.

Looking ahead, we will work to step up our onshore wind power project development capabilities, especially projects for selling power to the wholesale electricity market, and improve related operation and maintenance management services. The offshore wind power industry is expected to expand rapidly in Japan, so we will focus on designing, building, and supplying facilities. Specifically, we will place priority on designing and manufacturing floating substructures. At the same time, we will search for new projects that have potential for high profits in an effort to grow this business.

In each of these businesses, we will utilize ICT to provide solutions for changing needs in the market in our bids to win favorable orders for projects over the next three years of our new medium-term management plan, Forward 22.

### Fiscal year highlights

#### Joint venture set up to construct and operate an offshore wind farm in Aomori Prefecture

Hitachi Zosen established a joint venture company with Eco Power Co., Ltd. (currently Cosmo Eco Power Co., Ltd.) in April 2019. Named Aomori Seihokuuoki Offshore Wind, the new company will construct and operate an offshore wind farm in Aomori Prefecture to supply power to Japan's wholesale electricity market. The site is being surveyed with the goal of commencing operations in 2028. Wind power contributes to reducing greenhouse gas emissions as a green alternative to fossil fuel power generation. This wind farm is expected to help revitalize the prefecture's economy as it will supply electricity to the surrounding region and also create employment opportunities for local residents during both the construction and operational stages.



An artist's rendition of the offshore wind farm

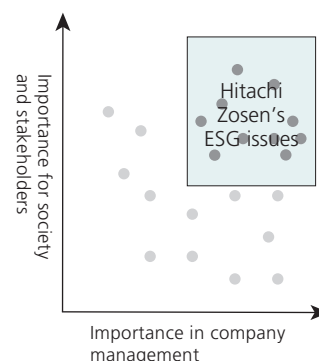
## Hitachi Zosen's ESG Issues

Of the risks and opportunities that could impact the sustainability of the Hitachi Zosen Group's business model and the implementation of our strategies, we have identified especially important issues as our ESG issues. We will tackle the solution of these issues with the aim of achieving the sustained increase in our Group's corporate value and realizing a sustainable society.

### Setting ESG issues

In the process of compiling Forward 22, our new medium-term management plan beginning in fiscal 2020, our Group studied and pigeonholed the risks and opportunities that might impact the sustainability of our business model and implementation of strategies from a medium- to long-term perspective. We evaluated the sorted issues in terms of two axes—their importance for society and stakeholders, bearing in mind our Group's understanding of social problems and the opinions of stakeholders, and their importance for our management, bearing in mind our management strategies and business strategies set out in the long-term Hitz 2030 Vision and Forward 22. We then identified especially important issues as our ESG issues and arranged them in the two categories of "strengthening foundations to support the sustained increase in our corporate value" and "contributing toward sustainability through business."

We will tackle the solution of these ESG issues in order to become a sustainable enterprise and to continue contributing toward the realization of sustainable societies globally.



### Hitachi Zosen's ESG issues Strengthening foundations to support the sustained increase in our corporate value

ESG issues	Risks (■) and opportunities (●)	Hitachi Zosen's efforts
<ul style="list-style-type: none"> <li>Corporate governance</li> <li>Compliance</li> </ul>	<p><b>G</b></p> <ul style="list-style-type: none"> <li>Impact on business if the corporate governance setup lacks effect</li> <li>Loss of trust and damage to corporate value through violation of laws and ordinances, such as antibribery and antimonopoly laws, and deviation from social norms</li> </ul>	<ul style="list-style-type: none"> <li>Analysis and evaluation of the effectiveness of the Board of Directors and promotion of improvements by rotating the PDCA cycle <a href="#">More</a> P.37 "Corporate Governance"</li> <li>Regarding compliance, realization in Japan of a high level centering on public-sector demand and instillation overseas of a spirit of legal abidance among everyone concerned, including partners and suppliers <a href="#">More</a> P.44 "Compliance"</li> </ul>
<ul style="list-style-type: none"> <li>Creation of new products and new businesses</li> </ul>	<p><b>S</b></p> <ul style="list-style-type: none"> <li>Shrinkage and disappearance of existing markets due to technological innovation</li> <li>Delay in launching new products and services on the market due to a stance of self-reliance</li> <li>Fast and low-cost development of new products and new businesses through the promotion of open innovation, alliances, and M&amp;As</li> </ul>	<ul style="list-style-type: none"> <li>Use cutting-edge technologies (integration of IoT and AI into products and services and acceleration of productivity improvement)</li> <li>Shift business locations and promote interaction with customers and markets</li> <li>Maximize the Group's comprehensive strengths</li> <li>Strengthen business group activities <a href="#">More</a> P.27 "R&amp;D and ICT"</li> </ul>
<ul style="list-style-type: none"> <li>Supply chain</li> </ul>	<p><b>S</b></p> <ul style="list-style-type: none"> <li>Loss of trust due to human rights infringements, abuse of superiority, environmental load, etc. in the supply chain</li> </ul>	<ul style="list-style-type: none"> <li>Promotion of CSR procurement in the supply chain</li> <li>Implementation of questionnaires to business partners and feedback <a href="#">More</a> P.50 "Promotion of CSR Procurement"</li> </ul>
<ul style="list-style-type: none"> <li>Pandemics</li> <li>Large-scale natural disasters</li> <li>Terrorism</li> </ul>	<p><b>S</b></p> <ul style="list-style-type: none"> <li>Sickness or disaster damage among directors, employees, and their families</li> <li>Malfunctioning of supply chain</li> <li>Occurrence of contract breaches, such as delivery delays, due to reduction or suspension of work performance</li> </ul>	<ul style="list-style-type: none"> <li>Prioritization of employees' and workers' safety</li> <li>In the case of impact on delivery, holding of consultations including application of force majeure clauses</li> <li>Regular review of BCP (business continuity plans) <a href="#">More</a> P.45 "Risk Management"</li> </ul>
<ul style="list-style-type: none"> <li>Development of human resources to create new value</li> </ul>	<p><b>S</b></p> <ul style="list-style-type: none"> <li>Impact of intensified competition to acquire human resources on the recruitment and retention of outstanding human resources</li> <li>Declining quality of human resources due to changes in the business environment and outflow from the company due to loss of opportunities to be active</li> <li>Acquisition of opportunities for company growth through recruitment and securing of human resources empathizing with the Hitz Value</li> <li>Human resource development respecting diversity and enhanced work efficiency and productivity improvement through the promotion of work style reform</li> </ul>	<ul style="list-style-type: none"> <li>Recruitment and securing of diverse human resources</li> <li>Appropriate assignment and strategic development (career formation support, global human resource development, management personnel training)</li> <li>Retention of human resources (enhancement of employee satisfaction)</li> <li>Promotion of work style reform</li> <li>Sharing of founder's spirit <a href="#">More</a> P.47 "Development and Utilization of Human Resources"</li> </ul>
<ul style="list-style-type: none"> <li>Occupational health and safety</li> </ul>	<p><b>S</b></p> <ul style="list-style-type: none"> <li>Impact on business if a workplace environment in which employees can work safely and healthily is not realized</li> </ul>	<ul style="list-style-type: none"> <li>Promotion of health and safety management and healthcare management <a href="#">More</a> P.49 "Promotion of Healthcare Management, Prevention of Occupational Accidents"</li> </ul>
<ul style="list-style-type: none"> <li>Environmental preservation and protection</li> </ul>	<p><b>E</b></p> <ul style="list-style-type: none"> <li>Loss of trust and damage to corporate value due to increased environmental load resulting from CO<sub>2</sub> emissions and leakage of harmful substances</li> </ul>	<ul style="list-style-type: none"> <li>Activities to reduce the environmental load based on the Hitachi Zosen Environmental Protection Promotion Plan (ozone layer protection, reduction of CO<sub>2</sub> emissions, and recycling and reduced volume of waste) <a href="#">More</a> P.51 "Environment"</li> </ul>

Contributing toward sustainability through business [More](#) P.23 “Contributing to Sustainability”

ESG issues	Risks (■) and opportunities (●)	Hitachi Zosen's efforts
<ul style="list-style-type: none"> <li>Energy shortage</li> <li>Reduction of CO<sub>2</sub> emissions</li> </ul>	<p><b>E·S</b></p> <ul style="list-style-type: none"> <li>Need to curb CO<sub>2</sub> emissions from the use of fossil fuels</li> <li>Expanded use of renewable energy</li> <li>Shift in the West from waste incineration to waste recycling</li> </ul>	<p><b>Supply of clean energy</b></p> <ul style="list-style-type: none"> <li>Further expansion of the energy business, including biomass</li> <li>Regarding organic waste, further effective utilization of energy from biogas conversion (hydrogen gas, electricity)</li> <li>Challenge of public-private partnerships in waste generation overseas</li> <li>Promotion of offshore wind power generation, which is expected to become the mainstream renewable energy in Japan</li> <li>Conversion of surplus electricity generated from wind power, solar energy, etc. into hydrogen or methane</li> </ul>
<ul style="list-style-type: none"> <li>Water shortage</li> </ul>	<p><b>E·S</b></p> <ul style="list-style-type: none"> <li>Need for clean drinking water</li> </ul>	<p><b>Supply of clean water</b></p> <ul style="list-style-type: none"> <li>Active participation in public-private partnerships in response to requests from public organizations in Japan for public-private collaboration</li> <li>Overseas business shift from selling facilities to selling water and response to emergency water demand through rental equipment</li> </ul>
<ul style="list-style-type: none"> <li>Resource cycle</li> <li>Environmental sanitary</li> </ul>	<p><b>E·S</b></p> <ul style="list-style-type: none"> <li>Increasing need in newly emerging countries for sanitary waste treatment</li> <li>Increasing necessity and urgency for domestic disposal of waste plastic rather than its export</li> <li>Need to curb air pollution caused by the increased amount of maritime transportation</li> <li>Ensuring of safety in the storage of spent nuclear fuel</li> </ul>	<p><b>Environmental preservation</b></p> <ul style="list-style-type: none"> <li>Promotion of sanitary treatment, volume reduction, and energy conversion by energy-from-waste plant overseas</li> <li>Further expansion of the waste treatment business area and effective utilization as renewable energy (electricity, biogas)</li> <li>Promotion of recycling technology development to dispose of waste plastic domestically</li> <li>Widespread promotion of our SCR (selective catalytic reduction) systems for marine engines as an environmental regulation countermeasure (compliant with the tier-III exhaust gas emission standard of the International Maritime Organization)</li> <li>Proposals in Japan and overseas for metal casks and concrete casks, which have a proven track record in the dry storage of spent nuclear fuel</li> </ul>
<ul style="list-style-type: none"> <li>Climate change</li> <li>Natural disasters</li> </ul>	<p><b>E·S</b></p> <ul style="list-style-type: none"> <li>Spread of tsunami, high-tide, and flooding countermeasures</li> <li>Emergency water demand in disaster- or drought-hit regions</li> <li>Expansion of measures to counter the aging of infrastructure</li> </ul>	<p><b>Building disaster-resilient communities</b></p> <ul style="list-style-type: none"> <li>Promotion of flap-gate type seawalls against flood disaster in regions with a high disaster risk</li> <li>Expanded sale of mobile water treatment equipment</li> <li>In addition to life-prolonging work for bridges, expressways, floodgates, chimneys, and plants, expansion of business area to maintenance and remote monitoring</li> </ul>
<ul style="list-style-type: none"> <li>Food problem</li> <li>Low birthrate and aging in Japan</li> </ul>	<p><b>E·S</b></p> <ul style="list-style-type: none"> <li>Need to break away from the normalization of poor catches and the trend toward fish harvest shortages</li> <li>Supply of products and services (agriculture, food product industry, energy-from-waste plants) to enable society to adapt to the labor shortage caused by the low birthrate and aging</li> <li>Approaching the limit in the new development of underground space for cities worldwide</li> <li>Increasing need to ensure railway safety</li> </ul>	<p><b>Building prosperous communities</b></p> <ul style="list-style-type: none"> <li>Promotion of land-based aquaculture system, which enables more safe, secure, and stable supplies compared to offshore cultivation</li> <li>Contribution toward reducing the burden of farm work through the supply of automatic steering services for farm machinery utilizing satellite measurement data</li> <li>In addition to the supply of recording equipment for food product production lines, deployment of further labor-saving services, such as food product identification utilizing AI</li> <li>Promotion of labor saving in energy-from-waste and other plants through the improvement of autonomous driving and remote monitoring technologies</li> <li>Active proposal of special shield tunneling machine suitable for excavatable underground space</li> <li>In addition to devices to record driving conditions, for which we have a good track record, supply of in-vehicle crime-prevention services through the utilization of on-board cameras</li> </ul>

### Corporate governance

Ensuring the soundness, transparency, and efficiency of management to respond sincerely to stakeholder expectations

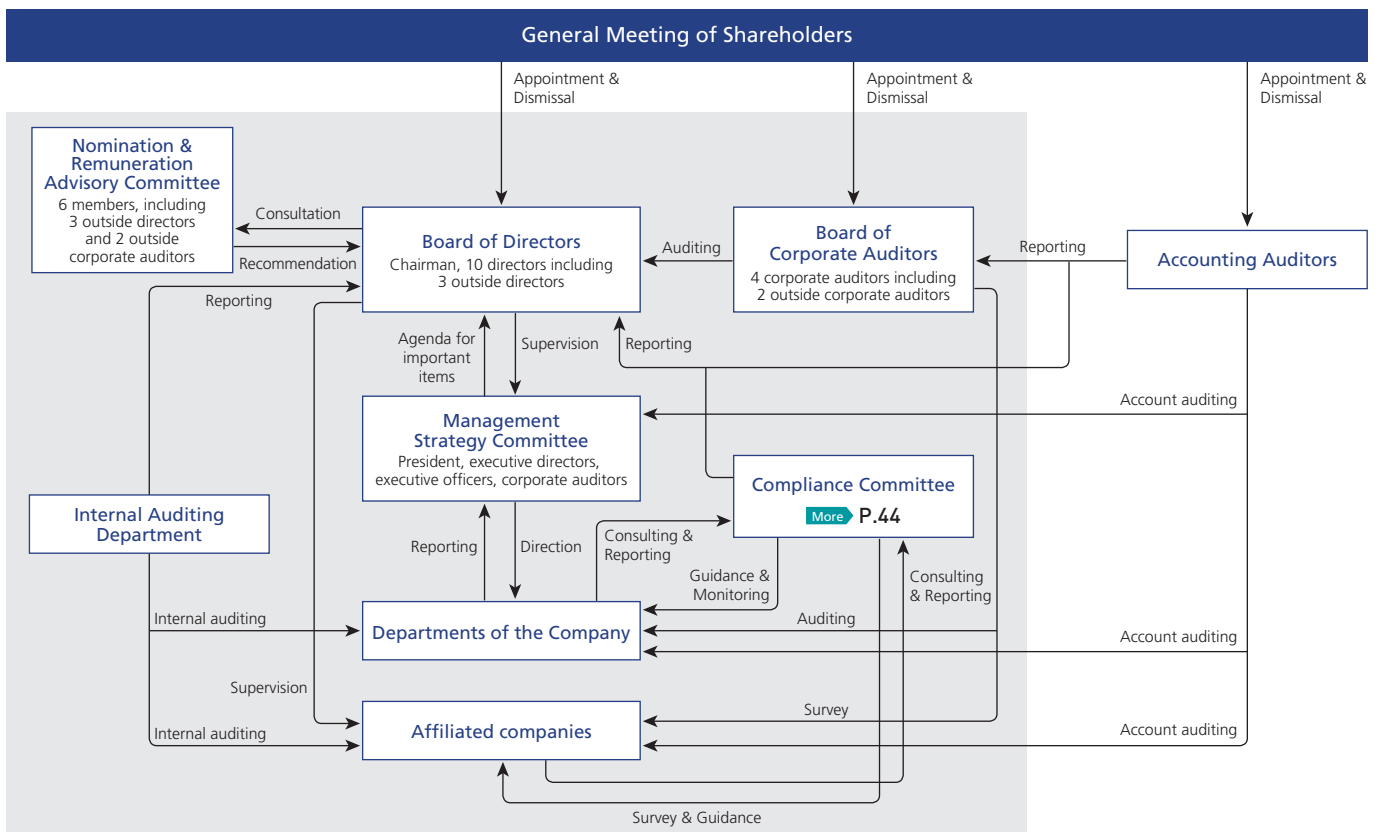
<Main activities>

- 1999 Adopted system of executive officers
- 2013 Appointed an outside director
- 2015 Appointed first woman as outside director (one of two outside directors)
- 2016 Started evaluating the effectiveness of the Board of Directors and making efforts to improve issues  
Appointed first non-Japanese outside director (one of three outside directors)
- 2018 Established the voluntary Nomination & Remuneration Advisory Committee

### Corporate governance framework

Our Company employs an audit and supervisory system. Meetings of the Board of Directors, in which there is a due number of directors in positions close to the worksite with executive and supervisory responsibilities, are attended by four corporate auditors, including two outside corporate auditors. This system ensures that decisions reached on important policies of the Company after thorough discussions by the Board of Directors are the right ones in terms of strengthening our engineering capabilities as the strong point of our manufacturing technologies and developing business that takes advantage of this characteristic. Corporate auditors also attend important internal meetings, including the Management Strategy Committee, which comprises the president, executive directors, and executive officers. In attending these meetings, corporate auditors give their input from a neutral perspective and supervise the business execution by directors and executive officers. Corporate auditors convene meetings of the Board of Corporate Auditors as well 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.

### Corporate governance organization



The Board of Directors, which comprises ten directors, including three outside directors, meets on a monthly basis and convenes for extraordinary meetings when necessary. In addition to supervising matters that are prescribed by law, the Board of Directors decides on important matters, including basic management policies and strategies, and supervises business execution. Furthermore, the Management Strategy Committee meets twice a month as a rule to discuss basic policies and important measures concerning business management and business operations. It is positioned to make timely and precise management decisions. Matters of particular importance are first discussed by the Management Strategy Committee and then thoroughly discussed by the Board of Directors before a decision on whether or not to go ahead is reached. Directors can also delegate some of their business execution functions to executive officers to enhance the supervisory functions of directors and secure rapid business execution.

### Nomination & Remuneration Advisory Committee

The Nomination & Remuneration Advisory Committee is a voluntary advisory body designed to secure procedural objectivity, transparency, and accountability in nominating candidates for directors and corporate auditors, appointing and removing the president and representative director, and discussing important matters concerning remuneration for directors. After discussing these matters, the Nomination & Remuneration Advisory Committee reports its findings to the Board of Directors, which further discusses the matter and makes a decision. The six-person Nomination & Remuneration Advisory Committee is headed by the chair of the Board of Directors and additionally comprises three outside directors and two outside corporate auditors. Outside officers provide input and advice that helps to secure transparency, suitability, and objectivity with respect to personnel decisions for directors and remuneration.

### Qualities and skills in the Board of Directors

Position	Responsible Areas	Business Management and Corporate Planning	Technology Development and R&D	Sales	Finance and Accounting	Human Resources	Legal Affairs and Compliance	ICT	Global Experience
Representative Director, Chairman and Chief Executive Officer Takashi Tanisho		○	○	○				○	
Representative Director, President and Chief Operating Officer Sadao Mino		○	○	○					
Vice Chairman Hidenobu Fujii		○		○	○	○			
Managing Director Toshiyuki Shiraki	Environmental Systems, Procurement	○	○	○				○	○
Managing Director Tatsuji Kamaya	Machinery and Infrastructure	○			○	○	○		○
Managing Director Tadashi Shibayama	Sales, Overseas Business, General Administration, Corporate Planning	○	○	○				○	○
Managing Director Kazuhisa Yamamoto	Business Planning, Technology Development, ICT, and Production Engineering	○	○	○				○	
Outside Director Chiaki Ito		○						○	○
Outside Director Kazuko Takamatsu		○				○			
Outside Director Richard R. Lury		○					○		○
Full-time Corporate Auditor Masayuki Morikata		○			○	○	○		
Full-time Corporate Auditor Koji Abo		○				○	○		
Outside Corporate Auditor Yoshihiro Doi		○	○					○	○
Outside Corporate Auditor Hirofumi Yasuhara		○			○				○

## Governance

### Compensation for officers

Compensation 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. Fixed remuneration is based on each officer's position.

Performance-linked bonuses are based on corporate earnings each fiscal year, using the profit attributable to shareholders of Hitachi Zosen in each fiscal year as an indicator of performance in order to further motivate directors to improve earnings. So as to ensure their independence, compensation for outside directors consists only of fixed remuneration. In determining the compensation for the senior management team and directors, the Nomination & Remuneration Advisory Committee reports to the Board of Directors regarding the remuneration provisions and compensation levels, which are discussed by the Board before a decision is made. The Nomination & Remuneration Advisory Committee regularly reviews the remuneration provisions and compensation levels to ensure that the compensation provides a healthy incentive for directors. Retirement bonuses for officers have been abolished.

### Composition of officer remuneration

Directors	Fixed remuneration	Performance-linked bonuses
Outside directors	Fixed remuneration	Upper limit on remuneration: Up to 550 million yen a year (fixed remuneration and performance-linked bonuses combined)
Corporate auditors	Fixed remuneration	

### Total amount of compensation, etc. by officer position, total amount by type of compensation, etc., and number of officers concerned (FY2019)

(¥ million)

Officer position (No. of persons)	Total amount of compensation, etc.	Total amount by type of compensation, etc.	
		Fixed remuneration	Performance-linked bonuses
Directors (7 persons*)	275	260	14
Corporate auditors (2 persons*)	61	61	—
Outside officers (5 persons)	50	50	—

\* Excluding outside directors and outside corporate auditors

### Outside directors and outside corporate auditors

The Company has appointed three outside directors who bring extensive corporate management experience and broad knowledge to the Company, from the perspectives of enhancing corporate governance, business globalization, and diversity-focused management. Additionally, the Company has appointed two outside corporate auditors who bring extensive knowledge regarding corporate management and specialized expertise in order to enhance the monitoring and supervision of management. The Board of Directors gives due respect to the input and advice it receives from outside directors and outside corporate auditors reflecting their independent and neutral stance and actively discusses matters before making a decision. This system is designed to ensure the monitoring and supervision of management. The secretariat of the Board of Directors supports the outside directors by providing them with important management information in a timely manner, as well as keeping the outside directors briefed on agenda matters and supplying other information ahead of each Board of Directors meeting. Outside corporate auditors are fully supported by a dedicated department that assists the work of corporate auditors by briefing them on agenda matters and supplying other information before each meeting of the Board of Corporate Auditors. The support frameworks enable outside directors and outside corporate auditors to fulfill their respective roles.

### Evaluation of the effectiveness of the Board of Directors

Since fiscal 2016 the Company has implemented an annual evaluation of the effectiveness of the Board of Directors in the previous fiscal year. The evaluation seeks to identify and actively improve functional and operational issues with the Board of Directors, with the aim of enhancing corporate governance and increasing corporate value. The evaluation comprises self-evaluations by directors and corporate auditors and interviews with outside directors and auditors, which are used to identify functional and operational issues with the Board of Directors. The issues are improved through a plan-do-check-act (PDCA) cycle. Of the issues that have been identified to date, the Company is especially prioritizing the strengthening of supervisory functions and ensuring time for substantial discussions with the aim of continuing the supervision of basic policies and strategies through lively discussions in the Board of Directors.



## Information on outside directors and outside corporate auditors

Position	Reasons for appointment	Years of service	Independent officer submission
Outside Director Chiaki Ito	Mr. Ito has extensive experience and wide-ranging insight into corporate management based on his long service as an executive manager in the information and communication equipment industry, including engaging in overseas business. The appointment seeks to leverage his experience and insight to strengthen corporate governance, the globalization of business, the development of new businesses and new products, and utilization of ICT, which the Company is now pursuing.	7	○
Outside Director Kazuko Takamatsu	Ms. Takamatsu has extensive experience and wide-ranging insight into corporate management and diversity-focused management. Her experience encompasses working for many years at global companies, as well as service as the representative director of a software development company and as the executive director and head of Secretariat of the Japan Institute for Women's Empowerment & Diversity Management. The appointment seeks to leverage her experience and insight to strengthen corporate governance and the globalization of business, which the Company is now pursuing.	5	○
Outside Director Richard R. Lury	Mr. Lury served as a partner of a major law firm in the United States for many years and has extensive experience and expertise in international corporate legal matters. The appointment seeks to leverage his experience and insight to strengthen corporate governance and the globalization of business, which the Company is now pursuing.	4	○
Outside Corporate Auditor Yoshihiro Doi	Mr. Doi has an outstanding track record as an executive officer and director of a major power utility and has served as a director, executive vice president, and executive officer since June 2016. The appointment seeks to leverage his extensive experience and broad knowledge of corporate management acquired through corporate operations to benefit the Company's audits.	3	○
Outside Corporate Auditor Hirofumi Yasuhara	Mr. Yasuhara was involved in corporate management as an officer responsible for accounting and a full-time auditor at a world-class electrical machinery and equipment maker. The appointment seeks to leverage his wealth of experience and wide-ranging knowledge of corporate management and auditing work in the Company's auditing.	0	○

## Results of evaluation of the effectiveness of the Board of Directors (main identified issues and state of efforts)

Items	Identified issues in FY 2019	State of efforts in FY 2019	Identified issues in FY 2020
Enhancing supervisory functions	<ul style="list-style-type: none"> <li>Continuing from fiscal 2018, the Board of Directors should conduct wide-ranging discussions of issues relating to large project orders received and management conditions at main consolidated subsidiaries, including important risks, reported by executive directors and executive officers. The Board of Directors should also endeavor to entrench monitoring of the state of progress.</li> <li>Regarding businesses with profitability issues, the Board of Directors should monitor not only at the time of drafting the medium-term management plan but on a regular basis.</li> </ul>	<ul style="list-style-type: none"> <li>Each operating division, including key overseas subsidiaries, reports on their business execution at the meeting of the Board of Directors, paying careful attention to the visualization of risks. Based on multifaceted feedback from the Board of Directors, the operating divisions implement business improvements, address important risks, and report on the improvements at later Board of Directors meetings. These initiatives serve to enhance the supervisory functions of the Board of Directors relating to risks.</li> <li>Regarding the regeneration of businesses with low profitability, appropriate reports were made and discussions conducted at Board of Directors meetings. Lively opinions were also heard from outside directors and are being reflected in policies.</li> </ul>	<ul style="list-style-type: none"> <li>From the perspective of conducting the supervisory functions of the Board of Directors appropriately and efficiently, in board meetings directors and executive officers should narrow down the key points and deliver reports focusing on matters discussed (risks and benefits) beforehand in the Management Strategy Committee, as well as issues identified by the Committee.</li> <li>Regarding the regeneration of businesses with low profitability, continued discussions to decide company policy are necessary utilizing the newly established Hitz target management system, etc.</li> </ul>
Vitalization of discussions	<ul style="list-style-type: none"> <li>The Board of Directors should endeavor to provide outside officers with important management information in a timely and appropriate manner and to substantiate discussions by actively drawing on the opinions of outside officers.</li> <li>Although time has been allotted for the discussion of important issues following the revision of in-house rules in fiscal 2018, discussions and considerations in the Board of Directors still include matters of less urgency. Therefore, efforts must be made so that even more time is spent on the discussion of important issues.</li> <li>More time should be spent on the discussion of medium- and long-term issues as well.</li> </ul>	<ul style="list-style-type: none"> <li>The Board of Directors compiled an annual management plan and made efforts to set important issues and ensure adequate discussion time.</li> <li>Besides Board of Directors meetings, offsite board meeting to hold deeper discussions on selected important issues and take in the opinions of outside directors were held in September 2019 and February 2020. They were attended by directors, corporate auditors, and general managers. Since themes were narrowed down, lively and deep discussions took place. (Themes included the Hitz 2030 Vision long-term vision; results and reflections on "Change &amp; Growth," the previous medium-term management plan; "Forward 22," the new medium-term management plan; and business- and product-specific strategies.)</li> </ul>	<ul style="list-style-type: none"> <li>Discussions in the Board of Directors have become more substantial, but it is necessary to identify risks quickly and further raise the speed of decision making.</li> <li>Regarding the offsite board meetings, it is desirable that operation methods, such as the selection of themes, allotment of time, and attendees, should be continuously revised so as to enhance the effect.</li> </ul>

## Message from Outside Directors

### Bolstering competitiveness while mitigating risks will be vital for future growth

Chiaki Ito Outside director Hitachi Zosen Corporation



I originally learned about how a board of directors operates when I first served on the board of a company that had been jointly established by a major European corporation, which set high standards of corporate governance. In comparison, I think the level of corporate governance at Hitachi Zosen is in no way inferior. The Company's Board of Directors has been including all important issues in its agendas and fully discussing many potentially challenging projects. In fiscal 2019, the Board began holding offsite meetings and devoted time for discussions of medium- and long-term issues. I would like the Board to continue engaging in dynamic discussions about how the Company's businesses should adapt to major societal changes that can be expected in the post-pandemic era.

In the process of creating our new medium-term management plan, Forward 22, we analyzed both the market and our competitors. Based on the insightful results of these analyses, the Board is formulating measures for bolstering the Company's competitiveness, which should lead to business expansion going forward.

Along with business expansion, however, measures for managing associated risks must also be taken. Hitachi Zosen must

work to expand globally because operating solely in Japan will not drive substantial growth in the future, but merging with or acquiring foreign businesses and companies will pose the greatest business risks for the Company. Therefore, it will need to establish plans in advance for dealing with any risks that materialize, and properly prepare a post-merger integration plan before carrying out a merger or acquisition.

Having acquired several foreign companies over the past decade, Hitachi Zosen has learned valuable lessons, including from several mistakes. We have kept detailed records of those experiences for future generations of management so that they do not make the same mistakes again.

In recent years, Hitachi Zosen has been steadily increasing the earnings power of its core businesses. Based on the success of those efforts, I am confident that the Company will be able to bolster its competitiveness while mitigating risks going forward.

### Making the Group's businesses more valuable for people worldwide as we envision the path ahead

Kazuko Takamatsu Outside director Hitachi Zosen Corporation



I believe that the duties of the Board of Directors are being properly performed. Deliberations have become more thorough than in the past, and managing directors have responded seriously to very critical views expressed by other directors. In fiscal 2019, I was particularly impressed by the Board's deliberations concerning projects outside Japan, especially its handling of a lawsuit in the United States that was instigated in response to the breakdown of a shield tunneling machine manufactured by Hitachi Zosen. Costs associated with that project led to losses, but having considered the various circumstances and resultant policies, I think the best outcome was attained for the Company. I also believe that management transparency has been improving now that the Board regularly receives reports on the operations of group companies around the world.

Also in fiscal 2019, we formulated a new medium-term management plan, for which we engaged in intense discussions after receiving detailed explanations about strategies from each business division. In my view, however, the Board has not sufficiently discussed the future vision of the Company and the direction its

businesses should take over the long term. With respect to corporate governance, I believe the supervisory function of the Board needs to be further strengthened. I also think that topics to be discussed by the Board should be examined more closely to determine whether or not they are pertinent. In addition, to prevent losses related to project delays and quality defects, the Company must continue raising awareness among employees and put more effective systems into place.

In line with Company's aspiration to provide useful technologies for people and the world, I have been making proposals, as an outside director, that consider the Group's ambition to contribute to the achievement of the United Nations Social Development Goals through its businesses, which will make them more valuable for people worldwide. Hitachi Zosen has maintained its pioneering spirit since its founding, and it possesses technologies that can help solve problems confronting the world today. Therefore, I believe the Group has a mission to make good use of these essential technologies while minimizing the impact of its operations.

## Strengthening corporate governance in an effort to make an even better company for stakeholders

**Richard R. Lury** Outside Director Hitachi Zosen Corporation



Since being appointed as an outside director in 2016, I have seen steady improvements in the functioning of Hitachi Zosen's Board of Directors. It has been clear to me that great importance is placed on fairness and honesty in the Company's corporate culture, and awareness of compliance is very high. I can assure stakeholders that the Company is committed to maintaining management transparency and has consistently adopted and implemented policies and practices that have minimized risks related to governance.

Looking back on fiscal 2019, the Board of Directors engaged in intense deliberations on large-scale projects, as well as issues concerning the operations and financial performance of certain of the Company's business units and the Company's major overseas subsidiaries, Hitachi Zosen Inova and Osmoflo. By examining unprofitable projects, we were able to clarify certain issues that arose when sales proposals and cost estimations were made, as well as problems that led to losses. Those discussions were very useful for determining what needs to be done to prevent similar issues from arising in connection with future projects and to boost profitability.

Based on those deliberations, we spent a substantial amount of time on refining our future strategies and goals to formulate a new medium-term management plan. We were able to finalize a plan that is expected to be highly effective in minimizing business risks and increasing profitability. We also laid out a clear long-term roadmap extending over the next decade, until 2030, and called it Hitz 2030 Vision. The primary focus of this long-term plan is to enhance the Company's profitability, which is recognized as a weakness. I am now looking forward to in-depth discussions on the adoption of medium- and long-term incentive compensation plans for Hitachi Zosen's senior officers and managers aimed at creating an environment in which the means for realizing this vision is assured.

In my view, the role of the Board of Directors is to confidently provide direction, including when times are tough, to make Hitachi Zosen an even better company for all of its stakeholders. With a strong awareness of our responsibility to stakeholders, I will continue to do my best to help further enhance the Company's corporate governance going forward.



## Intellectual property

Enhancing corporate value by obtaining intellectual property rights for proprietary technologies

### Basic policy

The intellectual property strategy of the Hitachi Zosen Group supports its management and business strategies. Intellectual property rights are accumulated and maintained in accordance with a research and development strategy with the goal of strengthening our market competitiveness. This means that all directors, executives, and employees recognize the importance of intellectual property and that we obtain intellectual property rights for the technologies we have developed and utilize them to enhance our earnings and corporate value.

For group companies, we apply a strategic approach to supporting their management of intellectual property aimed at capturing synergies. Moreover, to keep up with the globalization of our business, we work to strengthen close collaboration with patent offices abroad to acquire the international rights for our intellectual property.

### Intellectual property management

At the Hitachi Zosen Group, the Intellectual Property Department supports stable business activities by striving to identify or

#### Record of patent applications, acquisitions, and possession (Hitachi Zosen non-consolidated)

		FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
No. of patent applications	Japan	110	125	116	112	138
	Overseas	63	62	117	118	112
No. of patent acquisitions	Japan	89	115	85	71	82
	Overseas	72	116	52	76	113
No. of patents held	Japan	904	878	856	803	756
	Overseas	204	305	325	386	480

#### Number of design rights and trademark rights held in FY 2019 (Hitachi Zosen non-consolidated)

		FY 2019
No. of design rights	Japan	99
	Overseas	45
No. of trademark rights	Japan	171
	Overseas	49

generate inventions, using technology and patent maps to assess and analyze our patent portfolio as well as those of other companies, and ensuring optimal patent applications and acquisitions that suit our business model.

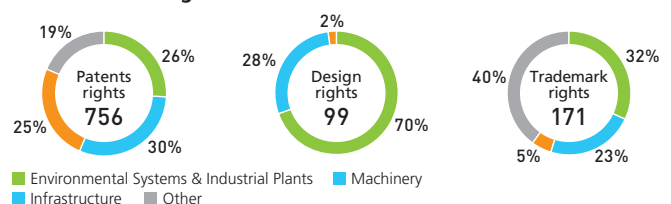
The Intellectual Property Department plays a core role in the Hitachi Zosen Group’s intellectual property strategies. The department implements a wide range of intellectual property activities, including such functions as developing intellectual property strategies in line with business and development strategies, as well as promoting the acquisition of patents in foreign countries along with the growth of our overseas business. These efforts have produced results. For example, the number of overseas patents held has increased more than two-fold (Hitachi Zosen non-consolidated). The Hitachi Zosen Group’s basic policy is to apply the rights for the intellectual property it has acquired over an appropriate scope of business operations and to manage intellectual property ethically to facilitate fair competition through mutual respect for property rights.

As of the end of fiscal 2019, neither Hitachi Zosen nor any member of the Group was involved in litigation relating to intellectual property rights.

#### <Main activities and initiatives>

- Each unit of our Business Planning and Technological Development Headquarters has a member in charge of promoting intellectual property activities. These member intensively coordinate such activities as discovering patent possibilities and facilitating patent applications in collaboration with the Intellectual Property Department.
- We strive to nurture an intellectual property-oriented corporate culture by holding seminars on intellectual property for each employment level, from new recruits to middle-management engineers, conducting e-learning programs tailored to different job responsibilities, and providing information on intellectual property in our internal newsletters. We also organize intellectual property workshops dedicated to AI and IoT to facilitate the use of ICT.
- To encourage the inventive activities of employees and reward them for the value of their inventions, we have established awards for the application/registration of patents and their practical applications, which are selected in accordance with our patent regulations and the judging criteria for practical applications. Recipients of practical application awards are evaluated and rewarded fairly.

#### Breakdown by business segment of patent rights, design rights, and trademark rights as of the end of fiscal 2019



## Compliance

Raising the compliance awareness and strict adherence to corporate ethics of all officers and employees

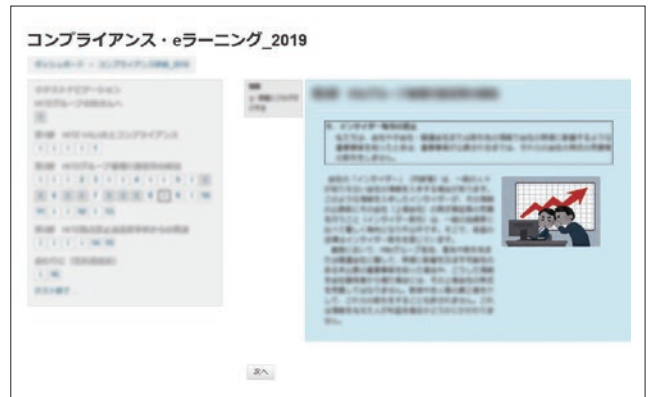
### Compliance system

Under the direction of the Compliance Committee chaired by the President, we carry out regular surveys and verification of overall corporate activities from the perspectives of the law and corporate ethics. We also have established the Hitz Group Charter of Ethical Behavior to serve as guidelines for ethical behavior. A wallet-sized reminder card is issued annually to all officers and employees, and e-learning and other means also provide further understanding of these issues.

Furthermore, in April 2019 the Company issued the Hitz Compliance Guidebook, which uses a Q&A format to explain common compliance issues in business execution. The guidebook has been distributed to all officers and employees in order to raise compliance awareness and encourage strict adherence to corporate ethics. Our whistle-blowing system enables employees to consult with or report to contacts both inside and outside the Company in order to provide quick and effective responses to violation of the law through prevention and early detection.

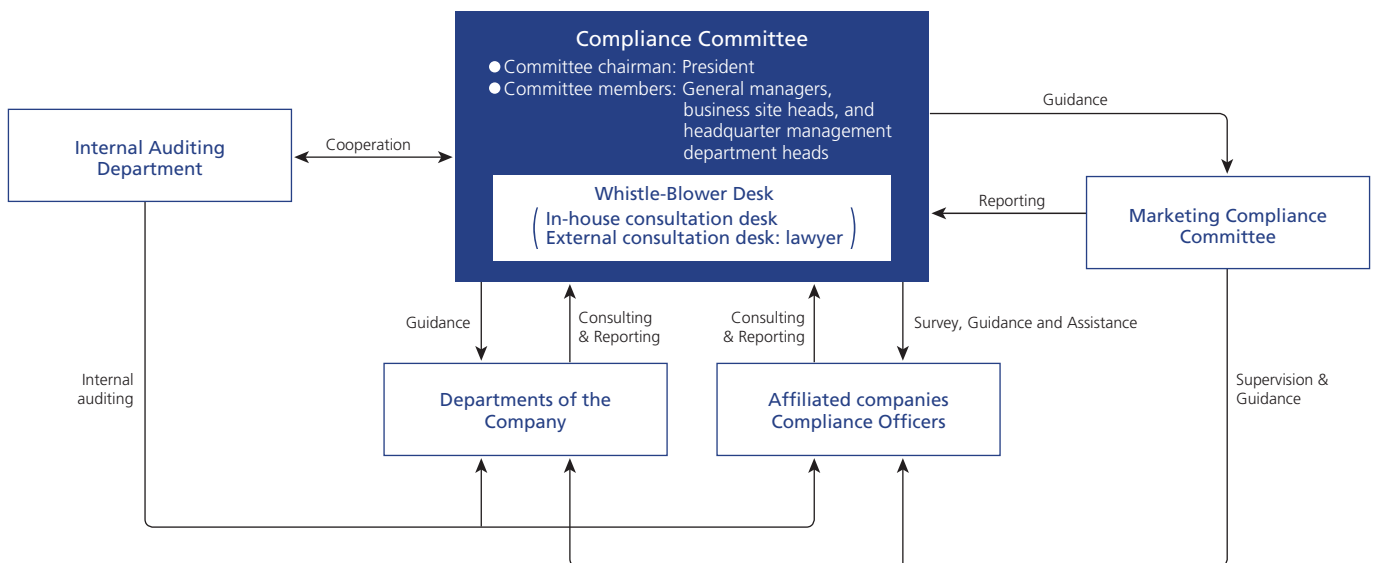


Hitz Compliance Guidebook



Compliance e-learning

### Compliance organization



## Risk management

Establish a management system in preparation of risks

In the Hitachi Zosen Group, risks related to compliance, the environment, safety, disasters, and information security, as well as other potential operational risks, are continually assessed and monitored by Company 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 standing of the Company or any member company of the Hitachi Zosen Group are reported to the Company's Board of Directors.

To enable a quick and appropriate response when a major risk materializes, the Company has set up systems in advance, including rules related to methods of communication and response, as well as management systems.

The Company's internal audit division audits the effectiveness and adequacy of risk management at group companies, 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>		
Violations of law	Risks occur from ignorance of laws, regulations, and socially-accepted norms as well as from a lack of willingness to comply them. Since public works account for a certain percentage of sales volume of the Group, members of the Group could be penalized by fines, damages, suspension of nominations, or loss of social credibility in the unlikely event of bid rigging or any other violation of the Antimonopoly Act, which could lead to losses that would materially affect their financial and operating results.	The Hitachi Zosen Group upholds compliance as its basic business policy, and considers strict compliance to be one of its critical management tasks. Accordingly, the Group continually carries out a wide range of measures relating to the promotion of compliance management. One of these measures, the prevention of Antimonopoly Act violations, is outlined in the Proposals from the Committee for Verification of the Antimonopoly Act Compliance and Proposals and the Company's approach (Corporate website: What's New, November 30, 2011), and a continuing internal education program ensures the prevention of non-compliance incidents. <a href="#">More</a> P. 44 Compliance
Environmental pollution	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.	Since the 1970s, the Hitachi Zosen Group has been making efforts to protect the environment in and around its business sites as well as the local communities in which they operate. The Environmental Protection Promotion Committee, established in 1992, has developed basic policies and priority action items for environmental protection at global and regional levels, and has carried out the necessary measures. Each of our plants and group companies promotes measures to protect the local environment through its Business Site Environmental Preservation Committee, following the aforesaid basic policies. In addition, we strive to act in line with global environmental protection activities, such as protecting the ozone layer, helping prevent or mitigate global warming, and recycling and reducing waste. <a href="#">More</a> P.51 Environmental Initiatives
Accidents and disasters	As engineering and manufacturing are the business activities of the Hitachi Zosen Group, we face the risks of causing personal injuries to a third party as well as industrial accidents involving workers, directly or indirectly, due to a lack of safety measures, unsafe practices, incorrect operations, or equipment failures.	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 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 the occurrence of diseases. <a href="#">More</a> P. 49 Promotion of healthcare management, Preventing occupational accidents
Information security incidents	Risks relating to information security include tampering with corporate websites, destroying or altering data, information leaks, denial-of-service attacks (DoS attacks) due to virus infections, unauthorized access, or account hijacking.	We have ensured that our information assets are secure through the establishment of the Hitz Information Security Policy. We carry out regular training of officers and employees in order to prevent leakage of information from within. For attacks from outside our organizations, we are making every effort to maintain the confidentiality, integrity, and availability of our information assets by implementing various preventive measures as appropriate.
<b>Risks that cannot be managed by conventional systems</b>		
Natural disasters and terrorism	Human casualties and property damage due to earthquakes, typhoons, or pandemics may adversely affect the business performance and financial conditions of the Hitachi Zosen Group.	In order to minimize human casualties and property damage during a disaster, we have a business continuity plan (BCP) in place, and carry out inspections and training to respond to such a disaster. We also maintain emergency communication systems.

### Risk management of individual projects

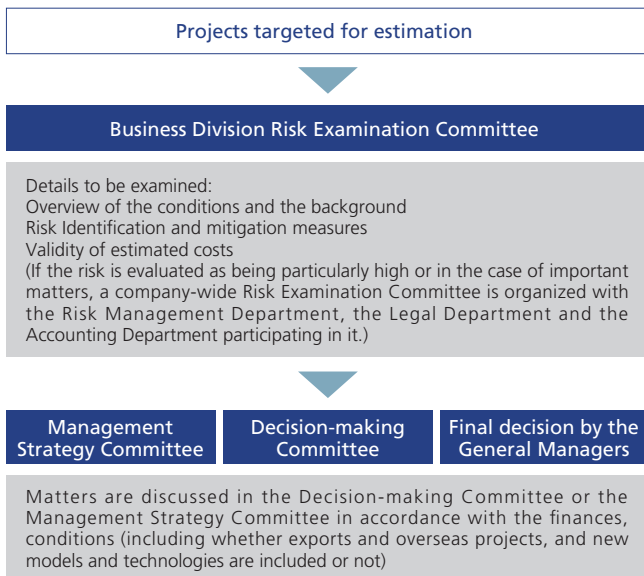
#### Decision-making and risk management process when accepting an order

All relevant departments in charge of estimation and proposals identify and evaluate the risks associated with technologies, estimation, delivery dates, and contracts, and incorporate suitable measures when accepting orders for individual projects. By doing so, thorough and stable risk management through the Risk Examination Committee is ensured at the time of accepting an order. The aim is to achieve results that exceed the returns expected at the time of accepting an order by successfully completing the project as planned after the order has been accepted. Special departments for risk management of projects established by the Corporate Planning Headquarters participate in the Risk Examination Committee, and discussions are held about the following points together with each business division. In accordance with the company’s sales regulations, consultations about decision-making on accepting orders are held with the general managers of each business division, the Decision-making Committee, or the Management Strategy Committee.

- 1) Identify and evaluate all the risks at the time of accepting an order
- 2) Propose and consider measures for avoiding risks
- 3) Quantify any residual risks

In this way, we strive to ensure risk aversion through advance identification of any challenges in project implementation after an order has been accepted.

#### Risk management process until the acceptance of an order



#### Risk management of individual projects after accepting an order

As part of the risk management of individual projects after accepting an order, we implement the following initiatives related to 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, advice, and support are made by the participants, who include General Managers, Senior Executive Managers, Project Department Head, Design Department Head, and representatives from the Procurement Division, Quality Assurance Division, and Risk Management Division.
- 2) Follow-up and reports on improvements in implementation conditions and profitability status, expansion to other models
- 3) Reports on 3-5 important matters every month to the Top Management Review Committee chaired by the President.
- 4) Regarding completed projects, meetings are held to report project results and share useful information across divisions about the project’s good points, matters to reflect on, issues, lessons learned, and so on, including the situation prior to accepting the order, so as to help strengthen profitability and prevent problems in ongoing and future projects.

#### Risk management of individual projects of overseas group companies

For decision-making regarding orders by major overseas group companies such as Inova, NAC, and Osmoflo, transfer of authority is conducted based on a fixed amount of money and specific conditions, but for large-scale projects and those that require attention to risks, the approval of the Hitachi Zosen Group is mandatory. In particular for projects with high risks, the final decision is made after they are reported to the Management Strategy Committee.

In addition, in order to gain an understanding of the progress status, profitability status, risks, and opportunities for projects in a timely manner, and to take appropriate measures, Inova established an exclusive department in 2018, with a more transparent in-house reporting style and a complete revision to an analysis-centered structure based on objective numerical data, thereby strengthening risk management of individual projects.

## Human resource development

Fully displaying the abilities of officers and employees in the Hitz Group

Human resource development is recognized as a key issue in the continuing development and growth of the Hitachi Zosen Group. Our Group defines the ideal employee to be a person who understands the Hitz Value, which comprises our corporate philosophy, our management stance, and our standards of business behavior, as well as its relevance to their work, and is able to reflect it in results. We have implemented the Career Planning Program, and individual departments specifically define their ideal front-line employee.

### Educational measures

Our Group has established various training schemes so as to expand opportunities for human resource development. Furthermore, to create a workplace environment in which everyone is equal and respects one another, we provide company-wide human rights education on a regular basis.

#### Career Planning Program and training schemes

Entry to second year	Third year on
OJT training by a workplace trainer	With the support of their department head, employees set a career plan that will guide them toward realization of their future image, combining the requirements of the organization (future employee image) and the objectives of the employee concerned.
The Hitz Seminar (101 classes) in which employees learn human, conceptual, and technical skills	
Study exchanges within Japan and accreditation incentives Internal language courses (13 classes in English and Chinese).	

### Development of global human resources

For the development of global business, we began an overseas training assignment program in fiscal 2011 and are starting a scheme under which about 30 young employees (Hitachi Zosen non-consolidated) will be dispatched every year to overseas affiliates and offices to experience practical onsite training, improve their language skills, and expand their international horizons through cross-cultural experience. In addition, to develop global personnel who will work in the areas of business expansion and new market development overseas, we actively assign young employees to positions in charge of work at overseas sites to give them the opportunity to experience a wide scope of duties.

### Promotion of training for technical personnel

Technical personnel are human resources who possess specialized skills and work mainly in manufacturing functions. We strive to facilitate skill transfers and increase worksite competencies by implementing various rank-specific training aimed at the early development and improvement of technical skills. Furthermore, the Hitz Training Center, which opened at the Ariake Works in March 2011, functions as an educational center for technical personnel of the Hitachi Zosen Group.

#### Training for technical personnel

New entrants	● Basic skill training camps (April to June)
Young technicians	● Group-wide basic skill training Planned guidance for development of highly skilled technical personnel (development of skill maps)
Midlevel personnel	● Training programs in high-level technical skills, safety, and supervision
Newly appointed supervisors	● Training for newly appointed supervisors

### Fostering of management sense

To strengthen management capabilities and improve problem-solving skills, we conduct workshops for management, internal training and dispatch to external training sessions for administrative personnel, and talks by outside instructors for new and second-year recruits and employees in their third year and after.

#### Workshops for management

Initiative	Content	FY 2019 implementation status
Executive workshops	Organized so that all executive officers engage in serious discussions away from daily duties and deepen mutual understanding, thereby forming a strong management team.	32 persons (1.5 days)
Senior management solution finding workshop	A place for senior executives to explore the future vision of the Group, discuss strategies to achieve it, and acquire a broad perspective of Group-wide management.	22 persons (Held eight times)



Executive workshop



## Utilizing diverse personnel

Promoting diversity and creating new corporate value

Since the inception of a group to empower women in 2008, diversity has been one of our key measures and includes the setting of numerical hiring targets for women and non-Japanese employees. To this end, we established the Diversity Promotion Office in 2015 and laid out action plans in eight categories-organization and culture, workstyle, gender, nationality, age, disability, childcare, and nursing care. To strengthen the unity of the Group and create new corporate value, we are promoting the establishment of an environment in which people who respect diverse values can be active. These activities have been recognized, and in March 2019 Hitachi Zosen was selected by the Ministry of Economy, Trade, and Industry as one of the 100 companies included in its “FY 2018 New Diversity Management Selection.”



Award ceremony



## Securing and utilizing human resources

To maintain and enhance core technology and skills, respond to globalization, and continue to create new value, we recruit new college graduates every year. In April 2020 we hired 139 graduates in accordance with our mandate to recruit from a wide range of faculties and our policy of securing diverse human resources, including our hiring targets for women and non-Japanese staff. Once they start, we endeavor to assign entrants to appropriate positions using a comprehensive assessment of individual aspirations and aptitudes through a department rotation system, open inhouse

### Ratio of female and non-Japanese hires to total new hires (college graduates)

		Joined April, 2018	Joined April, 2019	Joined April, 2020
New non-Japanese hires		13%	7%	5%
New female hires	Administrative	41%	39%	48%
	Technical	12%	8%	10%

Note: Hitachi Zosen non-consolidated

job postings, and personal career plan consultations. We also recruit midcareer people and yet-to-be-employed recent graduates (58 midcareer persons hired in fiscal 2019) for various types of work who, as a work-ready force, contribute their rich expertise and experience. Furthermore, from the perspective of diversity (that is, the building of workplace environments in which everyone can work comfortably), the employment of people with disabilities is an important issue. We maintain a hiring rate for people with disabilities in excess of the legally mandated level (2.2 %) and strive to build workplace environments in which diverse human resources can be active. (Figures are for Hitachi Zosen non-consolidated).

## Promoting the activities of women

In recognition of our work in response to the president’s message declaring the empowerment of women in October 2008, Hitachi Zosen has now received the Kurumin accreditation three times, in 2013, 2015, and 2019, from the Minister of Health, Labour, and Welfare. Furthermore, following the passing of the Act on Promotion of Women’s Participation and Advancement in the Workplace, we have implemented various measures, such as the development and announcement of an action plan with numerical targets, the promotion of diversity through the recruitment and managerial development of women, and support for continuous career building. As a result, we received the Eruboshi (2nd level) accreditation in June 2018 from the Minister of Health, Labour, and Welfare. Going forward, we are committed to continue our efforts to enable female employees to be even more active with the goal of acquiring the highest Eruboshi rating (3rd level).



Kurumin



Eruboshi

## Workstyle reform and work-life balance

Creating a workplace where every employee can perform at their best and grow with the Group

Workstyle reform at the Hitachi Zosen Group envisions increased productivity and better work-life balance through a reduction of long working hours. To this end, we are implementing a number of measures aimed at creating a workplace where every employee can perform at their best and the Group and its employees can grow together.

The measures aimed at achieving flexible workstyles

## Social

include a variety of programs, such as the work-from-home system and satellite office system, which started in April 2018, the super-flextime system, and the per-hour paid leave system. In addition, we are promoting the reduction of total working hours through the setting of no-overtime days, the planned acquisition of annual paid leave, and other measures.

Furthermore, as an initiative to reform our corporate culture and make the workplace more employee-friendly, since 2005 we have introduced a new dress code at our head office in Osaka and our Tokyo Office that allows staff to wear casual dress all year round. And since 2018, we have been attempting to foster a corporate culture that encourages a more flexible mindset so as to avoid stereotypical thinking and promote a culture of openness in the workplace that leads to more effective interpersonal communication. As a means of realizing improved productivity by enabling the execution of work in styles that boost comfort and efficiency, we have reviewed and in principle liberalized our dress code.

We are expanding measures aimed at helping to accommodate both work and childcare/nursing care, such as the extension of childcare leave until the child is three years of age, a shorter work-hour program and per-hour paid-leave system for employees with childcare and nursing care responsibilities, and the reduced workday system to accommodate employees' nursing care needs. In addition, we are striving to deepen the understanding of employees in general and enhance convenience by opening a web portal and distributing handbooks. As a result, the number of male staff taking childcare leave has increased in recent years.

We also organize workstyle reform promotion workshops for managerial personnel to increase their awareness of the need for efficient work habits and work-life balance and to provide support for female and non-Japanese staff in pursuing their career formation, including the resumption of work after childcare leave.



The female staff career promotion program



Support seminar to balance work and parenting



The childcare/nursing care support web portal



Handbook about balancing work with nursing care

## Promotion of healthcare management

Realizing a lively work life in which every employee enjoys good physical and mental health

The Hitachi Zosen Group promotes health management so that every employee can maintain an excellent level of physical and mental health and display their abilities to the full.

Specifically, to maintain employees' health and prevent sickness, we implement regular health examinations and stress checks, as well as health checks by physicians for those who work excessive hours. These measures are part of our health guidance and mental health program, which includes mental health seminars and professional counseling services.



Health education lecture



Stress check report session (for managerial staff)

## Preventing occupational accidents

Building compassionate workplaces so that everyone can work safely and comfortably

Under the basic policy of "Safety first and a compassionate, pleasant workplace for everyone," and under the leadership of managers and supervisors, we are enhancing workplace competence in terms of actual site, actual goods, and actual situation through an education scheme with "morning meeting trials"\* and training to simulate dangerous close-call experiences. Our aim is to achieve a "zero-accident workplace" through uncompromising and strict management, as well as compassionate guidance that motivates workers.

\*The "morning meeting trial" is an initiative to share examples of close calls in the workplace, raise awareness of dangers, and increase safety capabilities.

## Quality management

Improving customer satisfaction and enhancing technological and quality capabilities through our management stance and ISO9001

Our Group advocates “Always pursuing quality” as one of our management stances. As a company built on a foundation of advanced technology, all our employees are constantly aware of quality and pursue a level of quality that satisfies customers. When trouble does occur, we act swiftly to find a solution, investigate the reasons, and take steps to prevent recurrence without being hampered by thoughts of immediate gain. Specifically, throughout the Group we promote the following activities to raise the awareness of employees:

### (1) Building and effective operation of quality management systems

- All business headquarters and principal group companies have acquired and maintained the ISO9001 quality management system certification. Reviews and improvements are made regularly to ensure the effectiveness and appropriateness of operation.
- ISO9001 internal auditor workshops are held with instructors from external certification organizations. About 100 employees complete this training every year.



ISO9001 internal auditor workshop

### (2) Thorough sharing of troubles and measures to prevent recurrence

- Reasons for troubles and countermeasures are shared across the Group through reports on serious technological problems, meetings to report cases of technological problems and measures to prevent recurrence, and other measures.
- To learn lessons from problems that have occurred for the future, we promote the improvement of the trouble management system (trouble information database) and quality improvement design review tools.



Meeting to report cases of technological problems and measures to prevent recurrence

### (3) Strengthening of our technological foundations and transfer of skills from veterans to young employees

- Through collaboration between R&D divisions and business divisions, we conduct the Project to Strengthen Our Technological Foundations and Eradicate Troubles with the aim of improving quality.
- We have established the Technology Transfer Committee (design, onsite engineering work, etc.) to promote the passing on of the know-how possessed by veteran employees to the next generation, as well as the standardization of work processes.

## Promotion of CSR procurement

Promoting CSR procurement through the supply chain and reducing social and environmental risks

The Hitachi Zosen Group has stipulated the Hitz Value, Hitz SDGs Promotion Polic, and Environmental Basic Policy and, as well as the conventional target of improving product quality in production activities, is endeavoring to enhance the quality of management as a whole, including corporate social responsibility. As a solution partner that contributes to the realization of a sustainable, safe, and secure society, our Group develops business to supply products and services that are considerate of the global and local environment. We also conduct CSR-considerate activities constantly at the design, construction, and procurement stages.

At the product design stage, we reduce the amount of materials used and employ highly efficient, energy-saving equipment. At the construction stage, we make efforts to prevent pollution and stipulate targets for each project. Checks and evaluations at the time of planning and implementation and after completion lead to the improvement of subsequent design and construction activities. Furthermore, at the procurement stage, we have stipulated a purchasing policy to promote reasonable and fair transactions, compliance with laws, and environmental protection. By cooperating broadly with suppliers, we aim to enhance CSR throughout the entire supply chain. As part of these initiatives, since fiscal 2018 we have been implementing a fact-finding survey to gauge the state of efforts and awareness at each supplier, initially focusing on the theme of environmental protection. In the fiscal 2019 survey, as well as environmental protection, we added such themes as human rights and ethics and used questions compiled by the United Nations Global Compact, an international organization promoting the SDGs, with a view to extending the survey to overseas suppliers in the near future. We provide feedback to suppliers so that they can utilize the survey results in their subsequent CSR improvement activities.

We will continue the survey in fiscal 2020 in an effort to visualize CSR improvement in the entire supply chain. Responding to the demands of society by supporting suppliers and working even more closely together with suppliers who are actively addressing CSR improvement, we will endeavor to enhance the value of our Group's products.

## Environment

### Environmental management

Establish policies for environmental activities and promote global environmental protection activities

The Hitachi Zosen Group has been working on environmental protection measures through its offices, plants, and regional communities since the 1970s. In 1992, we laid down the Basic Environmental Protection Policy and Action Guidelines. Based on the policy and guidelines, in 1993, our Environmental Protection Promotion Committee developed action guidelines into a specific action plan called the Hitachi Zosen Environmental Protection Promotion Plan. In addition to conventional efforts to protect regional environments, we have expanded our activities to include ozone layer protection, global warming prevention, and recycling and reduction of waste. We also promote our environmental activities by setting key action targets and goals and following up on the actual performance.

### Environmental risk management

Establish voluntary standards and targets and ensure thorough management of waste

To reduce the environmental risks of our business activities with respect to the emission of pollutants into the environment, individual offices and plants of the Hitachi Zosen Group exercise strict waste management according to our voluntary standards and targets, which are stricter than the legally required levels. With the aim of minimizing environmental risk and preventing environmental problems from arising in our business activities we periodically inspect and maintain our equipment, and ensure that work is performed according to work process standards. We have manuals for responding in the event of environmental accidents so as to minimize pollution, and periodically conduct emergency drills and training. Environmental risks that have the severest impact on the Group are accidental oil spills, coating operations, and noise issues. To prevent these risks from materializing, we are constantly working on improvements based on the PDCA cycle and ISO 14001.

#### Achievements under the Hitachi Zosen Environmental Protection Promotion Plan

◎: Fully on target ○: Largely on target △: Short of target

	Measures	Medium-term targets	Results of fiscal 2019 activities	Assessment
Environmental management	Build an environmental management system	<ul style="list-style-type: none"> <li>Acquire ISO 14001 certification for all business sites(manufacturing departments)</li> <li>Implement environmental audits</li> </ul>	<ul style="list-style-type: none"> <li>Environmental audits of plants conducted by a regional environmental protection technical committee</li> <li>Internal audits conducted by internal auditors at business sites</li> <li>External environmental audits conducted by a third party</li> </ul>	◎
	Promote "green procurement"	—	<ul style="list-style-type: none"> <li>Promoted purchasing of products with a low environmental impact</li> <li>Promoted central online purchasing of environmentally friendly products</li> </ul>	◎
Reduce environmental burden of business activities	Reduce use of ozone-depleting substances	Properly dispose of equipment that uses fluorocarbons and properly manage such equipment to prevent fluorocarbon leaks in line with the Act for Rationalized Use and Proper Management of Fluorocarbons	Upgraded equipment that uses fluorocarbons	◎
	Reduce CO <sub>2</sub> emissions	Medium-term target: 2.8% decrease in FY2016 vs. FY2005 Long-term target: 3.8% decrease in FY2020 vs. FY2005	Cut by 25.0% vs. FY2005	◎
	Reduce waste (excluding valuable materials)	10% decrease in FY2020 vs. FY2000	Cut by 13.5% vs. FY2000	◎
	Curb landfill waste	70% decrease in FY2020 vs. FY2000	Cut by 67.9% vs. FY2000	○
Contribute to protection of the regional environment	Ensure robust environmental protection at business sites	—	<ul style="list-style-type: none"> <li>Complied with environmental protection laws and regulations</li> <li>Took environmental initiatives based on agreements with regional communities, and independently based on our business sites' plans</li> </ul>	◎
	Contribute to regional communities	—	Participated in environmental protection campaigns by government bodies, regional communities, etc.	◎

## Climate change

Contributing to the reduction of CO<sub>2</sub> emissions through production activities and products

### Reduction of CO<sub>2</sub> emissions in production

Although the emission coefficient of electric power companies increased due to suspension of the operations of nuclear power generation plants, Hitachi Zosen managed to reduce CO<sub>2</sub> emissions by 25% from the fiscal 2005 level by updating power generation facilities at the Ibaraki Works (switching fuel from class A heavy oil to liquefied natural gas) and other measures. As one example of our energy-saving efforts, we installed solar power generation facilities at the Head Office in Osaka and four sites, boosting generation capacity to 441 kWh. Generation conditions are displayed in real time in the Hitz Plaza entrance hall on the first floor of the Head Office.

### Contributions through products

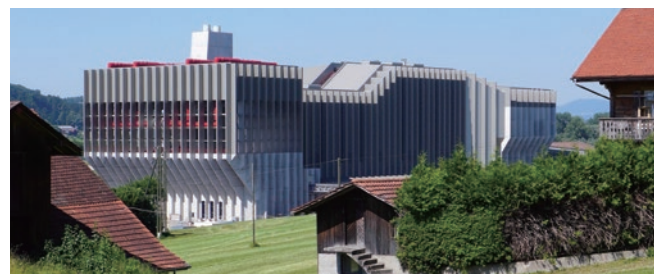
As the world economy has developed, clean energy and sanitary waste treatment have become serious challenges. The stabilization of landfilled waste is said to require from several decades to several hundred years, and waste that has not been sanitarily treated emits landfill gases, including methane and CO<sub>2</sub>. Our energy-from-waste (EfW) plants, which are our principal product, are contributing to the solution of both problems in Japan and overseas. EfW generation is a clean energy with a low CO<sub>2</sub> emission coefficient. Since it supplements part of core power supplies and, as a result, leads to the reduction of CO<sub>2</sub>, it is classified as a form of biomass power generation, which is a type of renewable energy. Since building Japan's first mechanical EfW facility with generating equipment in 1965, Hitachi Zosen has delivered 205 EfW facilities, including units with generating equipment, thereby contributing to the solution of waste and energy problems in Japan.

In addition, as of March 2020, 988 incinerations were operating around the world, including those supplied by Inova AG, which is a group company, and by licensees in China. Of these, 490 facilities have generating equipment and so on. Their combined generating capacity amounts to about 3,900 megawatts/year. When our biomass and wind power generation are added, this figure comes to 4,000 megawatts/year. Based on "The Method of Calculating Greenhouse-Gas Emissions and List of Emission Coefficients" issued by the Japanese Ministry of the Environment and "Global Warming" issued by Japan's Agency for Natural Resources and Energy, Hitachi Zosen's contribution to the reduction of CO<sub>2</sub> through our products amounts to a

maximum 15.18 million tons/year, which is the equivalent of 4.9% of Japan's target for the reduction of CO<sub>2</sub> emissions by fiscal 2030.

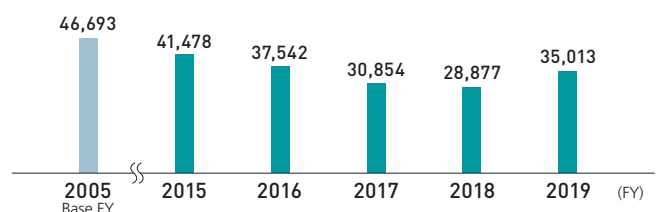
Furthermore, there is evidence that the advance of global warming heightens the risk of natural disasters, such as water shortages and flooding.\* To reduce damage from natural disasters, among other things, the Hitachi Zosen Group builds or rents water treatment plants and installs our proprietary flap-gate type seawalls, thereby making an increasing contribution both in Japan and overseas.

\*Source: Ministry of the Environment, "Protecting Japan from Global Warming: The Challenge of Adaptation"



EfW plant (Lucerne, Switzerland)

### Trends in CO<sub>2</sub> emissions (tons)



Notes: (1) Electric power emission coefficient: The emission coefficient after adjustment by electric power companies is employed. However, since the fiscal 2019 emission coefficient has not been released, we use the actual emission coefficient for fiscal 2018.

(2) The graph covers non-consolidated Hitachi Zosen as per mandated reporting under the Act on the Rational Use of Energy (Act on Promotion of Global Warming Countermeasures).

### Operation of wind power generation

Hitachi Zosen is contributing to the diversification of Japan's energy sources through wind power generation. By participating not only as an EPC company but from a project's development stage, we assist in yielding benefits for the local economy. So far, we have taken part in four wind power generation projects at three sites. In fiscal 2019 we established joint companies—one with a subsidiary of Itochu Corporation and the other with a subsidiary of Cosmos Energy Holdings Co., Ltd.—for two wind power generation projects, including one offshore project in Aomori Prefecture.

In addition, we are also channeling efforts into technological development for the diffusion of offshore wind power generation in Japan, where conditions differ from those in Europe. In the field of bottom-mounted systems, we have received a grant

## Environment

from the New Energy and Industrial Technology Development Organization (NEDO) and, jointly with Toyo Construction Co., Ltd., are testing technology for the installation of suction bucket foundations, which would substantially lower the cost of bottom-mounted offshore wind power generation facilities. Also, in the field of floating systems, we are aiming to implement new construction methods that would curb construction costs.

### Methanation technology

The reduction of CO<sub>2</sub> emitted from thermal power generation and other processes is an important issue in measures to address climate change. Furthermore, the development of carbon-recycle technologies that see CO<sub>2</sub> as a resource to be retrieved and effectively used is also required. The Hitachi Zosen Group is making efforts toward the practical application of methanation technology, which is the process of synthesizing methane by placing hydrogen produced through the electrolysis of water or other methods and CO<sub>2</sub> in a reactor containing a catalyst. Since the CO<sub>2</sub> emitted during the combustion of methane is thought to balance the separated and captured CO<sub>2</sub>, there is a possibility that if the hydrogen produced through the electrolysis of water using renewable energy can be widely used in the future, the amount of CO<sub>2</sub> emissions could be greatly reduced.

In 1995 the Hitachi Zosen Group, jointly with Tohoku University, demonstrated for the first time in the world that the recycled use of CO<sub>2</sub> was technologically feasible by converting CO<sub>2</sub> into methane by means of renewable energy. In addition, as well as investigating the retrieval of CO<sub>2</sub> from power generation plants and other industrial facilities and the manufacture of hydrogen using renewable energy, we have been engaged in the development of high-performance catalysts and reactors necessary for methanation. Using these technologies, at present we are conducting actual field tests of methanation technology and endeavoring to enlarge equipment.

In 2019, together with NEDO and INPEX Corporation, we completed the construction of a methanation test facility in the city of Nagaoka in Niigata Prefecture. From now on, as part of the Ministry of the Environment's carbon dioxide capture, utilization, and storage (CCUS) project, we will seek to establish integrated technology from the retrieval of CO<sub>2</sub> from incineration plants to the manufacture and utilization of methane and, in the future, develop it on a commercial scale.



Methanation test facility

## Resource cycle

Promoting reduction of the environmental burden by achieving zero emissions and curbing water usage

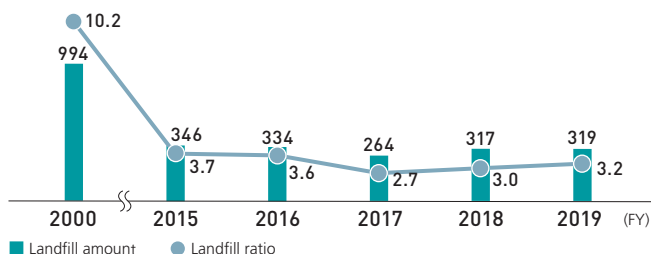
### Landfilling of waste

Although Hitachi Zosen Group aims to achieve zero emissions\*<sup>1</sup> at the Head Office and eight plants in Japan, due to the expansion of our business scale, in fiscal 2019 the amount of landfill increased slightly and the landfill ratio\*<sup>2</sup> rose to 3.2%. Compared with 2000, however, the amount has fallen by 67.9%. We will continue to promote the recycling of flux, sludge, slag, and so on with the aim of lowering the landfill ratio.

\*1. Definition of zero emissions: When the ratio of landfilled waste is 3% or less of emitted waste including valuable waste.

\*2. The ratio of waste handed over to final landfill sites.

#### Trends in landfill amount (tons) and landfill ratio (%)

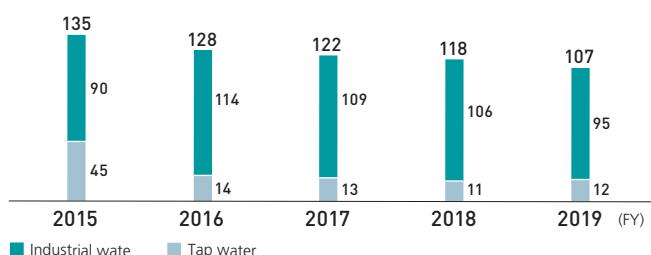


### Reduction of water usage in production

In fiscal 2019 the amount of water used was 1.07 million tons, which was down 9% from the previous fiscal year. The main reason was a drop in the amount of industrial water used due to a decline in the operating ratio of power generation plants.

We measure wastewater regularly and endeavor to keep it under our own voluntary standards, which are more stringent than official water quality regulations.

#### Trends in water usage (10,000 tons)



## Utilizing green finance

First Japanese manufacturer  
to issue green bonds

On September 21, 2018, Hitachi Zosen became the first Japanese manufacturer to issue green bonds. The proceeds from the Hitachi Zosen Green Bonds is used to purchase materials for the construction and refurbishment of EfW plants.

### ① Allocation of proceeds

As of March 31, 2020	(¥ million)
Amount of green bonds raised	5,000
Kyoto City Nambu Clean Center No. 2 Plant (provisional name)	-4,366
Maintenance and operation of the new EfW Plant (waste treatment facility) for Kikuchi Environmental Preservation Association	-634
Balance of unallocated funds	0

### ② Overview of projects and status

#### 1. Kyoto City Nambu Clean Center No. 2 Plant

Client	Kyoto City
Project	Rebuilding and construction of Kyoto City Nambu Clean Center No. 2 Plant (provisional name)
Contents	Design and construction of waste treatment facility, administration office, and environmental learning facility (including dismantling of existing facility and construction of exterior and other ancillary facilities)
Description	Treatment capacity 500 t/day (250 t/day x 2 stoker-type incinerators), power output 14,000 kW Sorting and resource reuse facility: 180 t/6 hrs Biogas generation facility: 60 t/day (30 t/day x 2 lines)
Completion	September 30, 2019
Current Status	Completed at the end of September 2019, currently in operation.

#### 2. EfW Plant for Kikuchi Environmental Preservation Association

Client	Kikuchi Environmental Preservation Association
Project	Construction and operation of new EfW plant
Contents	Design, construction, and operation for 20 years after completion of EfW plant
Description	Treatment capacity: 170 t/day (85 t/day x 2 lines) Power output: 2,800 kW
Completion	March 31, 2021
Current status	Regarding civil engineering and construction work, the work of pouring concrete has been completed, and work on constructing the steel frame for the fifth floor, the topmost floor, is being carried out. Plant mechanical construction started in January 2020 and the installation of the main equipment including incinerators, boilers, and flue gas treatment facilities as well as electrical instrumentation work and piping work are being carried out as scheduled.

\* The name of the factory is the name recorded at the time of receiving the order.

### ③ Evaluation by an outside body

In order to ensure eligibility and transparency of the Green Bonds and to enhance their appeal to investors, Hitachi Zosen received external review, in the form of a second-party opinion, from the leading international risk management firm DNV GL Business Assurance Japan K.K. A periodic green bond review was conducted in July 2020.

### ④ Impact reporting

Hitachi Zosen Corporation will continue to disclose the following indicators for each of the EfW plants receiving allocations of the proceeds, as long as the corresponding green bonds remain.

- Annual power output (MWh/year)
- Annual GHG emissions saved (t-CO<sub>2</sub>/year)

The report on the reconstruction work at the Kyoto City Nambu Clean Center No. 2 Plant (provisional name) will be done later on through the corporate site.



EfW Plant for Kikuchi Environmental Preservation Association

Directors



Representative Director,  
Chairman and  
Chief Executive Officer  
**Takashi Tanisho**

Apr. 1973 Joined the Company  
Jun. 2010 Director, the Company  
Jun. 2010 Responsible for Precision Machinery Headquarters,  
General Manager of Precision Machinery Headquarters,  
and General Manager of Chikkou Works, the Company  
Apr. 2012 Managing Director, the Company  
Apr. 2012 Responsible for Business & Product Development  
Headquarters and Precision Machinery Headquarters,  
and General Manager of Business & Product  
Development Headquarters, the Company  
Apr. 2013 Representative Director, President and Chief  
Operating Officer, the Company  
Apr. 2016 Representative Director, President and Chief  
Executive Officer, the Company  
Apr. 2017 Representative Director, Chairman and President,  
the Company  
Apr. 2020 Representative Director, Chairman and Chief Executive  
Officer, the Company (current position)



Representative Director,  
President and  
Chief Operating Officer  
**Sadao Mino**

Apr. 1982 Joined the Company  
Apr. 2011 Executive Officer, the Company  
Jan. 2013 General Manager of Engineering Business Division,  
Environment, Energy & Plant Headquarters, the Company  
Apr. 2013 Managing Executive Officer, 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  
Apr. 2017 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 (current position)



Vice-Chairman  
**Hidenobu Fujii**

Apr. 1979 Joined The Sanwa Bank, Limited  
Jun. 2006 Executive Officer, The Bank of Tokyo-Mitsubishi UFJ, Ltd.  
May 2009 Managing Executive Officer,  
The Bank of Tokyo-Mitsubishi UFJ, Ltd.  
Jun. 2010 Managing Director,  
The Bank of Tokyo-Mitsubishi UFJ, Ltd.  
Jun. 2013 President, Mitsubishi UFJ Research and  
Consulting Co., Ltd.  
Jun. 2017 Vice-Chairman, the Company (current position)



Managing Director  
**Toshiyuki Shiraki**

Apr. 1984 Joined the Company  
Apr. 2012 General Manager of Overseas Project Execution Dept.,  
Environmental Systems EPC Business Unit,  
Environmental Systems & Solutions Division,  
Engineering Headquarters, the Company  
Apr. 2013 Executive Officer, the Company  
Apr. 2015 General Manager of Business Planning Headquarters,  
the Company  
Apr. 2016 Managing Executive Officer, the Company  
Apr. 2016 General Manager of Technology Development  
Headquarters, and General Manager of Business  
Planning Headquarters, the Company  
Jun. 2016 Managing Director, the Company (current position)  
Apr. 2017 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  
Apr. 2019 General Manager of Environment Business Headquarters,  
the Company  
Apr. 2020 General Manager of Environment Business Headquarters  
and Responsible for Procurement Headquarters,  
the Company (current position)



Managing Director  
**Tatsuji Kamaya**

Apr. 1984 Joined the Company  
May 1990 Hitachi Zosen Singapore (Pte.) Ltd. (Secondment)  
Apr. 2012 General Manager of Corporate Planning Dept.,  
the Company  
Apr. 2014 Executive Officer, the Company  
Apr. 2015 Deputy General Manager of Environment Business  
Headquarters, 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 (current position)



Managing Director  
**Tadashi  
Shibayama**

Apr. 1982 Joined the Company  
Sep. 1992 Hitachi Zosen U.S.A. Ltd. (Secondment)  
Apr. 2012 Executive Officer, the Company  
Jan. 2013 General Manager of Environmental Systems & Plant  
Sales Division, Environment, Energy & Plant  
Headquarters, the Company  
Apr. 2015 Deputy General Manager of Infrastructure Business  
Headquarters, the Company  
Apr. 2016 General Manager of Wind Power Business  
Promotion Office, the Company  
Apr. 2017 Managing 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 (current position)



Managing Director  
**Kazuhisa  
Yamamoto**

Apr. 1982 Joined the Company  
Apr. 2012 General Manager of Domestic Project Execution  
Dept., Environmental Systems EPC Business Unit,  
Environmental Systems & Solutions Division,  
Engineering Headquarters, the Company  
Apr. 2014 Executive Officer, the Company  
Apr. 2015 General Manager of Environmental EPC Business  
Unit, the Company  
Apr. 2017 Managing 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 (current position)  
Apr. 2020 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 (current position)



## Corporate Auditors



Apr. 1970 Joined Fujitsu Limited  
 Jun. 2006 Corporate Senior Executive Vice President and Representative Director, Fujitsu Limited  
 Jun. 2008 Vice Chairman and Director, Fujitsu Limited  
 Apr. 2010 Chairman and Representative Director, FUJITSU RESEARCH INSTITUTE  
 Jun. 2013 Outside Director, the Company (current position)  
 Jun. 2015 Outside Director, Zensho Holdings Co., Ltd. (current position)  
 Jun. 2015 Outside Director, OBIC Business Consultants Co., Ltd. (current position)

Outside Director  
**Chiaki Ito**



Apr. 1974 Joined Sony Corporation  
 Apr. 2003 Representative Director, Sony Digital Network Applications, Inc.  
 Oct. 2008 VP in charge of Environment, Sony Corporation  
 Apr. 2012 Advisor, YAMAGATA INTECH Corporation  
 Apr. 2013 Executive Director and Secretariat, Japan Institute for Women's Empowerment & Diversity Management  
 May 2015 Outside Director, Dexerials Corporation (retired in Jun. 2019)  
 Jun. 2015 Outside Director, the Company (current position)  
 Jun. 2020 Outside Director, The Kansai Electric Power Co., Inc. (current position)

Outside Director  
**Kazuko Takamatsu**



May 1974 Admitted to the bar of the State of New York  
 Sep. 1989 Partner, Kelley Drye & Warren LLP  
 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. (current position)  
 Jun. 2016 Outside Director, the Company (current position)

Outside Director  
**Richard R. Lury**



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)

Full-time  
 Corporate Auditor  
**Masayuki Morikata**



Apr. 1973 Joined the Company  
 Dec. 2005 General Manager of Legal & Intellectual Property Dept., the Company  
 Apr. 2009 Executive Officer, the Company  
 Apr. 2011 Managing Executive Officer, the Company  
 Jun. 2012 Managing Director, the Company  
 Jun. 2012 Responsible for Legal & Intellectual Property Dept., General Affairs & Human Resources Dept. and Environmental Management & Safety Dept., the Company  
 Apr. 2015 General Manager of General Administration Headquarters, the Company  
 Jun. 2015 Full-time Corporate Auditor, the Company (current position)

Full-time  
 Corporate Auditor  
**Koji Abo**



Apr. 1979 Joined The Kansai Electric Power Co., Inc.  
 Jun. 2006 Executive Officer, The Kansai Electric Power Co., Inc.  
 Jun. 2009 Managing Director, The Kansai Electric Power Co., Inc.  
 Jun. 2013 Director and Managing Executive Officer, The Kansai Electric Power Co., Inc.  
 Jun. 2016 Director and Executive Vice President, The Kansai Electric Power Co., Inc.  
 Jun. 2017 Outside Corporate Auditor, the Company (current position)  
 Apr. 2020 President and Director, Kansai Transmission and Distribution, Inc. (current position)

Outside  
 Corporate Auditor  
**Yoshihiro Doi**



Apr. 1979 Joined Matsushita Electric Industrial Co., Ltd. (currently Panasonic 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  
 Jun. 2015 Senior Audit & Supervisory Board Member, Panasonic Corporation (Retired in Jun. 2019)  
 Jun. 2019 Outside Corporate Auditor, Santen Pharmaceutical Co., Ltd. (current position)  
 Mar. 2020 Outside Corporate Auditor, Sumitomo Rubber Industries, Ltd. (current position)  
 Jun. 2020 Outside Corporate Auditor, the Company (current position)

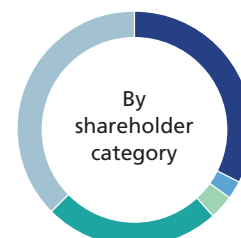
Outside  
 Corporate Auditor  
**Hirofumi Yasuhara**

## Stock data

Number of shares authorized:	400,000,000
Number of shares issued:	170,214,843 (including 1,674,282 treasury shares)
Number of shareholders:	77,068

## Distribution of shareholdings

Financial institutions	32.5%
Securities firms	2.5%
Other domestic corporations	3.4%
Non-residents	24.2%
Individuals, etc	37.4%



## Major shareholders (Top 10 shareholders)

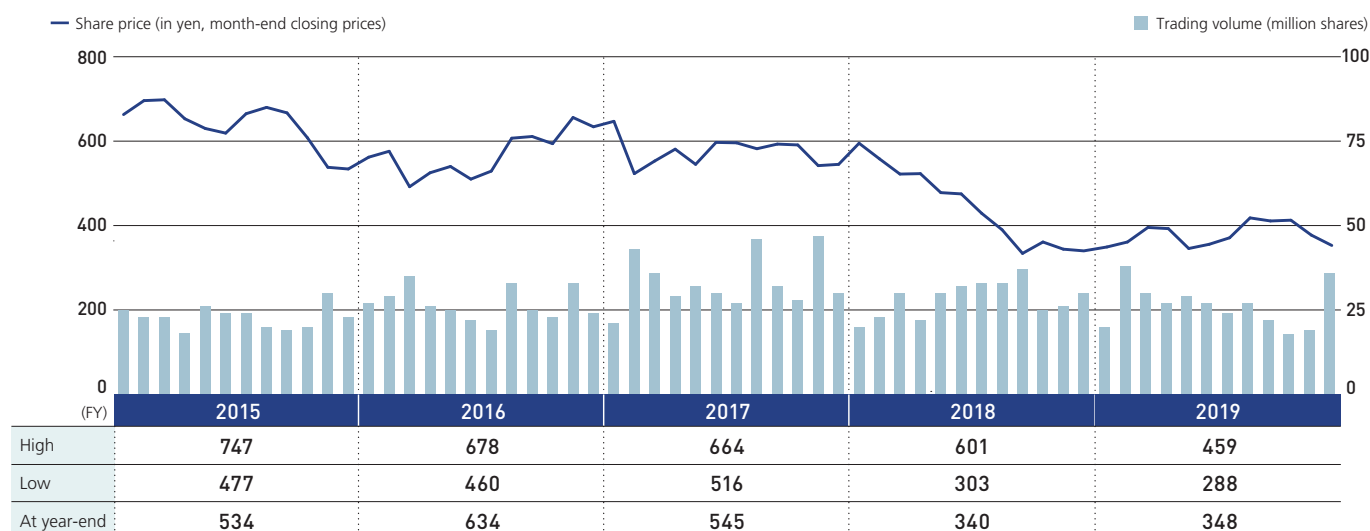
Name of shareholder	Number of shares held (Thousands of shares)	Shareholding ratio (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	12,324	7.3
Japan Trustee Services Bank, Ltd. (Trust Account)	12,057	7.2
MUFG Bank, Ltd.	5,291	3.1
STATE STREET LONDON CARE OF STATE STREET BANK AND TRUST, BOSTON SSBTC A/C UK LONDON BRANCH CLIENTS-UNITED KINGDOM	3,806	2.3
Japan Trustee Services Bank, Ltd. (Trust Account 9)	3,652	2.2
DFA INTL SMALL CAP VALUE PORTFOLIO	3,392	2.0
JP MORGAN CHASE BANK 385151	3,334	2.0
Japan Trustee Services Bank, Ltd. (Trust Account 5)	3,215	1.9
Hitachi Zosen Employee Shareholding Association	2,580	1.5
Sompo Japan Nipponkoa Insurance Inc.	2,358	1.4

Notes: 1.The holdings ratio does not include treasury stock.  
2.On April 1, 2020, Sompo Japan Nipponkoa Insurance Inc. changed its name to Sompo Japan Insurance Inc.

## 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>
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

## Share price and trading volume



## Corporate data

<b>Date of founding</b>	April 1, 1881
<b>Date of establishment</b>	May 29, 1934
<b>Representative</b>	Sadao Mino President and Chief Operating Officer
<b>Capital*</b>	45,442,365,005 yen
<b>Number of employees*</b>	10,707 (consolidated) / 4,010 (non-consolidated)
<b>Business</b>	Design, construction and manufacture of energy-from-waste plants, desalination plants, water and sewage treatment plants, marine diesel engines, press machines, process equipment, precision machinery, bridges, hydraulic gates, shield tunneling machines, and equipment for use in disaster prevention/mitigation
<b>Number of Group companies*</b>	131(115 consolidated subsidiaries and 16 affiliates)

\* As of March 31, 2020

### Regarding the drafting of the 2020 Integrated Report

With its long-term vision, the “Hitz 2030 Vision”, the Hitachi Zosen Group has laid out its aspiration to be a solution partner that contributes to the sustainability and safety of society.

We will continue working to enhance our earning potential by leveraging the technological capabilities we have developed and refined, our track record of deliveries, and ties with our customers and society, while making utmost efforts to solve customer and market issues. The target for attaining the UN’s SDGs is the year 2030—which also coincides with our target year for fulfilling the aspirations expressed in the “Hitz 2030 Vision”. The Hitachi Zosen Group will do its utmost to help realize the SDGs.

This report is informed by the perspective of creating value designed to address social issues in areas related to the natural environment—especially energy and water, which our Group sees as core business areas.

We hope that it will help our shareholders, investors, and numerous other stakeholders gain a deeper understanding of the Hitachi Zosen Group.



Corporate advertisement, launched in July 2019



## 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

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Environmental Databook

<https://www.hitachizosen.co.jp/csr/report.html>

Investor Relations Information

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

Corporate Information

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



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CSR Web Site

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



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YouTube

Hitachi Zosen Group Channel

