



IHI Integrated Report 2020  
IHI Corporation

## **Management Philosophy**

Contribute to the development  
of society through technology

Human resources are our single  
most valuable asset

## **IHI Group Vision**

The IHI Group seeks to solve the various  
environmental, industrial, social, and energy  
related problems of the 21st century, through  
using engineering expertise to focus on  
“Monozukuri” technology.

In striving towards these goals,  
IHI is becoming a global enterprise offering the  
safety and security for the benefit of  
both the environment and humanity.



## Contents

- 01 Management Philosophy and IHI Group Vision
- 02 Contents and Editorial Policy

### Value Creation Strategy

- 03 Message from the Chairman
- 05 Message from the President
- 09 Value Creation Process
- 11 Value Creation Story
- 19 Our Businesses
- 21 Business Overview

- 23 Group Management Policies
- 25 Financial Strategy

### Foundation for Sustainable Growth

- 27 Cultivating Human Resources as Change Drivers
- 31 Corporate Officers
- 33 Messages from Outside Officers
- 35 Corporate Governance
- 37 Risk Management
- 41 Addressing Climate Change

### Data

- 43 Financial Summary
- 45 Non-Financial Summary
- 49 Consolidated Financial Statements
- 53 Corporate Data

## Editorial Policy

This report is issued as a communication tool to convey particularly important information regarding fundamental initiatives that support the policies, strategies, and businesses of IHI. Please visit the websites below for more detailed information.

Financial: <https://www.ihi.co.jp/en/ir/>  
Non-Financial: <https://www.ihi.co.jp/csr/english/>



## On the Cover

We have taken a minimalist approach to the design of our front cover. It features our logo set against a white background, with the color white meant to evoke the concepts of “beginnings,” “future,” and “limitlessness,” and so express the IHI Group’s commitment to a new departure.

In FY2020, we will look ahead to the post-pandemic world, and reexamine the IHI Group under the new president as we move forward in our transformation as we work to further enhance our corporate value.



With our technologies and culture of taking on challenges, we will work to solve the most pressing issues of the new era. The IHI Group's mission is to support people's prosperity, safety and security.

### Tsugio Mitsuoka

Chairman of the Board and Chief Executive Officer  
IHI Corporation

The IHI Group conducts its business activities guided by the two tenets of its Management Philosophy: "Contribute to the development of society through technology" and "Human resources are our single most valuable asset."

Since its founding as a shipbuilder in 1853, IHI has continuously developed original technologies for each era, and contributed to the development of society by providing products and services that are the foundation of daily life.

Our unwavering mission is to support prosperity, safety and security for people worldwide by solving the social issues of each era through the tireless pursuit of *monozukuri* ("manufacturing"), advanced engineering capabilities and technological excellence that have been passed down to us, and the achievements and trust that they have led to.

## **We will respond to a rapidly changing social environment and further accelerate our transformation.**

Today, society and values are undergoing significant change; in particular, as regards sustainability. One such change is the move toward decarbonization in response to global warming and the increasing frequency of extreme weather events worldwide. To ensure sustainable development in the future, there is a need for diverse solutions adapted to the different industries that support people's lives in each country and region. It is still too early to accurately gauge the full impact of the COVID-19 pandemic. Nevertheless, it will reshape the very structure of society.

We have been working to transform our business model and operational structure based on our long-term approach: Tackle social and customer issues with customers and create new value.

Amid these environmental changes, I believe we should return to our original purpose as a company and rethink our businesses.

## **We will put the IHI Group back on a growth track under a new management structure.**

In June 2020, I became Chairman of the Board and CEO, and Hiroshi Ide was appointed President and COO.

Mr. Ide, my successor, has broad vision on a global scale, agility and outstanding communication skills, along with experience, particularly in overseas sales in the energy field and including as managing director of an overseas subsidiary.

In the face of this period of rapid change, we have appointed as president someone who has the sensitivity to understand what goals we should set and what we should do to support the sustainable growth of society. By strengthening our business execution framework, we will further advance our strategic allocation of resources, and complete the transformation of our business structure as early as possible.

Under a new leadership structure and with the determination to transform the IHI Group, the entire management team is committed to putting the Company on a new growth track. We will show the world once again the true value of our relentless pursuit of *monozukuri* and our advanced engineering capabilities.



With the DNA of contributing to society and a changed mindset, we will transform ourselves to pursue a new growth track.

**Hiroshi Ide**

President and  
Chief Operating Officer  
IHI Corporation

### Management that is fully prepared to transform IHI

I was appointed chief operating officer in April 2020, and president and representative director in June. In a business environment that is changing significantly, I have braced myself for taking on the responsibilities of president, and am fully prepared to transform the IHI Group.

Previously, I worked in overseas sales in the energy field and as managing director of a subsidiary in Singapore. I became vice president of the Resources, Energy & Environment Business Area three years ago, and president last year. Since the Paris Agreement was adopted in 2015, there have been increasing calls to shift to a carbon-free recycling-oriented society to achieve social sustainability. Having worked in the energy field for many years, I feel strongly that the IHI Group must urgently transform to ensure its future. My duty as president is to align the various businesses of the whole Group with its long-term approach—“Tackle social and customer issues with customers and create new value”—without letting up on the reforms of the last three years. I am determined to change everything that should be changed, even in businesses that currently seem to be doing well, to continue on our path of transformation.

## Changing our mindset to become a lean, flexible and agile company

First, I will work to change our mindset to become a lean, flexible and agile company. This means being a company that swiftly reacts to and takes action on the issues it faces, including those of customers. To that end, every employee needs to be highly responsive in sensitively perceiving and acting on changes in society, customers and the people we work alongside. This will be the starting point for all that follows.

As such a company, what do we need to do to transform? We will carry out reforms that cover all aspects of our operations, including human resource development, quality, safety, technology development and proposals to customers. As a company with a long history, we tend to think of the future as an extension of the past. Of course, it is true that we have been able to create socially useful businesses because of the achievements of our predecessors, and I have great respect for that. To achieve further sustainable growth, however, we must evolve into a company that can respond quickly while asking ourselves how we should transform. Just as the large dinosaurs became extinct because they were unable to adapt to changes in the natural environment, we cannot survive simply by remaining massive and heavy. Like the mammals that adapted to changes, we need to become lighter and more agile.

When I became managing director of one of our Group companies in Singapore, I was the only Japanese person among employees of many different nationalities, and there was a sense that they were waiting for me to show them what I could do. I took action by creating a management policy that reflected my intention to transform the company, and by

communicating the policy with perseverance until it was shared by all the employees. At the same time, whenever a problem occurred, I made sure that I reacted immediately and that we moved together to solve it. Over time, this approach led to more active communication, and employees started to ensure that I was kept in the loop about small risks they noticed in their daily work, and began taking me to visit local customers. In my responsibilities as president of IHI, I aim to take the same approach. I will continue to value dialogue with our various stakeholders, while pursuing a lean, flexible and agile management style.

## Getting started on restructuring our business to respond to the social changes brought on by COVID-19

The COVID-19 pandemic is one of our major external challenges. In immediate terms, there are delays in new investment in infrastructure and facilities and equipment, and the pandemic is having a significant impact on results for civil aero engines in particular, due to the sharp decline in passenger demand and deteriorating business conditions for airlines. On the other hand, new needs have arisen, such as extension of the service life of existing equipment and enhancement of production efficiency. As featured in Group Management Policies 2019 (see page 23), I believe lifecycle businesses are the answer to these issues. Such businesses provide comprehensive support for operation throughout the equipment lifecycle, thereby giving customers confidence in using our infrastructure and equipment over a long period.



In our Group Vision, we seek to “offer the safety and security for the benefit of both the environment and humanity.” Even amid the current pandemic, climate change is having an enormous impact on society. We believe this is a social issue that we should address, and we will contribute to both mitigation and adaptation. With societal demands regarding safety and security, including health, becoming stronger, we have reaffirmed that providing the infrastructure for people to live with peace of mind must be our purpose. Although the COVID-19 pandemic is ongoing, the IHI Group will not change its direction. However, in view of the changing social and



industrial landscape, we will not restrict ourselves to our current business areas as we restructure our business portfolio to incorporate future growth businesses.

### **Refining our technologies and human resources and sharing a healthy sense of urgency to advance with frontline operations**

The most important resources for fulfilling the IHI Group’s long-term approach are our technologies and our people. The technological strength, human resource power and relationships with customers cultivated over our 167-year history are foundations we must continue to cherish.

Human resources are essential to a company’s vitality. In light of the increasingly diverse nature of society, we are rethinking how we nurture talent and whether we should change our approach to recruiting. For IHI, which provides prosperity, safety and security to the global community, diversity and inclusion is a critical theme. This is because “prosperity” is a subjective value that differs completely depending on the country, region and individual. Can an organization without any diversity in racial background, gender and age group really provide that? The answer is no.

“Contribute to the development of society through technology” is one of the tenets of our Management Philosophy, and our social mission. As the speed of change accelerates, our ability to respond quickly to society’s needs will be key. How can we sharpen and apply our technological



strengths, and who should we form partnerships with? We must be more flexible in our thinking about our technologies, and not insist on doing everything ourselves.

Additionally, we are reinforcing quality assurance, safety and compliance based on the principles of *Sangen-Shugi* ("three realities") from the viewpoint of risk management. *Sangen-Shugi* espouses taking action after taking a close look at the *genba* ("actual site"), *genbutsu* ("actual thing/service"), and *genjitsu* ("reality"). It is the departure point for all our businesses. Furthermore, a healthy sense of urgency is important to



Safety patrol

properly managing risk. Nevertheless, if management simply preaches a sense of urgency from the top down, the desired effect may not be forthcoming because frontline workers may have difficulty picturing specific risk factors and feel anxious about the future. For that reason, it is important to create opportunities for bridging that gap through dialogue about what employees are thinking in their respective posts. If management shows employees in concrete terms the direction they should face and outlines the situations that could occur, their worries will turn into a healthy sense of urgency. They will then be able to take precise measures on the front lines to make sure that risks do not materialize.

The IHI Group has a long history of striving to build industries and infrastructure in concert with the development of society. That DNA has been passed down to the Group today, and we have a firmly rooted culture of wishing to work for and with society, which includes being first on the scene to repair infrastructure during times of disaster. This culture is not something that can be created overnight; it is a strength that has been shaped by the steady, sincere efforts of employees over the years. When I was in charge of energy plants overseas, I saw first-hand how a power plant was built where there was nothing; the electricity went on, people came, and a new town sprang up around it. I am proud and happy that I was able to participate in that moment of history as a part of the IHI Group.

Going forward, as a manager that forges new paths, I will work with employees to pass on this unique DNA and dedicate my efforts to building the IHI Group into an enterprise that society can continue to rely on.

## External Changes

Accelerating trend away from CO<sub>2</sub> and fossil fuels

Rapid diffusion of digital technology

Urgent action on disaster prevention, disaster risk reduction and national resilience plan in response to frequent disasters

COVID-19 economic crisis

## IHI Group's Key Assets

**Our strength** Problem-solving capability supported by concentration of diverse technologies

R&D expenses FY2019 **¥38.1 billion**

### Technology

Contribute to the development of society through technology

### Lean and flexible

Flexible response to environmental changes

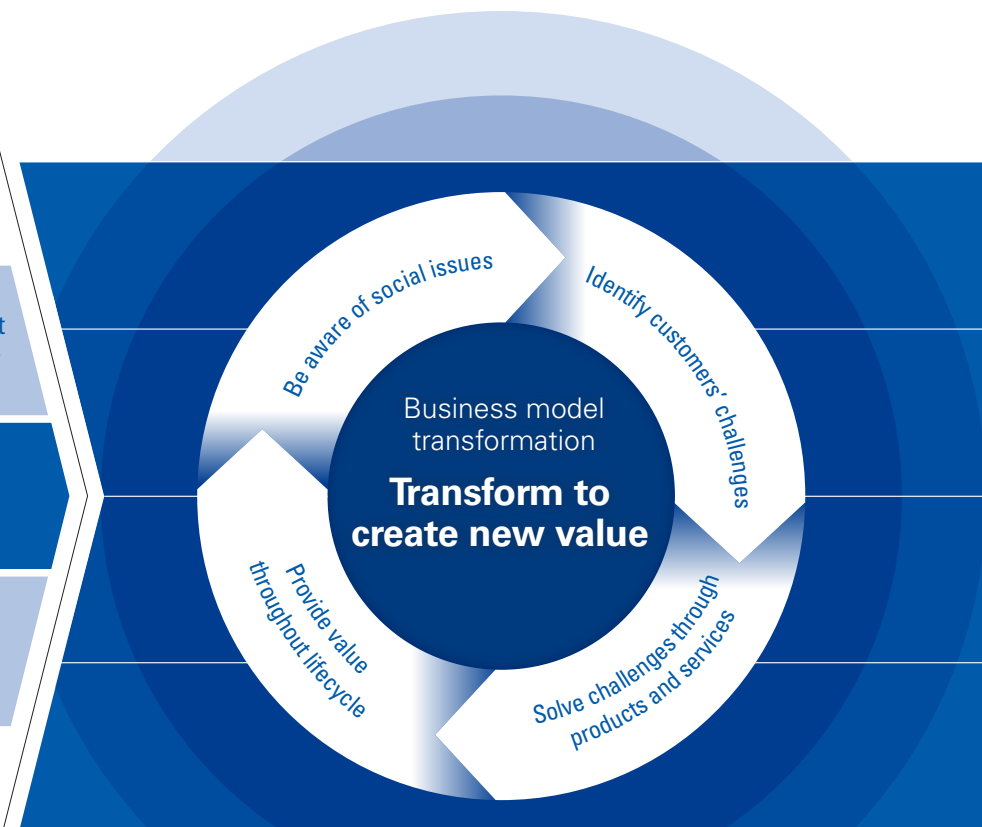
### Human Resources

Human resources are our single most valuable asset

**Our strength** Globally connected teamwork

Employees (consolidated) FY2019 **28,964**

## Solutions and Sustainable Growth Foundation



Foundation for sustainable growth **p. 27-**

### Environment

Reduce environmental impact

### Society

Materialize an affluent society

## IHI Group's Value Creation Story

## Value Offered to Society



# For Prosperity, Safety and Security

Under our Group Vision, we seek to “offer the safety and security for the benefit of both the environment and humanity.”

We believe that the key social issue we should tackle is climate change, a factor in weather disasters that are becoming more frequent and larger in scale.

We are approaching solutions from both mitigation and adaptation perspectives to realize prosperity, safety and security.



**Increase in CO<sub>2</sub>  
in atmosphere**



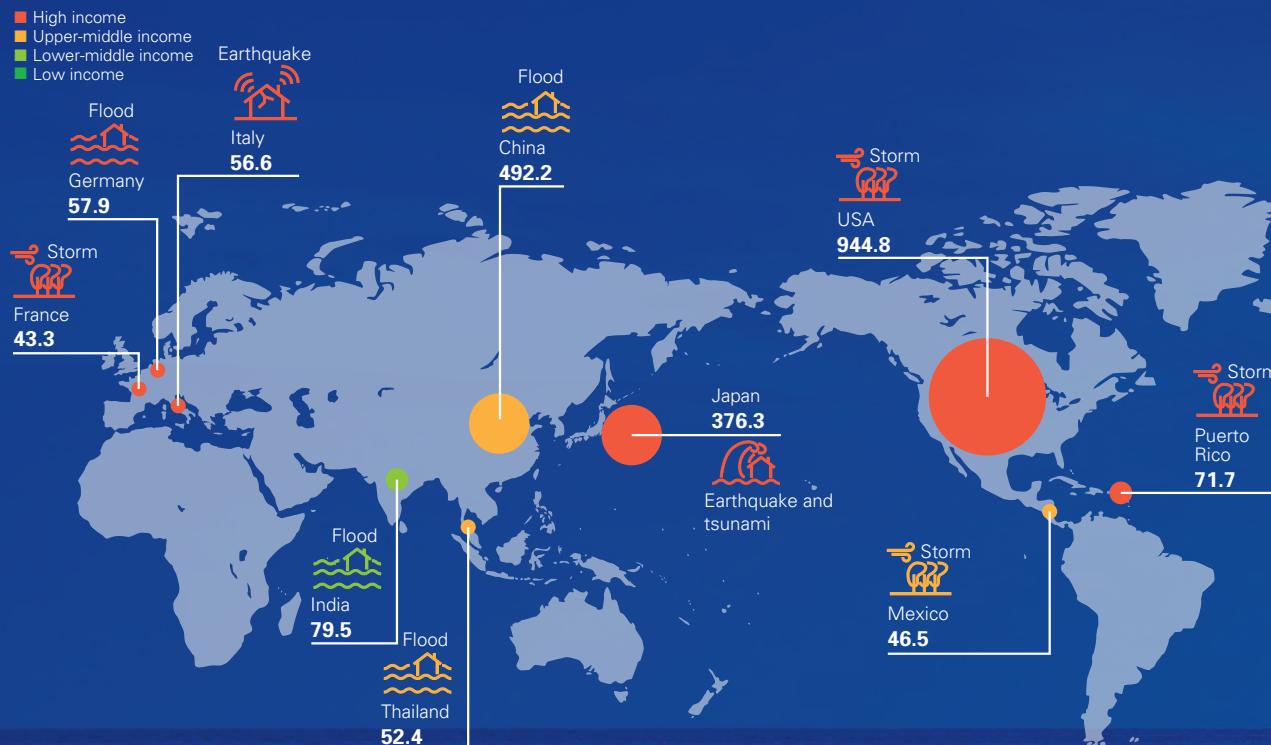
**Rising  
temperatures**



**Climate change**

**Frequent  
weather  
disasters**

**Top 10 Countries/Territories in Terms of Absolute losses (Billion US\$) 1998–2017**



## Increase in economic losses from weather disasters

The chart to the left shows economic losses from weather disasters as reported in *Economic Losses, Poverty and Disasters 1998-2017* issued by the UN Office for Disaster Risk Reduction (UNDRR) (formerly the United Nations International Strategy for Disaster Reduction (UNISDR)) in 1998.

In the 20 years from 1998 to 2017, natural disasters claimed the lives of 1.3 million people worldwide and resulted in economic losses of \$2,908 billion (approximately ¥330 trillion). About 77%, or \$2,245 billion, of those losses can be attributed to climate change-related disasters, an increase of 2.5 times compared with the previous 20 years.

Source: *Economic Losses, Poverty & Disasters 1998-2017*, Centre for Research on the Epidemiology of Disasters (CRED), United Nations Office for Disaster Risk Reduction (UNDRR)



# Mitigation

Reduction of CO<sub>2</sub>  
emissions

## IHI Group's Solutions

### Realizing a Carbon-Free Society

▶ p. 13

#### CASE STUDY 1

One of the largest biomass power plants in the prefecture begins commercial operation in Kagoshima City

#### CASE STUDY 2

IHI Terrasun Solutions launches energy management services business in North America

### Creating Prosperity in Daily Life

▶ p. 15

#### CASE STUDY 1

Enabling safe and clean air transport with electrification of aircraft

#### CASE STUDY 2

Bio-jet fuel manufactured from microalgae receives international standards certification

# Adaptation

Preparedness for the  
effects of climate change

### Disaster Prevention and Risk Reduction

▶ p. 17

#### CASE STUDY 1

Rehabilitation of three bridges in Bangladesh to improve safety and extend service life

#### CASE STUDY 2

Simple remote control system Robo QS used in disaster recovery work

# Realizing a Carbon-Free Society

The IHI Group contributes to the realization of a carbon-free recycling-oriented society by reducing CO<sub>2</sub> emissions throughout the value chain in the energy and industrial sectors.



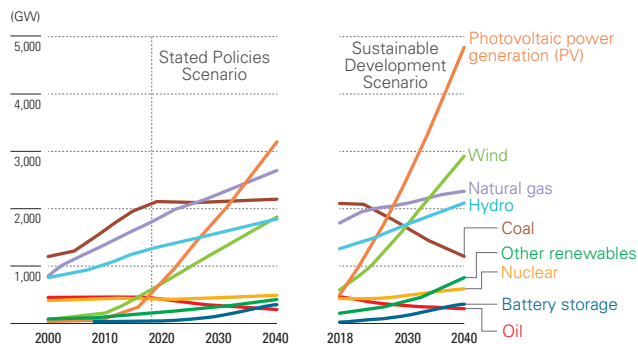
## Social Issue

The *Emissions Gap Report 2018* issued by the UN Environment Programme (UNEP) warned that unless greenhouse gas emissions are reduced by 7.6% annually from 2020 to 2030, achieving the goal of the 2015 Paris Agreement will not be attainable.

The movement to switch from conventional to renewable energy resources is accelerating as a powerful measure for decarbonization. It is predicted that photovoltaic power generation will become the number-one energy supply source among all means of power generation by 2040.

To ensure the stable use of renewable energy, electricity supply and demand control systems as well as efficient battery storage systems will be needed.

## Global Power Generation Capacity



Source: *World Energy Outlook 2019*, International Energy Agency (IEA)

## Solutions

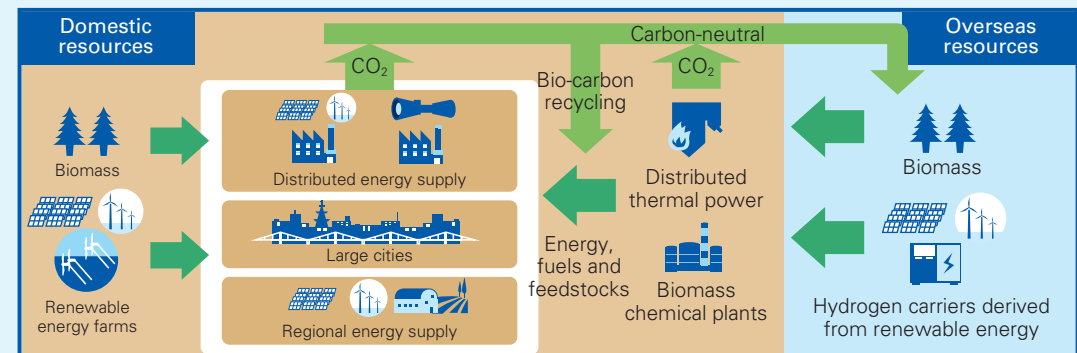
The IHI Group works to reduce CO<sub>2</sub> emissions throughout the value chain not only by reducing emissions from its own business activities, but also by providing technologies, products and services that help customers reduce emissions.

### Energy creation

- Use of hydrogen, ammonia and biomass fuels
- Carbon capture, utilization and storage (CCUS)
- Promotion of renewable energy use through energy management

### Energy consumption

- Optimization of logistics
- More efficient and energy-efficient manufacturing processes
- Electrification of vehicular turbochargers



## Value Offered to Society

By introducing low-carbon and carbon-free technology throughout the value chain, we aim to achieve a 50% reduction in customer CO<sub>2</sub> emissions by 2035.





## CASE STUDY 1 One of the largest biomass power plants in the prefecture begins commercial operation in Kagoshima City

In January 2019, Nanatsujima Biomass Power LLC, which was established by IHI and eight investment-partner companies, started commercial operation of the Nanatsujima Biomass Power Plant in Kagoshima City, Kagoshima Prefecture.

Its power generation capacity is 49 MW, equivalent to the annual energy consumption of approximately 77,000 ordinary households. Based on the provisions of the Act on Special Measures Concerning Procurement of Electricity from Renewable Energy Sources by Electricity Utilities, all the power the plant generates will be sold to Kyushu Electric Power Co., Inc. for a 20-year period.

The plant uses three types of fuel: palm kernel shell, wood pellets and timber from forest thinning. Generating power with carbon-neutral biomass is expected to lead to a reduction in CO<sub>2</sub> emissions of about 200,000 tons per year compared to conventional fossil energy resources. Use of timber from forest thinning (from Kagoshima Prefecture) contributes to sustainable forest cultivation.

### Investment-Partner Companies

IHI Corporation, Tokyo Century Corporation, Kyudenko Corporation, Kagoshima Kairiku Unso Co., Ltd., Shimadzu Ltd., Nangoku Corporation, Nippon Gas Co., Ltd., The Kagoshima Bank, Ltd., Kyuden Mirai Energy Company, Incorporated



Nanatsujima Biomass Power Plant

## CASE STUDY 2 IHI Terrasun Solutions launches energy management services business in North America

The importance of solar power generation and other renewable energy in the fight against climate change is receiving increasing global attention. In order to effectively generate renewable energy, which varies in output depending on the weather and time of day, a sophisticated energy management system and energy storage system will be an integral part of dispatchable energy.

IHI Terrasun Solutions, Inc. is expanding an energy management services business for effective use of renewable energy in North America. Based on advanced hardware and software, as well as data analysis technology, IHI Terrasun Solutions provides support for

maximizing customer profit not only in the design and construction stages, but throughout the project lifecycle.

In the project executed in FY2019 with Convergent Energy + Power Inc., IHI Terrasun Solutions delivered a solution that utilizes the electricity pricing system for the peak-shaving market in Ontario, Canada by discharging battery during peak periods, and substantially reduces electricity costs to end-customers.

With this and other projects, IHI Terrasun Solutions now has a total of more than 320 MWh of energy storage installed and contracted, and expects to reach 600 MWh in FY2021.



Project in Sarnia, Ontario (Battery Energy Storage System)

# Creating Prosperity in Daily Life

The IHI Group will contribute to reduction of CO<sub>2</sub> emissions and enable safe and clean air transport with a new aircraft system that improves environmental performance.



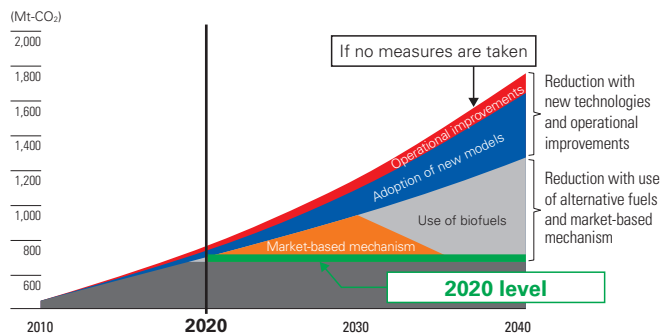
## Social Issue

In the aviation industry, while demand for air transport is falling due to the COVID-19 pandemic, the industry continues to regard the implementation of climate change countermeasures as an issue it should prioritize.

According to a survey by the Japan Aircraft Development Corporation, the annual amount of CO<sub>2</sub> emitted by international air transport is 560 million tons (figure for 2016), which is estimated to be approximately 1.7% of the 32.8 billion tons of CO<sub>2</sub> emitted worldwide.

In terms of CO<sub>2</sub> emissions from international aviation, the general assembly of the International Civil Aviation Organization (ICAO) established a global goal of carbon-neutral growth from 2020 onwards.

### Forecast of CO<sub>2</sub> Emissions from International Aviation and Conceptual Illustration of Emissions Reduction Targets



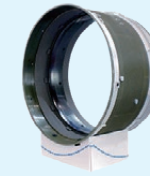
## Solutions

The IHI Group is taking a multifaceted approach to reduction of CO<sub>2</sub> emissions from aviation. This includes lighter aero engine components, electrification of aircraft and aero engines, development of algae biofuel, and support for operational optimization through digital twins.

### Lighter weight and higher heat resistance

- Carbon fiber reinforced plastics (CFRP) fan cases and fan blades
- Ceramic matrix composite (CMC) turbine blades\*

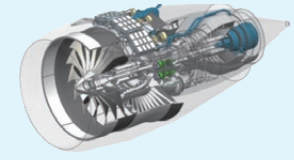
\* Conducting joint research in JAXA's En-Core Project (FY2018–2023)



Fan cases

### Electrification

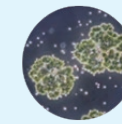
- Autonomous air-cooling system
- Engine embedded electric machine
- Metering-integrated fuel-feeding electrification



Schematic diagram of aero engine (image)

### Bio-jet fuel

- Production of bio-jet fuel using oil extracted from fast-growing microalgae



Microalgae

### Digital twins

- Support optimization of aircraft operation with digital twin simulation



## Value Offered to Society

We will contribute to the achievement of a 50% reduction in net aviation CO<sub>2</sub> emissions from 2005 levels by 2050, the goal set by the International Air Transport Association (IATA), while facilitating the smooth and economical flow of people and goods.





## CASE STUDY 1 Enabling safe and clean air transport with electrification of aircraft

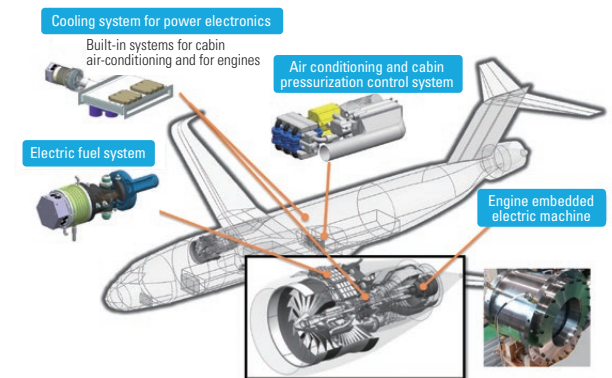
One global-scale climate change goal is the reduction of CO<sub>2</sub> emissions from aircraft. The IATA has set the target of reducing net aviation CO<sub>2</sub> emissions by 50% from 2005 levels by 2050. Achieving that will require not only conventional technological improvements, but all-new aircraft systems that radically improve environmental performance while maintaining safety and economic efficiency.

IHI launched the MEAAP (More Electric Architecture for Aircraft and Propulsion) project in 2012 with domestic aviation-related companies, and is conducting research and development aimed at practical application in the 2030s.

The biggest challenge is development of a large-capacity electric motor-generator that can handle the necessary

increase in power consumption. IHI is developing an engine embedded electric machine,<sup>1</sup> which achieved a rated output of 250 kW in ground tests in February 2020. In May 2020, we completed the world's first successful evaluation test of an air cooling system for 100 kW-class power electronics.<sup>2</sup> In addition, we will optimize the system by linking it with electrification of the fuel system and the air conditioning and cabin pressurization control system, which are currently under development.

IHI will further develop advanced technologies and aims to establish a new position in the aircraft industry, and thereby better contribute to mitigation of climate change through total energy management of aircraft.



1. A motor-generator with excellent heat resistance that connects directly to the engine to provide the large amount of electric power needed by an electrified aircraft. It is mounted inside the tail cone of the engine.
2. A clean, efficient cooling system for cooling power electronics (semiconductor-based electronic power conversion and control systems) that uses cabin air, which is typically emitted as exhaust outside the aircraft, instead of a conventional cooling system that uses cooling water, etc.

## CASE STUDY 2 Bio-jet fuel manufactured from microalgae receives international standards certification

To reduce CO<sub>2</sub> emissions related to air transport, there is a worldwide need for development of renewable alternative aviation fuels. IHI, under the consignment from the New Energy and Industrial Technology Development Organization (NEDO), is undertaking a project to develop technology for stable production of bio-jet fuel from fast-growing microalgae (hyper-growth *Botryococcus braunii*).<sup>3</sup>

The project, which started in FY2017 has seen the progression of algal culture tests in Kagoshima Prefecture, Japan and Saraburi Province, Thailand targeting future commercialization. We have also been developing an integrated process for reforming oil extracted from the

algae to manufacture fuel.

We are the first Japanese corporation to apply for and obtain ASTM D7566 Annex 7 standardization approval. Fuel that conforms to this standard can be mixed as is with existing fuels, meaning that engines and fuel supply infrastructure would need no modification.

Based on the progress of this technology development, we aim to quickly begin commercial production of bio-jet fuel. In FY2020, we plan to supply our fuel for use in the aircraft of domestic regular airline routes for commercial demonstration flights.

3. Strain owned by GGT Corporation



Pilot-scale test facility in Thailand

# Disaster Prevention and Risk Reduction

The IHI Group contributes to urban development that enables residents to continue living in safety and security through its solutions for providing infrastructure that is resilient to damage from increasingly frequent weather disasters caused by climate change.

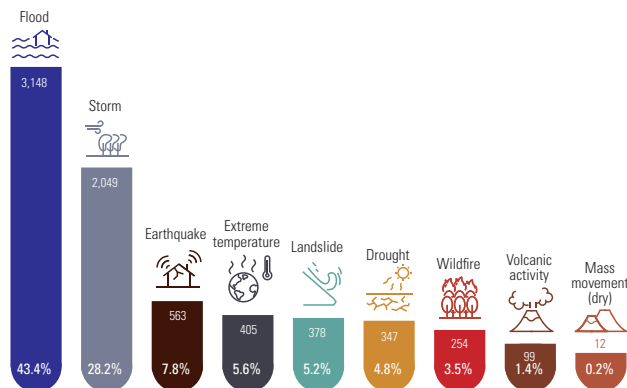


## Social Issue

Climate change is increasing the frequency and intensity of natural disasters.

According to a report by the United Nations Office for Disaster Risk Reduction (UNDRR), there were 7,255 natural disasters worldwide within the 20 years from 1998 to 2017, and 91% of them were climate-related. Moreover, among disasters associated with climate change, such as floods, storms, drought and heat waves, damage from floods and storms is particularly heavy, and the number of such disasters increased 2.2 times compared with the previous 20 years.

### Numbers of Disasters per Type 1998–2017



Source: *Economic Losses, Poverty & Disasters 1998-2017*, Centre for Research on the Epidemiology of Disasters (CRED), United Nations Office for Disaster Risk Reduction (UNDRR)

## Solutions

The IHI Group minimizes damage from climate change through various measures, such as appropriate maintenance and management of infrastructure to preserve its resilience, and use of climate data to control dams and water gates. We also help to restore everyday life following a disaster within a short period of time through our products and services.

### Protection through resilience

- Infrastructure maintenance and management



Bridge deck replacement work

### Response to disasters

- Meteorological observation systems
- Remote control of dams and water gates
- Rainwater storage and infiltration tanks
- Drainage canals



High-pressure radial gate

### Quick restoration

- Emergency bridge (TRIAS)
- Simple remote control system (Robo QS)



TRIAS

## Value Offered to Society

We help to reduce the number of people affected and economic losses from weather disasters.





## CASE STUDY 1 Rehabilitation of three bridges in Bangladesh to improve safety and extend service life

IHI Infrastructure Systems Co., Ltd., an IHI Group company, formed a joint venture with Obayashi Corporation, Shimizu Corporation and JFE Engineering Corporation for the construction and rehabilitation of bridges in Bangladesh. The project was completed in January 2020.

National Highway 1, which connects the capital city of Dhaka with the major port city of Chittagong, is an important artery in the economic activity of Bangladesh. In recent years, worsened congestion due to increasing traffic, damage and deterioration of existing bridges had become issues.

To solve these issues, a project to rehabilitate the Kanchpur, Meghna and Gumti bridges and construct second bridges

parallel to the existing bridges was carried out. Measures to prevent scouring,\* enhancement of seismic resistance, and other upgrades were implemented. These improved the safety performance and extended the lives of the existing bridges, while enabling them to accommodate rapidly increasing traffic demand. This project was financed through a Japanese Official Development Assistance (ODA) yen loan.

The IHI Group will continue its contribution to ensure the safety and security of societies through construction of social infrastructure.

\* Erosion of soil around the foundation due to rain, wind and waves



Completion of the new Meghna Bridge (existing bridge on left, new bridge on right)

## CASE STUDY 2 Simple remote control system Robo QS used in disaster recovery work

At the sites of landslides caused by typhoons and heavy rains, which have recently become increasingly frequent in Japan, fast work is required to prevent the damage from spreading. Due to the risk of secondary disasters, it is necessary to operate construction machinery remotely from a safe location, but the high cost of special construction machinery for use in disasters limits the number of machines that can be deployed.

To solve this problem, IHI has developed and launched Robo QS, a remote control system for construction machinery, together with Fujita Corporation and the Kyushu Technology Office of the Kyushu Regional Development Bureau of the Ministry of Land, Infrastructure Transport and Tourism.

Robo QS is fitted to the driver's seat of general-purpose backhoes to enable unmanned operation via remote control. Installation is very simple, and manual operation is also possible without removing the device. Currently, Robo QS has been deployed to the Kyushu Regional Development Bureau, and to the Chugoku Technology Office of the Chugoku Regional Development Bureau, and is being used at disaster recovery sites.

### Awards Received for Robo QS

**FY2017 Japan Construction Engineers' Association Award**

**FY2019 The Robotics Society of Japan, Technical Innovations Award**



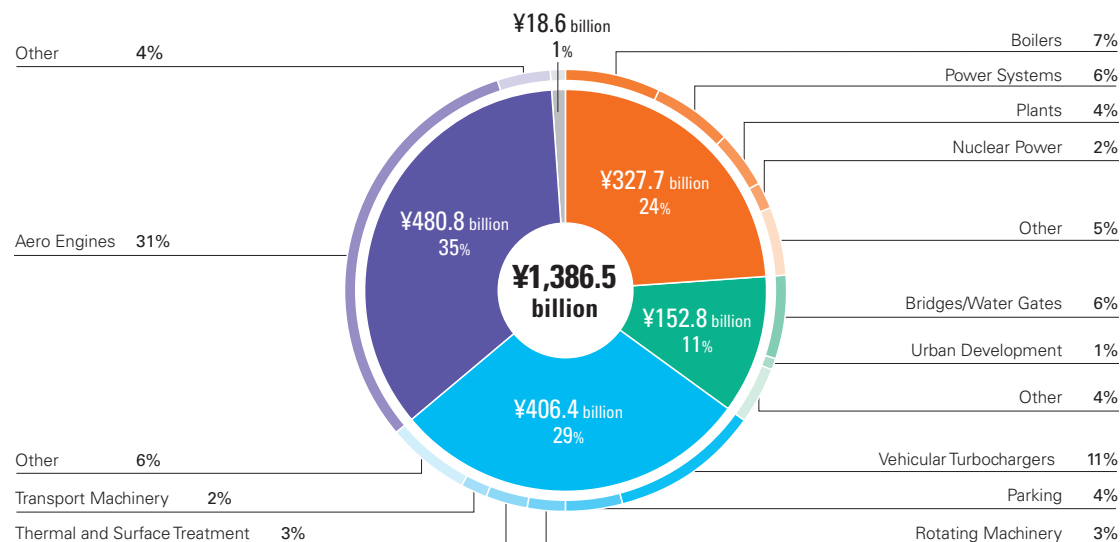
Robo QS (simple remote control system) installed in backhoe

- Resources, Energy & Environment
- Social Infrastructure & Offshore Facilities
- Industrial Systems & General-Purpose Machinery
- Aero Engine, Space & Defense
- Other and adjustments

Note: Sum of percentages for all segments may not total 100%, as figures are rounded to the nearest 100 million yen.

## Net Sales by Business

(FY2019)



### Resources, Energy & Environment



#### Boilers

Our boilers efficiently combust various fuels to supply steam for power generation and production processes. Furthermore, we are working to eliminate chemical substances in flue gas and reduce CO<sub>2</sub> emissions.

Domestic share of ultra-supercritical pressure boilers  
**35%**



#### Power Systems

For land use, we supply gas turbines, gas engines and diesel engines. For marine use, we supply small to large engines for large vessels and high-speed boats.

Diverse lineup  
**2 MW to 50 MW**



#### Global Plant Engineering

Jurong Engineering provides design, procurement, construction and maintenance for overseas projects in fields including power generation, petroleum, chemicals and steelmaking.

Service network  
**13 countries**



### Social Infrastructure & Offshore Facilities



#### Bridges

IHI was the first private company engaged in bridge-building in Japan (Miyako Bridge in Yokohama, 1883). We engineer, fabricate, construct and maintain bridges and expressways in Japan and around the world.

Construction achievements

**Over 12,000 bridges**



#### Water Gates

We build water gates for controlling water flow of dams and rivers, thereby supporting hydropower generation, flood control and water utilization.

Construction achievements

**Over 4,000 projects**



#### Tunnel Boring Machines

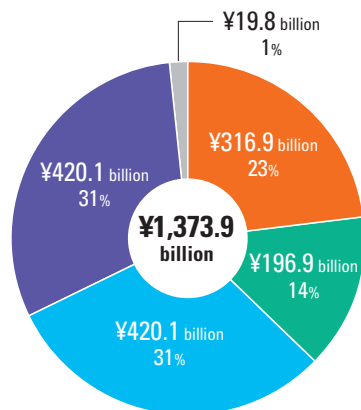
We provide machines with rotating cutters that excavate tunnels for subways, roads and other engineering works. We are also Japan's leading supplier of automatic assembly systems for tunnel interior segments.

Domestic share  
**44%**



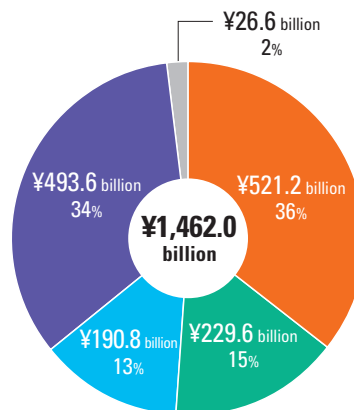
## Orders Received by Business

(FY2019)



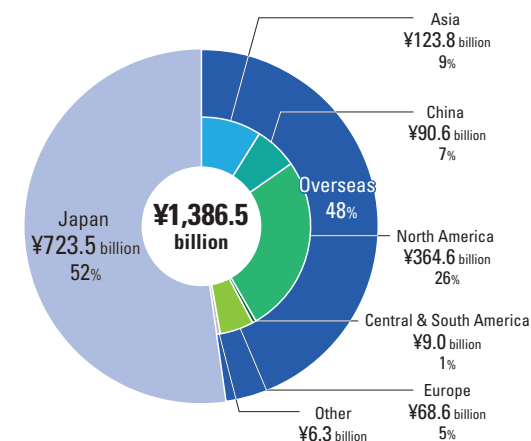
## Order Backlog by Business

(FY2019)



## Net Sales by Region

(FY2019)



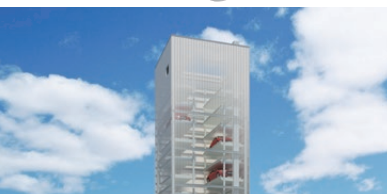
### Industrial Systems & General-Purpose Machinery



#### Vehicular Turbochargers

Our turbochargers harness exhaust gas energy to increase airflow and thereby engine output. They improve fuel efficiency and environmental performance by reducing engine displacement in vehicles, etc.

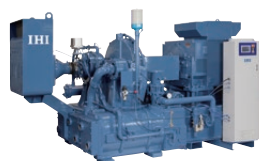
World share  
**20%**



#### Parking Systems

Since installing Japan's first tower parking in 1962, we have continued to provide various parking systems suited to urban needs, including tower parking, underground parking, and ramp parking systems.

Domestic share of  
elevator parking systems  
**42%**



#### Compressors

Compressors are an essential utility for factories. They pressurize air or other gases for storage in tanks and supply to equipment. Our lineup addresses a variety of needs, including those relating to energy conservation, maintenance reduction, and ecology.

Domestic cumulative  
deliveries of general-  
purpose turbo compressors  
**9,600 units**



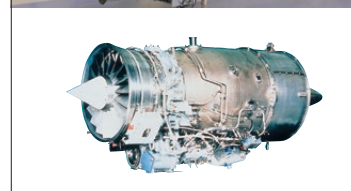
### Aero Engine, Space & Defense



#### Civil Aero Engines

Leveraging our proprietary technologies, we participate in global joint development projects of various types of civil aero engines (small to extra-large), as well as develop and supply engine modules and parts for these projects. We also perform maintenance and repair on engines, thereby supporting aero engines throughout their lifecycle.

Share of global long  
shaft market  
**No. 1**



#### Aero Engines for Japan's Ministry of Defense

As a general contractor, we oversee the development and production of many aero engines used by Japan's Ministry of Defense. In particular, we are involved in all engine models for fighter jets in Japan. Moreover, we facilitate the efficient operation of aircraft through engine maintenance and technical support.

Domestic share  
**No.1**



#### Rocket Systems and Space Exploration

We develop and manufacture the solid rocket booster and turbo pump that are core components of the engine for the H3, Japan's mainstay rocket, and oversee the development and manufacture of the Epsilon rocket. In addition, we are engaged in development in the space exploration sector, including satellite data usage.

Epsilon rocket launch  
success rate  
**100%**



## Resources, Energy & Environment

### Summary

We create eco-friendly products and services that supply energy essential to industrial development and an enriched life. We are moving forward with initiatives for a sustainable, CO<sub>2</sub>-free society.

### External Environment

The movement to respond to climate change and the world's shift towards a carbon-free society are accelerating. Accordingly, the issues facing society and our customers are becoming more diverse.

Energy management for the diffusion of renewable energy and distributed power sources, as well as for stable energy supply, is also strongly required.

### Opportunities and Risks

- Opportunities**
- Increasing energy demand in emerging countries
  - Increasing demand for clean energy due to tightening of regulations
  - Increasing demand for distributed energy
  - Increasing demand for power-source adjustment due to adoption of renewable energy
  - Increase in companies expanding into Asia
- Risks**
- Shrinking market for fossil fuel power generation equipment
  - Differences in regional characteristics and entering new countries



## Social Infrastructure & Offshore Facilities

Improving infrastructure is essential for people and societies across the world. Going forward, we will continue to support safe and secure infrastructure using the technical skill and strong sensibility developed through our many years of achievements.

In Japan, the increasing severity of disasters in recent years and aging infrastructure are fueling the needs to upgrade resilience and extend longevity.

Overseas, our concession businesses, which encompass every stage from design and construction to operation and maintenance, are expanding, and we are carrying out road and railway construction projects, including bridges and tunnels.

- Opportunities**
- Increasing demand for extension of service life and greater resilience as measures for aging infrastructure and disaster resistance
  - Increasing project sizes aimed at achieving greater infrastructure investment efficiency
  - Increasing demand for new construction in Asia due to growing needs for electricity, flood control and water utilization, in tandem with population growth
  - Increased outsourcing of operation and maintenance work to private sector due to labor shortages
  - Increasing demand for excavation to construct subways in urbanizing ASEAN, the Middle East, and Turkey, etc.
  - Increasing demand for tunnels for flood prevention and rainwater collection
- Risks**
- Greater competition due to reduced domestic demand for new infrastructure
  - Worsening profitability of large projects overseas due to legal and regulatory reform, political instability and economic downturns
  - Reduced profitability of large projects due to intense competition
  - Expansion into global markets by Chinese manufacturers



## Industrial Systems & General-Purpose Machinery

We provide various solutions, including logistics systems, compressors, and vacuum thermal treatment equipment. We take a multi-dimensional approach to support the future of manufacturing, spanning products, technology, and systems.

There is a concern that conditions, including the global market slowdown in the automotive industry, which started with China, the associated slump in related components industries, and the prolonged stagnation of economic activity brought on by the spread of COVID-19 pandemic, will have a significant impact on this business area, especially on our automotive-related businesses.

- Opportunities**
- Increasing demand for vehicular turbochargers to downsize engines and lower environmental impact
  - Increasing demand due to ongoing urbanization in Southeast Asia and China
  - Desire for machines with high energy efficiency due to heightened environmental awareness
  - Increasing needs for efficient logistics facilities due to the expansion of e-commerce
  - Increasing interest in traceability that takes into account hygiene
- Risks**
- Shrinking market for turbocharged vehicles due to vehicle electrification
  - Commoditization of vehicular turbocharger market
  - Decreasing number of cars owned in Japan
  - Intensification of competition with foreign manufacturers, particularly those from emerging nations
  - Decreasing needs for new construction due to weak market appetite for capital expenditure



## Aero Engine, Space & Defense

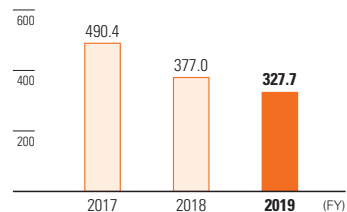
Whether developing and manufacturing next-generation engines or rockets, we are paving the way for the future of aerospace, using our organizational and technical skills to pursue the latest in global innovations.

The sharp decline in air travel demand due to the COVID-19 pandemic has affected sales of aero engines and spare parts. Many aircraft with IHI engines are newer models, which will be given priority when carriers restart operations, and therefore a relatively early recovery of profits can be expected in areas such as maintenance and the sale of spare parts.

- Opportunities**
- Expansion of maintenance business through a network of engine manufacturers
  - Launch of full-scale development of future fighter planes and engines
  - Transfer of logistical support services to the private sector
  - Overseas transfer of defense equipment
  - Increase in rocket demand due to higher demand for small satellite launches
  - Expansion in satellite data usage market
- Risks**
- Downward pressure on expenditure for domestically made defense equipment due to increased transnational procurement between governments
  - Intensified competition in the rocket launch sector
  - Intensified competition of satellite data business

## Net Sales

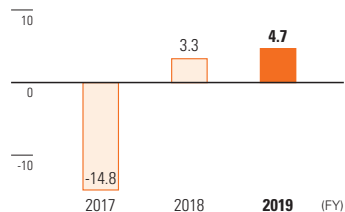
(Billions of yen)



Net sales decreased due to a delay in project progress in the Boilers Business and absent contributions from the progress of large-scale projects in the Plants Business in FY2018.

## Operating Profit

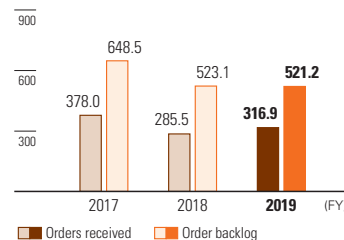
(Billions of yen)



Operating profit increased due to an improvement in the decline in profitability of the previous fiscal year in the Plants Business, offsetting the effects of a decrease in sales in the Boilers Business and a decline in profitability in the Power Systems Business.

## Orders Received and Order Backlog

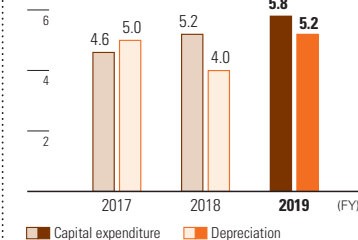
(Billions of yen)



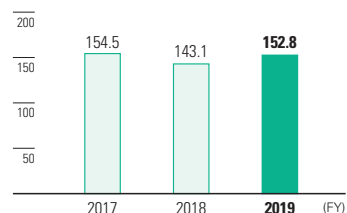
Orders received increased as a result of booking a large-scale overseas project in the Boilers Business, despite a decrease in orders in the Plants Business.

## Capital Expenditure and Depreciation

(Billions of yen)

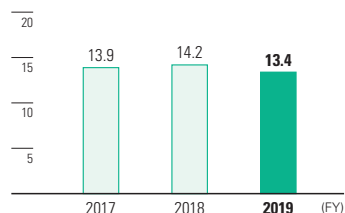


(Billions of yen)



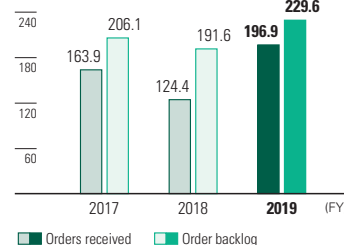
Net sales increased in the Bridges/Water Gates Business, offsetting a decrease in the Shield Systems Business.

(Billions of yen)



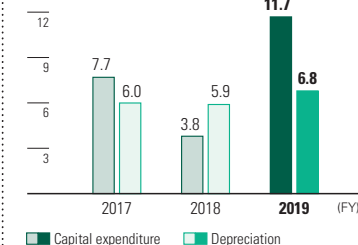
Operating profit decreased due to the decrease in sales in the Shield Systems Business, offsetting an increase in sales in the Transport Systems Business.

(Billions of yen)

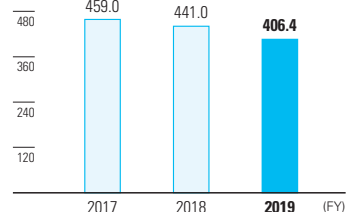


Orders received increased as a result of booking large-scale overseas projects in the Bridges/Water Gates Business.

(Billions of yen)

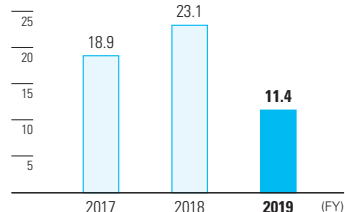


(Billions of yen)



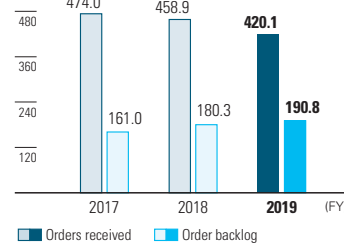
Net sales decreased due to the downturn in the Vehicular Turbochargers Business and the Thermal and Surface Treatment Business, in addition to the effect of the transfer of the Small Power Systems Business in FY2018.

(Billions of yen)



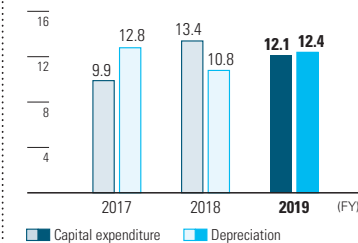
Operating profit decreased due to a decrease in sales in the Vehicular Turbochargers Business and the Thermal and Surface Treatment Business.

(Billions of yen)

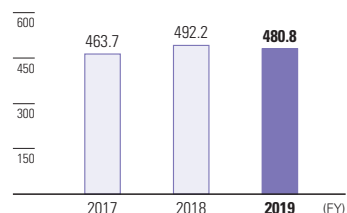


Orders received declined due to a decrease in orders in the Vehicular Turbochargers Business and the Thermal and Surface Treatment Business, despite the booking of large-scale projects in the Transport Machinery Business.

(Billions of yen)

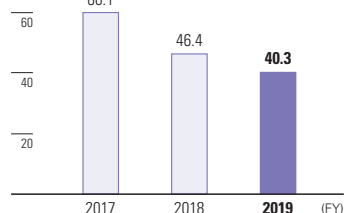


(Billions of yen)



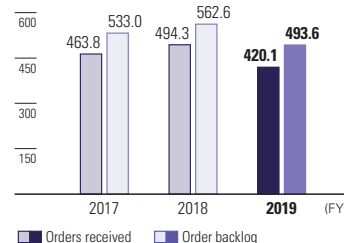
Net sales decreased in aero engines for Japan's Ministry of Defense.

(Billions of yen)



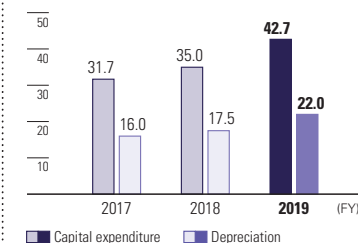
Operating profit in the Civil Aero Engines Business declined due to the effect of making the inspection process stricter in the maintenance business and to increased program costs among other factors, despite positive outcomes in cost-saving initiatives for the new engine.

(Billions of yen)



Orders received decreased in aero engines for Japan's Ministry of Defense, the Civil Aero Engines Business and the Rocket Systems and Space Exploration Business.

(Billions of yen)



# Outline and Progress of Group Management Policies 2019

The IHI Group formulated its Group Management Policies 2019, a three-year plan that was launched in FY2019.

In Group Management Policies 2019, the IHI Group defined its approach to contributing to social sustainability from a long-term perspective in light of a changing social environment.

To realize that objective, we have positioned the three years of the plan as a time for tackling the issues facing society and customers head-on, reorganizing our businesses, and transforming ourselves into an enterprise that creates new value.

## Long-Term Approach

Tackle social and customer issues with customers and create new value

### Group Management Policies 2019

**Reform businesses in earnest to tackle social and customer issues**

#### Three initiatives

#### 1 Strengthen business foundations

Accelerate aftermarket business development with customers from lifecycle perspectives

Focusing on overall lifecycles, we will align closely with customers' operations, accelerate development of aftermarket business, and help customers find solutions for their most pressing issues.

#### 2 Build a robust operational structure

Create a lean and flexible operational structure

We will optimally allocate resources, such as employees and funds, to growth areas and other strategic areas, and build a corporate structure that is resilient to change.

#### 3 Accelerate preparations for tomorrow

Transform our business model to create value

To help realize social sustainability, we will accelerate our transformation to a business model that generates new forward-looking value.

Cultivate human resources as change drivers

Safety and quality

Risk management

## Review and Assessment of the First Year of Group Management Policies 2019

	Key initiatives	Remaining issues
<b>Strengthen business foundations</b>	<p>Made progress in solution proposals, developing operation and maintenance businesses, and upgrading post-construction maintenance proposals and aftermarket business</p> <p>Began full-scale expansion of lifecycle businesses in Asia-Pacific region</p>	<p>Generating higher added value in lifecycle businesses by reinforcing internal and external collaboration</p> <p>Accelerating and expanding lifecycle businesses overseas</p>
<b>Build a robust operational structure</b>	<p>Made progress in business restructuring to achieve optimal allocation of resources, such as through business integrations and centralization of functions</p> <p>Leveraged IoT for business process reform and made progress with smart factory initiatives</p>	<p>Improving cash flows</p> <p>Accelerating shift of resources to profit-making businesses</p>
<b>Accelerate preparations for tomorrow</b>	<p>Made progress in collaborating with domestic and overseas customers and partners to create new business models</p> <p>Made some progress in developing technologies and businesses in each business area</p>	<p>Accelerating product and business commercialization</p> <p>Stepping up exploration of prospective businesses from a value chain perspective</p>

## FY2020 Initiatives

Under Group Management Policies 2019, the medium-term management plan now in its second year, we are aiming to create new value and to contribute to social sustainability by working with our customers to tackle social and customer issues from the perspective of product lifecycles.

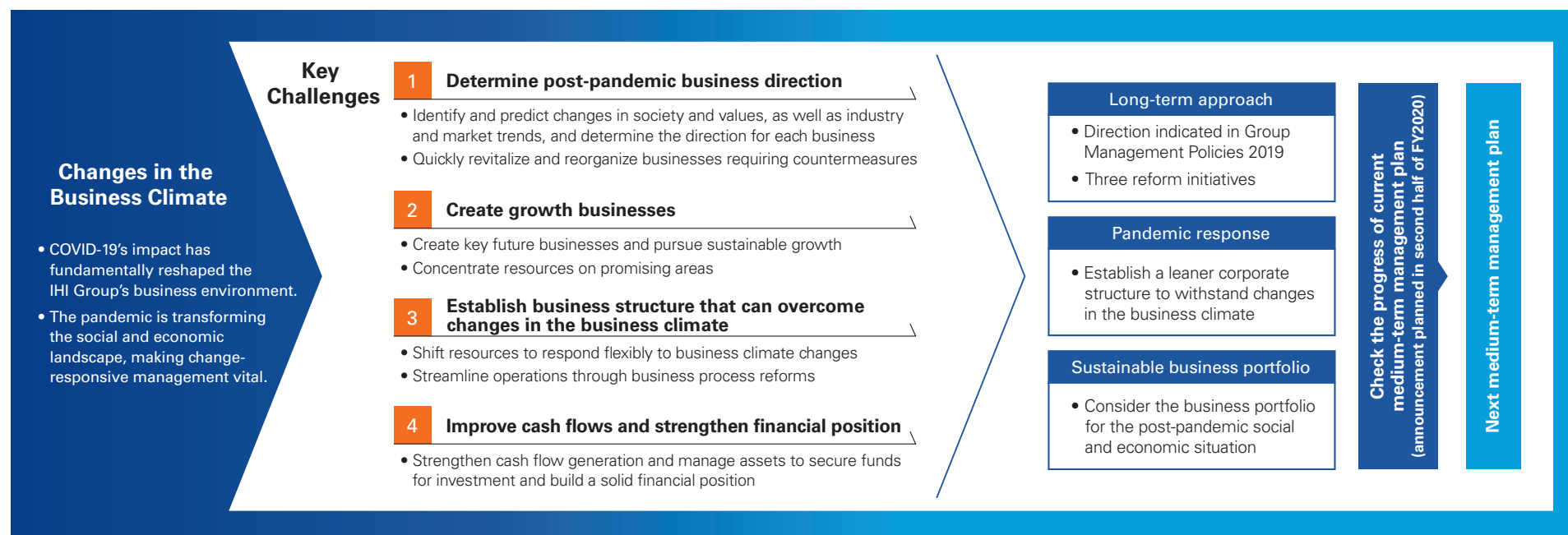
In addition, the COVID-19 pandemic has led to changes in values and altered social and consumer behavior. Consequently, restructuring of corporate business operations and the progress of digitalization are expected to accelerate. Under the approach set forth in Group Management Policies 2019, we will reassess how to respond to the new normal as a sustainable company, ascertain our business direction and promote structural reforms and portfolio management.

The COVID-19 pandemic is having a significant impact on the performance of the Civil Aero Engines Business, as sales of engines and spare parts have fallen due to the sharp decline in passenger demand and deteriorating business conditions for airlines. In the automotive industry, despite expectations of an early recovery in the Chinese market, sales in the Vehicular Turbochargers Business are also projected to decrease due to the decline in global automotive demand and suspension of production operations of auto manufacturers.

Taking these conditions into account, we have reexamined the current medium-term management plan,\* and will work on formulating the next plan.

\* A revision to the management policies was announced on November 10, 2020:

📄 Presentation on Financial Report of 2Q, 2020 "Project Change"







**Takeshi Yamada**

Executive Vice President  
Senior Executive Officer

## Anticipating changes in the business environment, we will reconfigure our business portfolio and work to enhance the Group's overall investment efficiency.

### We invested in growth business areas, particularly the Aero Engine, Space & Defense Business Area.

In Group Management Policies 2019, our medium-term management plan, our aim was to strengthen cash generation, and to use that cash to transform our business model in order to solve social issues, thereby enhancing the IHI Group's corporate value. However, we were unable to avoid a short-term decline in production efficiency in the Aero Engine, Space & Defense Business Area, which requires a large amount of working capital, as we took corrective steps following the inadequate inspection case in the Civil Aero Engine Maintenance Business that occurred in 2019. Consequently, cash generation was unsatisfactory.

As a result of our efforts to correct this issue and prioritize safety and quality in everything we do, productivity generally recovered to its previous level. However, moving into FY2020, the Civil Aero Engines Business is being significantly impacted by movement restrictions related to the COVID-19 pandemic. Our efforts to improve cash flows will continue, but in the short term, our main focus will be on securing liquidity using diverse financing sources.

In the current medium-term management plan, we planned to generate sufficient cash by balancing profitability and efficiency, and to use that cash to make growth investments of ¥420 billion over the three years. That comes to an average of ¥140 billion per year. Our investments in FY2019 did not reach the scale we expected because we are executing investments only after screening and other assessment of the anticipated investment effect. About

70% of investments were allocated to businesses positioned as growth businesses, particularly the Aero Engine, Space & Defense Business Area.

### We will transform our corporate structure while minimizing the impact of COVID-19.

The COVID-19 pandemic has led to a steep decline in sales, mainly in the Civil Aero Engines Business, and significant deterioration will be unavoidable not only in profits, but also in cash flows. In response, we have implemented countermeasures in the short term, including the securing of financing to ensure liquidity on hand, partial freezing and/or reduction of investments, and reduction of total cost/fixed cost. The short-term partial freezing and/or reduction in investments mean that narrowing down the businesses to which we should allocate resources will be even more important.

Consequently, to achieve Group Management Policies 2019, we also need to swiftly advance the review of our business portfolio and corporate structure based on the assumption of a "with-COVID-19" scenario. First, after building a business continuity framework that ensures the safety of employees by thoroughly reviewing work systems and business processes, we will work toward the early recovery of the Civil Aero Engines Business and accelerate the transformation of our business model with a focus on ESG. In addition, we will flexibly allocate cash generated through reduction of working capital, as well as human resources to businesses where we have a strong competitive edge. In this allocation of resources, we will emphasize

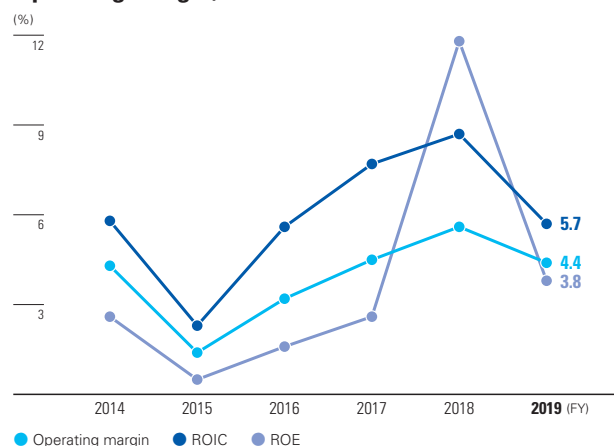


the growth potential and profitability of businesses and investment efficiency, balanced with contribution to solutions for the issues facing customers and society. We plan to revise the targets of Group Management Policies 2019 to reflect the results of our consideration of these factors.

### Based on our cross-shareholding policy, we sold all our holdings of seven stocks and part of our holdings of two stocks.

As a general rule, we look to reduce cross-shareholdings after having engaged in suitable dialogue with the issuing company. However, we may hold shares in strategic partners for business alliances, joint research and development, or other forms of collaboration, for the purposes of pursuing medium- to long-term growth and increased corporate value. Based on this policy, the Board of Directors reviews all cross shareholdings every year to verify the economic rationality of continuing to hold them. In FY2019, of the 57 cross-held stocks (including 26 stocks contributed to the retirement benefit trust), we sold all of our holdings in seven stocks and part of our holdings in two stocks.

### Operating Margin, ROIC and ROE



### We strive to pay stable dividends with a target consolidated dividend payout ratio of 30%.

Our shareholder return policy of distributing stable dividends with a target consolidated dividend payout ratio of 30% remains unchanged. For FY2020, however, it is difficult to rationally calculate the impact of the COVID-19 pandemic on our consolidated results at present, and whether we will have adequate funds for dividends at the end of the fiscal year is not certain. Therefore, we have regrettably decided to forgo the interim dividend for this period. We have yet to make a decision on the year-end dividend, as we need to give further consideration to the forecasts of results.

### We aim to solve social issues through the initiatives of Group Management Policies 2019.

Due to the COVID-19 pandemic, the IHI Group is being buffeted by changes in the business environment unlike anything previously experienced. However, we will continue to operate while protecting the health of employees, and by implementing the initiatives described in Group

Management Policies 2019\* we will help to solve social issues and enhance corporate value while meeting the expectations of stakeholders.

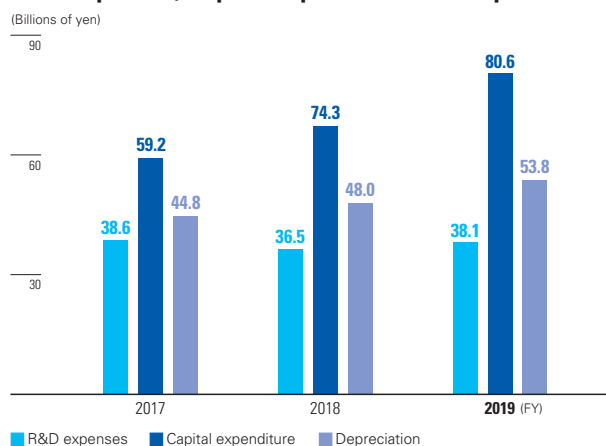
\* A revision to the management policies was announced on November 10, 2020: [Presentation on Financial Report of 2Q, 2020 "Project Change"](#)

### Performance (Consolidated)

	FY2017	FY2018	FY2019
Operating profit	¥72.2 billion	¥82.4 billion	¥60.7 billion
Operating margin	4.5%	5.6%	4.4%
ROIC <sup>1</sup>	7.7%	8.7%	5.7%
Debt-to-equity ratio <sup>2</sup>	0.92	0.93	1.38
ROE <sup>3</sup>	2.6%	11.8%	3.8%
Equity to total assets	19.9%	21.0%	18.7%
CCC <sup>4</sup>	83 days	97 days	120 days
Dividends	Interim: ¥3 per share Year-end: ¥30 per share (after a consolidation of common stock)	¥70 per share (¥30 interim and ¥40 at year-end)	¥50 per share (¥30 interim and ¥20 at year-end)

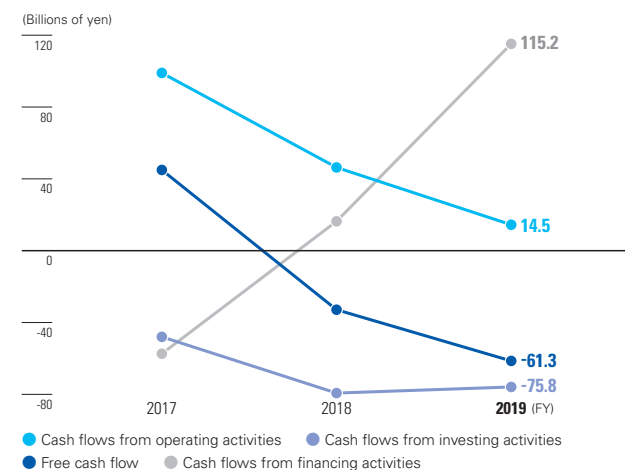
- (Operating profit + Interest and dividend income) after tax ÷ (Owners' equity + Interest-bearing liabilities)
- Interest-bearing liabilities ÷ Net assets
- Profit attributable to owners of parent ÷ (Average of owners' equity at end of previous fiscal year and end of current fiscal year)
- (Working capital ÷ Net sales) × 365 days

### R&D Expenses, Capital Expenditure and Depreciation



Note: The calculation method for capital expenditure and depreciation changed from FY2019. Figures for FY2018 show restated amounts according to the FY2019 calculation method.

### Cash Flows



### Basic Approach to Human Resources Management

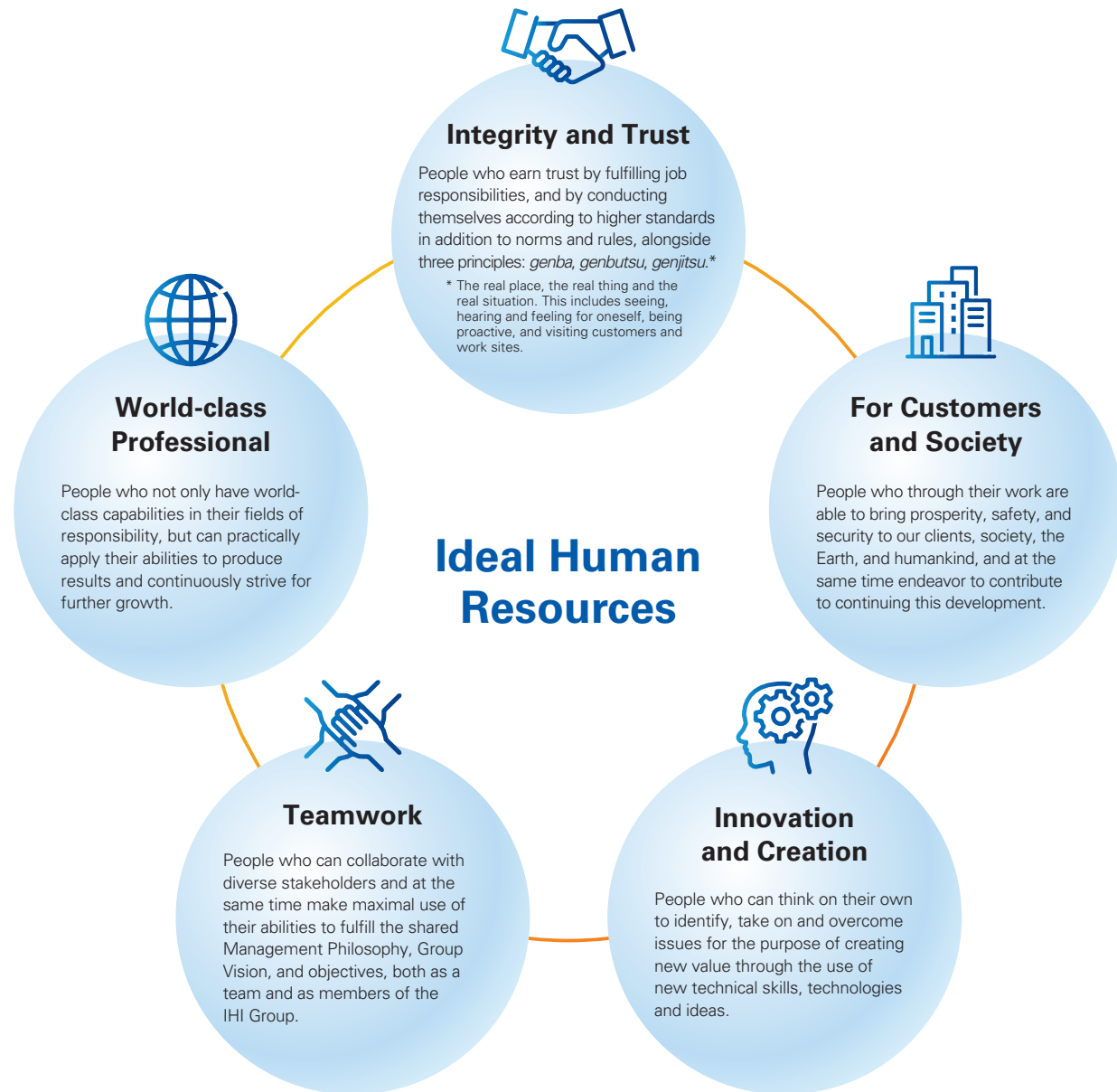
Based on the tenets of its Management Philosophy, “Contribute to the development of society through technology” and “Human resources are our single most valuable asset,” the IHI Group works to develop and secure professionals as its most important management resource.

IHI has made diversity part of its human resources strategy, and strives to provide workplace environments where diverse individuals are empowered to reach their full potential.

### The Attributes We Seek in Change Drivers

In Group Management Policies 2019, we seek to contribute to social sustainability from a long-term perspective by enhancing both customer value and the IHI Group’s corporate value. To achieve these goals, we will develop talent capable of driving our business transformation by responding flexibly and swiftly to changes in the business environment.

Based on our Management Philosophy and the IHI Group Vision, we formulated the Group Human Resource Management Policy as our basic policy for talent development. The policy defines our “ideal human resources” and identifies five qualities—“integrity and trust,” “for customers and society,” “innovation and creation,” “teamwork,” and “world-class professional”—as the values that all IHI Group employees should embody. We reflect these values in employee recruitment, development and evaluation.



# VOICE

We aim to grow as professionals by keeping these five qualities in mind as we work.

## Treat people with a commitment to integrity and trust

I think it is important to think of work as much more than just an assigned task, and to go about it with a sincere desire to help others as a fellow human being. That feeling will always come through to the other person. Build a good relationship, then good work will follow.

### Personnel

Personnel Group, Human Resources Division, IHI

Joined IHI in FY2014

Patcharaporn Leknoi



## Think first about what you can do for customers and society

My job is to weld the pipes that make up boilers. Normally, I have very few opportunities to hear from customers directly, but knowing that the finished product is being put to good use gives me pride that my welding is of service to society. Working with pride changes how you look at each job and provides the inspiration to do even better.

### Manufacturing

Panel Manufacturing Group, Manufacturing Department, Aioi Works, Boilers Business Unit, Resources, Energy & Environment Business Area, IHI

Joined IHI in FY2018

Tomomi Nagase



## Pursue the creation of new value by tirelessly striving for innovation and creation

When attempting to create something new, it is important to also talk outside the division with people in other business areas or external parties. Establishing connections across the Company is a way to encounter ideas and ways of thinking that may not have otherwise occurred to you, and new combinations will be created.

### Design

Airfoil Parts Design Engineering Group, Civil Engine Engineering Department, Civil Aero Engine Division, Aero Engine, Space & Defense Business Area, IHI

Joined IHI in FY2004

Takaya Kato



## Act while coordinating with others and thinking about teamwork

The IHI Group has about 29,000 employees. In that context, we should think about what we want to accomplish, and how we want to contribute to realizing the vision of the Company and the division. When the position of each person is clearly defined, our relationships as part of one Company-wide team will grow stronger.

### Personnel

Manager, Administration Division, Business Support, IHI

Joined IHI in FY2005

Kazuyoshi Yogo



## Aim high as a world-class professional

I joined IHI after studying business administration, with a major in English and Japanese, at a university in South Korea. Of course, I encountered various differences at the Company, such as in its practices and philosophy. Whenever I felt a difference, I would dig deeper on my own with a spirit of inquiry to discover its root causes. I think that kind of proactive attitude leads to world-class professionalism.

### Finance

Cost Accounting & Control Group, Finance & Accounting Division, IHI

Joined IHI in FY2015

Daehoon Jeong



## Diversity and Inclusion

To achieve our goal of “cultivating human resources as change drivers,” it is important to organically link activities such as recruitment, training and assignment, evaluation, remuneration and promotion, and ensure that they are functioning effectively.

Moreover, the growth of employees is a collaborative endeavor between the employee and the Company, with the employee making efforts to grow through his or her daily work, and the Company providing opportunities to connect those efforts to growth.

The IHI Group clearly defines human resource development responsibilities for employees and responsibilities for the Company, as well as the roles of supervisors, departments and HR divisions in providing development opportunities. Furthermore, development is supported through the formulation of educational frameworks and training curricula, as well as a unique development path for each person in the workplace.

## Overview of Talent Development



## IHI Group Education and Training Programs

(As of March 16, 2020)

		Management Training			Professional Training			Training by Level and Position			Global Human Resource Training		Diversity	Open Lecture			
Managers	Senior Management	Senior Executive Program	Training for Newly Appointed Officers at Affiliated Companies	Education by Job Category and Department													
	General Managers	Executive Manager Program								Executive Manager Program at Affiliated Companies							
		Business Leader Program (Advanced)												Middle Management Training			
	Section Managers									Professional Engineering Training Professional Quality Training Production Management Training Project Training for Product Development Data Analyst Training Design Strategist Training	Manager Training			Global Leader Training (On-site University Program)	Business English Lessons		Overseas Appointment Training and Language Lessons
Workplace Leaders	Assistant Managers	Business Leader Program (Basic)			Instructor Training	Leader Training	Foreman Training										
Senior Employees	Senior Employees					Middle Level Employee Training	Assistant Foreman Training	Global Human Resource Training (Overseas Appointment, etc.)									
Junior Employees	Junior Employees					Third-year Employee Training Second-year Employee Training	Technical Leader Training										
					Orientation Training for New Employees Basic Technical Skills Training												
		Selective Training			Education by Level and Position			Elective Training									

## CASE STUDY 1 Introduction of Career Development Program (CDP)

In 2019, IHI introduced a Group-wide Career Development Program (CDP) that tailors to the needs of each employee. This program encourages independent career development, accelerated growth, and lifelong learning.

For the program to work effectively, it is important to bring out employee motivation and workplace vitality through interviews and coaching by supervisors. Therefore, IHI provides training to supervisors to continually enhance their coaching skills.

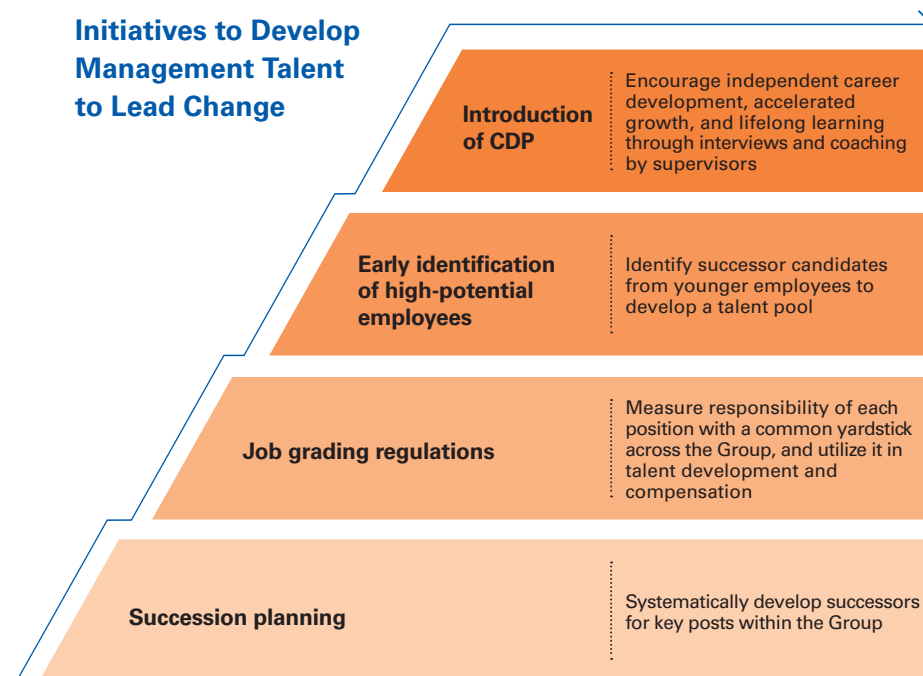


## CASE STUDY 2 Selection and Development of Management Talent to Lead Change

To carry out our business transformation, management talent to lead change will be essential. The IHI Group is taking a number of steps to that end, including succession planning for systematic development of successors, job grading to measure responsibility with a common yardstick across the Group, and identifying successor candidates among younger employees.

Effective from FY2020, we have revised the employee compensation system. This system will ensure that the right people are in the right positions throughout the Group, and that we are able to actively select, develop and promote capable and motivated employees.

### Initiatives to Develop Management Talent to Lead Change





## Directors

Name Position at the Company	Reasons for nomination	Attendance at Board of Directors meetings in FY2019	Period in office
 <b>Tsugio MITSUOKA</b> Chairman of the Board	Tsugio Mitsuoka has led IHI Group management since April 2016. He has actively carried out the selection and concentration of business operations and the transformation of the business model in response to the changing business environment. He has also built stronger earnings foundations for the Group by bolstering risk management and ensuring compliance. Since April 2020, he has been working to further strengthen corporate governance as Chairman of the Board. We believe his abundant experience and insight as a corporate manager will be utilized in the management of the IHI Group.	18 out of 18 (100%)	6 years
 <b>Hiroshi IDE</b> President <span>Nomination</span> Chairperson	Hiroshi Ide has accumulated a great deal of knowledge mainly in the overseas marketing division for the Energy Plant Business. As Managing Director of an overseas subsidiary and subsequently as the manager responsible for a business area, he has formulated business strategies and carried out business operations with a long-term perspective for the realization of a carbon-free recycling-oriented society. Since April 2020, he has led the IHI Group management as Chief Operating Officer. We believe his abundant international experience, accomplishments, and insight will be utilized in the management of the IHI Group.	—	Since June 2020
 <b>Takeshi YAMADA</b> Executive Vice President <span>Remuneration</span>	Takeshi Yamada has accumulated a great deal of knowledge mainly in the finance and accounting field as well as corporate planning, and led the Group's finance and accounting. Since April 2019, he has worked on Group financial strategies and improvement in the financial condition as Executive Vice President. We believe his high level of insight into overall Group business management will be utilized in the management of the IHI Group.	18 out of 18 (100%)	3 years
 <b>Tomoharu SHIKINA</b> Executive Vice President	Tomoharu Shikina has accumulated a great deal of knowledge in the aero engine technology development field. He has been responsible for managing the global Aero Engine, Space & Defense Business and strived to grow the business. We believe his abundant accomplishments, experience, and insight will be utilized in the management of the IHI Group.	18 out of 18 (100%)	4 years
 <b>Masafumi NAGANO</b> Director <span>Remuneration</span>	Masafumi Nagano has accumulated a great deal of knowledge mainly in human resources. He has worked on business model transformation centering on the lifecycle business in the Industrial Systems & General-Purpose Machinery Business. Since April 2020, he has been involved in planning management strategies, drawing on his experience in both corporate and business divisions. We believe his extensive experience, accomplishments, and insight will contribute to the growth of the IHI Group.	18 out of 18 (100%)	2 years
 <b>Kouichi MURAKAMI</b> Director	Kouichi Murakami gained experience in the research and development of materials as well as overall technological management in technology and intelligence integration. After being the manager responsible for a business division, he has led the technology and intelligence integration as well as engaged in creating new businesses, drawing on his high level of insight across all technologies. We believe his extensive experience, accomplishments, and insight will be essential for the growth of the IHI Group.	18 out of 18 (100%)	2 years

Name Position at the Company	Reasons for nomination	Attendance at Board of Directors meetings in FY2019	Period in office
 <b>Takeshi KAWAKAMI</b> Director	Takeshi Kawakami has accumulated a great deal of knowledge mainly in the bridge design and construction divisions. He served as the manager responsible for many domestic and overseas projects, and subsequently as the president of a company formed through IHI acquisitions of major operations in Japan, which engages in the Bridges/Water Gates Business. He has strived to grow the social infrastructure-related business within the Group. We believe his abundant accomplishments, experience, and insight will contribute to growth in the Social Infrastructure & Offshore Facilities Business Area and across the IHI Group as a whole.	—	Since June 2020
 <b>Yasuhiro SHIGEGAKI</b> Director	Yasuhiro Shigegaki has accumulated a great deal of knowledge mainly in technology and intelligence integration. In addition to having served as the chairman of the board of an overseas entity that IHI acquired in the Thermal and Surface Treatment Business, he has actively pursued global expansion by leading domestic and overseas Group companies engaged in related businesses to achieve growth. We believe his extensive experience, accomplishments, and insight will contribute to the growth of the IHI Group, including the Industrial Systems & General-Purpose Machinery Business.	—	Since June 2020
 <b>Taketsugu FUJIWARA</b> Outside Director <span>Remuneration</span> Chairperson <span>Nomination</span> <span>Independent</span>	Taketsugu Fujiwara gained extensive experience and broad insight at the helm of a general chemicals manufacturer, where he implemented diversified management. We aim to have these qualities reflected in IHI management, and acknowledge his proven ability in management oversight and monitoring functions from an independent perspective.	17 out of 18 (94%)	5 years
 <b>Kazuhiko ISHIMURA</b> Outside Director <span>Remuneration</span> <span>Nomination</span> <span>Independent</span>	Kazuhiko Ishimura gained extensive experience and broad insight at the helm of a comprehensive materials manufacturer. We aim to have these qualities reflected in IHI management, and acknowledge his proven ability to perform management oversight and monitoring functions from an independent perspective.	18 out of 18 (100%)	3 years
 <b>Yoshiyuki NAKANISHI</b> Outside Director <span>Remuneration</span> <span>Nomination</span> <span>Independent</span>	Yoshiyuki Nakanishi has gained extensive experience and broad insight as the corporate manager of a global chemical manufacturer by implementing various measures to respond to changes in the business environment. We aim to have these qualities reflected in IHI management, and expect him to carry out management oversight and monitoring functions from an independent perspective.	—	Since June 2020
 <b>Chieko MATSUDA</b> Outside Director <span>Nomination</span> <span>Independent</span>	Chieko Matsuda has gained abundant knowledge in business strategy and finance strategy through her research and studies, and broad insight through her experience as an outside officer of several companies. We aim to have these qualities reflected in IHI management, and expect her to carry out management oversight and monitoring functions from an independent perspective.	—	Since June 2020

Remuneration Remuneration Advisory Committee Member Nomination Nomination Advisory Committee Member

Independent Officer satisfying Article 436-2 of the Securities Listing Regulations of the Tokyo Stock Exchange and IHI's Independence Criteria for Outside Officers



## Audit & Supervisory Board Members

Name Position at the Company	Reasons for nomination	Attendance at Board of Directors meetings / Audit & Supervisory Board meetings in FY2019	Period in office
 <b>Taizo SUGA</b> Standing Audit & Supervisory Board Member	Taizo Suga has accumulated a great deal of knowledge mainly in the finance and accounting field since joining IHI. He was appointed as the President and Chief Executive Officer of IHI ASIA PACIFIC PTE. LTD. We believe his high degree of specialist knowledge in financial management and wide ranging business experience in overall business management will be utilized in the effective auditing of the IHI Group.	<b>18</b> out of 18 (100%)  <b>13</b> out of 13 (100%)	<b>3</b> years
 <b>Takashi NIIMURA</b> Standing Audit & Supervisory Board Member	Takashi Niimura has accumulated a great deal of knowledge in the sales and marketing field since joining IHI. As the manager responsible for supervising domestic and overseas branches and affiliated companies, he has carried out sales strategies from a Companywide perspective, while globally expanding operations and managing risks according to the situation in each country. We believe his abundant accomplishments, experience, and insight will be utilized in the effective auditing of the IHI Group.	—	Since June 2020
 <b>Tomomi YATSU</b> Outside Audit & Supervisory Board Member <b>Independent</b>	Tomomi Yatsu has accumulated extensive experience and insight in responding to various corporate challenges as an attorney at law and a certified public accountant and has been carrying out the auditing functions of IHI management from an independent perspective.	<b>18</b> out of 18 (100%)  <b>13</b> out of 13 (100%)	<b>3</b> years
 <b>Toshio IWAMOTO</b> Outside Audit & Supervisory Board Member <b>Remuneration Independent</b>	Toshio Iwamoto has gained extensive experience and broad insight as a corporate manager. We expect him to strengthen corporate governance and use these qualities and his independent perspective in IHI management auditing functions. Given that IHI is engaged in transforming its business model, we believe he will utilize his extensive IoT knowledge and experience in system development and other operations.	<b>14</b> out of 14* (100%)  <b>10</b> out of 10* (100%)	<b>1</b> year
 <b>Aiko SEKINE</b> Outside Audit & Supervisory Board Member <b>Independent</b>	Aiko Sekine has accumulated abundant experience and insight as a representative of an auditing company and the Chairman and President of JICPA. We expect these qualities and her independent perspective to be reflected in the management auditing functions. Although she has not been involved in company management, we believe she will adequately execute her duties as an outside Audit & Supervisory Board member.	—	Since June 2020

\* Shows attendance at Board of Directors meetings/Audit & Supervisory Board meetings held after appointment as Audit & Supervisory Board member.

## Executive Officers

### Tsugio MITSUOKA

Chief Executive Officer  
In charge of Business Relating to Internal Audit and Risk Management

### Hiroshi IDE

Chief Operating Officer  
President of Resources, Energy & Environment Business Area

### Takeshi YAMADA

Senior Executive Officer  
Assistant to the President,  
In charge of Group Finance & Accounting

### Tomoharu SHIKINA

Senior Executive Officer  
Assistant to the President, President of Aero Engine, Space & Defense Business Area,  
In charge of Business Relating to Public Relations and Investor Relations, Procurement and Information Management,  
In charge of Group Business Process Platform

### Masafumi NAGANO

Managing Executive Officer  
In charge of Business Relating to Corporate Planning and Human Resources and Labor,  
In charge of Group Safety and Health

### Kouichi MURAKAMI

Managing Executive Officer  
General Manager of Technology & Intelligence Integration, In charge of Group Engineering, In charge of Business Relating to New Corporate Businesses

### Kazuki AWAI

Managing Executive Officer  
In charge of Business Relating to Administration, Legal and CSR  
In charge of Group Compliance

### Yoshinori KAWASAKI

Managing Executive Officer  
Vice President of Industrial Systems & General-Purpose Machinery Business Area

### Yutaka KUNISADA

Managing Executive Officer  
General Manager of Solution & Engineering and New Corporate Businesses Headquarters

### Takeshi KAWAKAMI

Managing Executive Officer  
President of Social Infrastructure & Offshore Facilities Business Area,  
In charge of Monozukuri System Strategy, and Group Quality Assurance

### Yoshinori KOMIYA

Managing Executive Officer  
General Manager of Intelligent Information Management Headquarters

### Yasuhiro SHIGEGAKI

Managing Executive Officer  
Vice President of Industrial Systems & General-Purpose Machinery Business Area

### Shunichi TAKAYANAGI

Executive Officer  
Vice President of Social Infrastructure & Offshore Facilities Business Area

### Mitsutoyo YOSHIDA

Executive Officer  
General Manager of Project Risk Management Division

### Masato SHIDA

Executive Officer  
General Manager of Human Resources Division

### Hideo MORITA

Executive Officer  
Vice President of Aero Engine, Space & Defense Business Area

### Kouji TAKEDA

Executive Officer  
Vice President of Resources, Energy & Environment Business Area,  
President of IHI Plant Services Corporation

### Tetsuji FUJIMURA

Executive Officer  
Vice President of Aero Engine, Space & Defense Business Area

### Kiyoshi NIHEI

Executive Officer  
General Manager of Global Marketing & Sales Headquarters and Vice President of Industrial Systems & General-Purpose Machinery Business Area,  
In charge of Group Operations

### Noriko MORIOKA

Executive Officer  
Deputy General Manager of Solution & Engineering and New Corporate Businesses Headquarters



**Taketsugu Fujiwara**  
Outside Director

Career background: Mr. Fujiwara is currently a special advisor of Asahi Kasei Corporation, where he previously held the posts of president and representative director, and vice chairman. In providing advice and recommendations to IHI's management, he draws on his extensive experience and broad insight from implementing multifaceted management.

## Pushing for further transformation driven by the conviction of IHI's beliefs

### Promoting Change with Strong Determination under the New Management Structure

Since my appointment as an outside director, I have exchanged opinions and offered advice and suggestions on initiatives for business structure reforms. IHI is truly a leader of the heavy industry that has underpinned Japan's postwar growth. Because of its history and eminence, changing its culture and business model is no easy matter. Nevertheless, top management has maintained strong determination in its commitment to change since Chairman Mitsuoka's time as president. Now I believe that IHI will be able to take its reforms a step further through President Ide's energy and vitality.

### Accelerating Change in Governance

The Board of Directors has changed. Directors who also have executive roles have come to express opinions in a supervisory capacity, and I feel that the separation of execution and supervision is effective. I also get a sense that IHI is moving toward autonomous governance—for example, risks are brought up not only by outside directors but also from within the Company.

Responses to misconduct are not left to frontline staff, but are handled at the management level. In the response to inadequate inspection practices in the Civil Aero Engine Maintenance Business, frontline employees themselves thought of and proposed actions for improvement. In addition, organizational changes were made to put a person in charge of consulting with rule makers to establish rules at the management level.

I am chairperson of the Remuneration Advisory Committee. For FY2020, we debated how the impact of COVID-19, which existing mechanisms are unable to take account of, should be reflected in remuneration. In order to allow for factors specific to FY2020, we clarified issues to address through dialogue between the President and other officers, and made it so that responses to those issues will be evaluated and reflected in remuneration.

### Sustainable Growth through a Well-Substantiated Renewal

Due to the impact of COVID-19, the global business landscape has shifted dramatically, and created a situation where nobody has the right answers. Rather than being fenced in by the past, President Ide and the executive team will forge new paths by communicating their values to stakeholders, heeding how stakeholders respond, and taking quick action.

IHI has carried out the job of "building society" by applying the shipbuilding technologies on which it was founded to branch out into bridges, power plants and other businesses. The Aero Engines Business in particular has expanded and grown into a key earnings driver. With this business as a cornerstone, I think IHI needs to accelerate its transformation by taking a fresh look at what it does well, based on its technologies and the trust it has built.

In further deepening discussions at Board of Directors meetings, I will do my utmost to ensure that IHI carries out a well-substantiated renewal.



**Toshio Iwamoto**  
Outside Audit &  
Supervisory Board Member

Career background: In his audit work at IHI, Mr. Iwamoto draws on his abundant experience and broad insight gained while serving as CEO and director in charge of the Financial Segment at NTT DATA Corporation.

## Strengthening risk management and being flexible and adaptable to changes in the business climate

### Impressions after One Year as an Audit & Supervisory Board Member

My first encounter with IHI goes back more than a quarter-century. NTT DATA's head office was built on land owned by IHI, so I used to watch the new ship launching ceremonies of the shipbuilding works of Ishikawajima-Harima Heavy Industries, as the Company was known at the time. I was appointed as an Audit & Supervisory Board Member one year ago, but my impression of IHI has not changed—I still see it as a very serious company. IHI has a well-established reputation for its technological strengths, and the Company has consistently earned trust through its integral role in the building and maintenance of the social infrastructure, while evolving technologies to meet the demands of the times, from shipbuilding to energy and aero engines.

I believe management is the art of adapting to the business environment. Society will always change. It is important to assess the implications from a business management perspective, and then transform what the company does accordingly. That includes responding to the current pandemic. The president is the one who holds the key to corporate management and his or her primary job is to set the direction for the company. The timing for IHI's appointment of a new president comes amid the tumultuous situation created by the COVID-19 pandemic. Nonetheless, I am rooting for President Ide.

### Measures for Continuing Growth and Advancement

The Company has two main challenges to address for future growth. First is the active exchange of technologies and human resources across business divisions. One can find a silo mentality at every company, but I think having a long history can make it especially hard to cross organizational boundaries.

Second is the strengthening of risk management. Currently, under the leadership of Chairman Mitsuoka, the Board of Directors receives regular reports on risks that have materialized. That is certainly a good thing. However, dealing with an event such as corporate misconduct or a quality problem after it occurs is only risk response. Risk management entails looking at the overall value chain to predict what could happen, and then taking proactive measures. It is this area where further improvement is needed.

### Advancing Digital Transformation and Globalization through Practical Advice

My role as an outside Audit & Supervisory Board member is to audit operations in the Company's strategic business areas based on two perspectives. The first is digital transformation. Such transformation will become increasingly important in streamlining business activities and enhancing the sophistication of products and services. The second is global management. A company that sells products to customers abroad is merely an "international company," but that does not make it a "global company." To be a global company in the truest sense, the Group must establish management systems suited to each country and region, while sharing a common set of values.

I will fulfill my duties by providing practical advice based on my management background at a tech company and contribute to the IHI Group's development.

## Corporate Governance Initiatives

### Basic Views

Our corporate governance system improves management efficiency as a way to fully leverage our unique capabilities and in turn ensure sustainable growth and maximize corporate value. As a means to this end, we have separated management supervision and business execution functions, which heightens the efficiency and aptness of internal decision-making and lays a foundation to draft and put internal rules into practice. This approach ensures proper business conduct throughout the entire Group.

IHI is consistently enhancing corporate governance to earn long-standing trust and support from all of our stakeholders, including shareholders.

We strive to further corporate governance according to the following basic policies.

- (1) Respect shareholder rights and ensure equal treatment
- (2) Strive to maintain proper working relationships with all of our shareholders, including stakeholders
- (3) Proactively disclose accurate corporate information, ensure transparency, and remain accountable to our stakeholders
- (4) Clarify roles and responsibilities of the Board of Directors and Audit & Supervisory Board to enable members to fulfill management, audit, and supervisory functions
- (5) Engage in constructive dialogue with shareholders whose investment policy aligns with medium- to long-term shareholder interests

### Overview of Corporate Governance Structure

The Company has an Audit & Supervisory Board, which comprises Audit & Supervisory Board members who audit the duties executed by directors. The Board of Directors makes decisions related to all important matters concerning the management of the Company and the Group, in addition to

supervising directors in their business execution. Outside directors, who are elected from among individuals with extensive experience and broad insight gained at the helms of management or with a high degree of specialist knowledge and diverse experience, participate in the Board of Directors' decision-making process, offer advice and make recommendations independently of managers who handle business execution.

#### Business Execution Framework

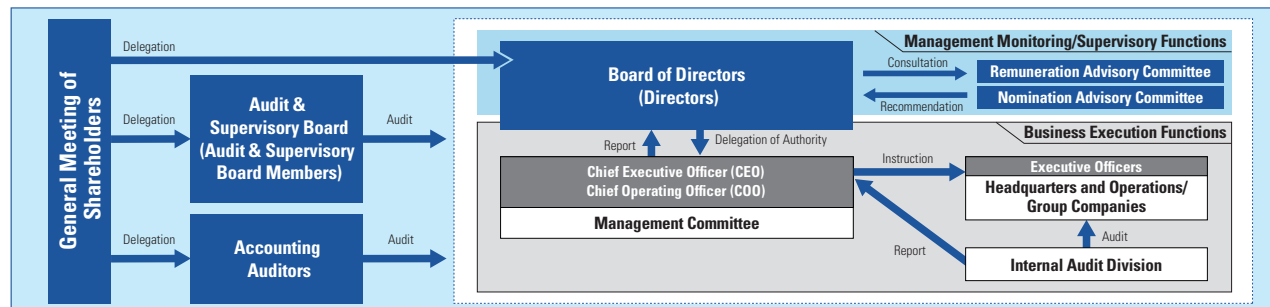
The Company introduced its Executive Officer System to strengthen decision-making and supervisory functions of the Board of Directors, as well as to improve efficiency of business execution. The Company appoints executive officers by resolution of the Board of Directors.

#### Remuneration Advisory Committee and Nomination Advisory Committee

The Remuneration Advisory Committee determines the suitability and objectivity of the officer remuneration brought before it by the Board of Directors. This six-person committee comprises three outside directors (one of whom is the chairperson), one outside Audit & Supervisory Board member, the director in charge of human resources, and the director in charge of finance and accounting.

The Nomination Advisory Committee oversees and advises the Board of Directors on appropriate officer nominations. This five-person committee comprises the President (who is the chairperson), and four outside directors.

#### Corporate Governance Structure



### Policies Relating to Appointment of Officers

We have defined "Ideal Officer Attributes." Furthermore, we have drafted the Independence Criteria for Outside Officers in accordance with the Tokyo Stock Exchange Independent Officer Requirements to ensure the independence of outside directors and outside Audit & Supervisory Board members. The Board of Directors has formulated a basic policy to appoint corporate officers who can best ensure sustainable growth and enhance medium- to long-term corporate value throughout the IHI Group according to these ideal attributes and the Independence Criteria for Outside Officers.

### Evaluation of Board Effectiveness

The Board of Directors has been conducting evaluations of its performance annually in principle since FY2015 to further its effectiveness. The Board of Directors evaluation (self-assessment) carried out in FY2019 once again verified the effectiveness of the Board of Directors.

However, we were able to identify several new risk factors from a broader view, including a need to strengthen oversight and monitoring of business execution and prevention of the spread of COVID-19. IHI affirmed these measures will deepen discussions and further enhance the effectiveness of the Board of Directors.

## Policies and Procedures in Determining Officer Remuneration

### Policy on Determination of Remuneration for Officers

Officer remuneration provides powerful motivation for IHI officers to achieve specific management goals by encouraging business execution founded in the Management Philosophy, Group Vision, and Group Management Policy for the purpose of fostering sustainable growth and increasing medium- to long-term corporate value of IHI. A fixed salary is merely one part of officer remuneration. IHI also sets appropriate performance-based bonuses

linked to fiscal performance in addition to performance-based share remuneration tied to corporate value and medium- and long-term performance. This incentivizes officers to demonstrate a sound entrepreneurial spirit.

### Procedures for Determining Remuneration

IHI determines the remuneration for directors and executive officers through deliberation and recommendations from the Remuneration Advisory Committee with the final decision made by the Board of Directors. This process ensures fairness and objectivity.

### Calculation Method for Incentives

We calculate incentives using consolidated ROIC and consolidated operating margin as performance evaluation indicators as these are important management indicators under Group Management Policies 2019.

Remuneration type	Form of remuneration	Payment amount calculation method
Performance-based share remuneration (medium- to long-term incentives)	Stock	$\text{Number of issued shares} = \left( \text{Basic points corresponding with job title ranking} \times \text{Performance evaluation payout rate corresponding with consolidated ROIC} \times \text{Percentage obtained by dividing the months of enrollment by 12} \right) \times 1/2$ <p style="text-align: center;">Variable from 0 to around 150 Level of accomplishment at end of performance evaluation period (upcoming 3 business years)</p>
	Cash	$\text{Amount of monetary payment} = \left( \text{Number of confirmed points}^1 - \text{Number of issued shares} \right) \times \text{Current market price of IHI shares on the day rights are finalized}$ <p style="text-align: center;">1. 1 confirmed point is equivalent to 1 IHI share.</p>
Performance-based bonuses (annual incentives)	Cash	<p><b>In the case of representative director</b></p> $\text{Performance-based bonuses} = \text{Standard payment amount corresponding with titles and positions} \times \left( \text{Performance evaluation payout rate corresponding with current net profit attributable to owners of parent}^2 \times 50/100 + \text{Performance evaluation payout rate corresponding with consolidated operating margin}^2 \times 50/100 \right)$
		<p><b>In the case of directors</b></p> $\text{Performance-based bonuses} = \text{Standard payment amount corresponding with title and position} \times \left( \text{Performance evaluation payout rate corresponding with current net profit attributable to owners of parent}^2 \times 30/100 + \text{Performance evaluation payout rate corresponding with consolidated operating margin}^{2,3} \times 50/100 + \text{Payout rate based on individual performance evaluation}^2 \times 20/100 \right)$ <p>2. Variable from 0 to around 200 3. In the case of a director overseeing a business area, the performance evaluation payout rate corresponding with the consolidated operating margin of the said business area is used. FY2020 adds cash flows (consolidated cash flow and consolidated cash flow of business areas in charge) as a performance evaluation indicator with the aim of securing future investment funds and building a solid financial base. The consolidated cash flow is the sum of cash flows from operating activities and investing activities.</p>

## Remuneration of Outside Directors and Audit & Supervisory Board Members

IHI provides only a fixed amount to outside directors that takes their duties into account. We also provide only a fixed salary to outside Audit & Supervisory Board members based on their duty to oversee business execution throughout the entire IHI Group. IHI determines the specific amount of remuneration together with the Audit & Supervisory Board.

### Results for FY2019 Remuneration

Details of Director and Audit & Supervisory Board Members Remuneration (Millions of yen)

Category	Number of people remunerated	Total remuneration by type			Total remuneration
		Basic remuneration	Performance-based share remuneration	Performance-based bonuses	
Directors	12	434	117	12	565
Audit & Supervisory Board Members	6	108	—	—	108
Total (outside officers)	18 (8)	542 (75)	117 (—)	12 (—)	673 (75)

Note 1: Annual remuneration for directors is capped at ¥1,090 million, annual amount for Audit & Supervisory Board members is capped at ¥120 million.

Note 2: The table includes one director and one Audit & Supervisory Board member who retired at the conclusion of the Ordinary General Meeting of Shareholders held on June 20, 2019.

Thus, the figures are different from the figures as of March 31, 2020 (11 directors and five Audit & Supervisory Board members).

Note 3: Indicated remuneration amounts are rounded down to the nearest unit.

### Targets, Results, and Other Data of Performance Evaluation Payout Rates

Type of remuneration	Performance evaluation indicator	Margin of performance evaluation payout rate	Target	Results	Performance evaluation payout rates
Performance-based share remuneration	Consolidated ROIC	0–150%	Maximum: 13% Target: 10% Minimum: 3.5%	5.7%	50%
Performance-based bonus	Current net profit attributable to owners of parent	0–200%	Maximum: ¥60.2 billion Target: ¥45.2 billion Minimum: ¥30.2 billion	¥12.8 billion	0%
	Consolidated operating margin	0–200%	Maximum: 8.0% Target: 6.0% Minimum: 4.0%	3.6%	0%



## Risk Management Initiatives

### Policies

The IHI Group considers and engages in risk management as one of the top material issues of management.

The basic objectives of risk management are ensuring business continuity, ensuring the safety of executives, employees and their families, protecting managerial resources, and maintaining public trust. We manage risk in accordance with the following action guidelines based on the Basic Code of Conduct for the IHI Group.

1. Ensure the continuity of the IHI Group's business operations.
2. Improve the public reputation of the IHI Group.
3. Protect the IHI Group's managerial resources.
4. Avoid jeopardizing stakeholders' interests.
5. Achieve recovery from damage as soon as possible.
6. Take responsible action when an issue arises.
7. Meet public requirements regarding risks.

### Risk Management Structure

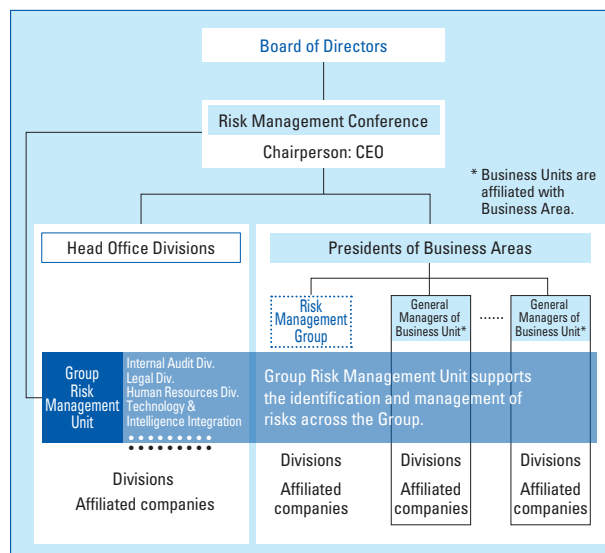
The IHI Group established the Risk Management Conference chaired by the CEO as a body to review policy initiatives, annual plans, corrective measures and other matters important to overall risk management.

We formulated the IHI Group Key Risk Management Policies to prioritize risks that need to be addressed. Each IHI division and Group company worldwide moves forward with independent risk management in accordance with these policies.

Some risks though are common throughout the entire IHI Group. Therefore, the Group Risk Management Unit made up primarily of head office divisions shares information and provides training to take advantage of expert knowledge and support risk management activities of each Group division. The Internal Audit

Division also strives to secure a suitable level of risk management by assessing the readiness and progress of the Group risk management structure.

### Risk Management Structure



### Key Risk Management Policies in FY2020

Today, the business environment around the IHI Group is changing significantly. To accelerate business transformation while responding to the significant change, IHI must thoroughly identify the risks accompanied by the ever-evolving business climate, strengthen rapid response capabilities, and spearhead uncompromising risk management through the PDCA cycle. This understanding is the basis on which we formulated and are implementing the Key Risk Management Policies.

### Key Risk Management Policies

#### Key Themes

1. Evolve compliance program
2. Settle quality assurance framework
3. Enhance risk management for important business risk

#### Full List of Risk Management Activities

1. Thoroughly implement and strengthen safety management
2. Strengthen compliance
3. Reform quality and operation systems
4. Respond to changes in management environments and competitive environments, and promote environmental management
5. Properly respond to risks associated with the execution of global strategy
6. Transition to robust project implementation and risk management structures
7. Ensure information security
8. Develop adequate Business Continuity Plans (BCP) in case of disasters/accidents
9. Ensure the appropriateness of large-scale investments
10. Improve operational productivity through workstyle reforms and build workplaces where diverse human resources can actively participate
11. Prevent leaks of confidential business information, personal information, and vital technical information
12. Maintain and improve trusting relationships with stakeholders
13. Implement thorough measures against harassment
14. Promote further improvement of diversity
15. Promote education on human rights and activities to raise awareness



# Measures in Response to the COVID-19 Pandemic

## Basic Approach

The IHI Group understands that responding to various situations including states of emergency is vital as an organization that supports social infrastructure. Therefore, we ensure business continuity of the Group.

We responded to the COVID-19 pandemic by urgently setting up a Crisis Management Headquarters led by the President as chief. As we continue our business activities, the Headquarters takes the steps necessary to prevent the spread of the virus by prioritizing the health and safety of our customers as well as officers and employees and their families above all else.

## Initiatives

### Providing a Work System to Prevent Infection

Administrative departments have increased the ratio of employees that work from home. Our works and other production bases have taken steps to reduce the risk of infection as much as possible when commuting and while at work. These measures include fewer on-site staff, alternative work schedules, and encouraging employees to commute using personal vehicles rather than public transportation. IHI also checks on the health of not only officers and employees but also their families every day and takes measures such as instructing employees that may be infected to not attend the workplace.

### Securing Items for Infection Prevention

We have even secured stable procurement routes for masks, alcohol-based disinfectants, and other items for infection prevention to distribute and stockpile at each site.

### Establishing Work Environment Guidelines

Division-specific guidelines to prevent infection have been formulated for offices, works, construction sites and other workplaces.

- Avoid the 3Cs (closed spaces, crowded places and close-contact settings) at workplaces and work sites (rules including two-meter distancing)
- Install transparent acrylic panels and use face shields

## Helping to Prevent the Spread of Infection through IHI's Businesses

### 1 Launched FeverCheck® for Temperature Screening

IHI Inspection & Instrumentation Co., Ltd. has launched FeverCheck®, which measures body surface temperature distantly. Using AI to accurately identify human faces, the system can measure the body surface temperature of multiple people simultaneously without contact, and automatically notifies the operator when it detects someone with an abnormal body temperature.

At offices, factories, schools, hotels, airports, event sites and other public places, the system efficiently screens the temperatures of people walking by without the need to stop them. This reduces the risk of infection through contact, thereby contributing to sustainable social activity while preventing the spread of the virus.



FeverCheck® in use

### 2 Developed and Ramped Up Production of High-Performance Ozone-Related Products with Air Purification and Disinfection/Deodorization Functions

IHI Agri-Tech Corporation has developed and launched medical devices and public health equipment (air cleaning and sterilization/deodorization equipment) that use ozone gas.

IHI Agri-Tech recently developed and launched a simple negative-pressure isolation tent as a quarantine space that can be used in conjunction with ozone-related products. This isolation tent is now being used in hospitals, nursing homes and other facilities where there are an insufficient number of negative-pressure rooms.

While strengthening the production system, production of these high-performance ozone-related products is being ramped up to meet demand in controlling the spread of COVID-19.



eZ-100 air purifier



Portable air purifier

# Quality-Related Compliance Initiatives

The IHI Group strives for sound compliance founded on the Basic Rules of Compliance for IHI Group and other guidelines. These activities are conducted not only to address legal compliance but also to respond to the needs of society with a full grasp of the ever-changing values and expectations of society.

IHI Group Code of Action and IHI Group Quality Declaration were newly established to ensure that the entire IHI Group practices uncompromising compliance as a basic rule in light of inadequate inspection in the Civil Aero Engine Maintenance Business in 2019. We also conducted Quality & Compliance Training and follow-up support to nurture an even greater awareness about compliance in all IHI Group directors, officers and employees.

We will continue to ensure uncompromising compliance and prevent recurrence by finding the root causes of quality issues in an effort to rebuild trust.

## Number of Compliance Training Participants

Item	Scope of Data	FY2019
Officer Training	IHI and subsidiaries in Japan	—
Line Manager Training	IHI and subsidiaries in Japan	72
Quality & Compliance Training	IHI and subsidiaries in Japan	27,866
	Affiliated companies overseas	1,774
e-Learning	Japan	18,164
	Overseas	1,214

## Strengthening Quality Assurance and Quality Management Systems

The IHI Group established the IHI Group Quality Committee as a Group-wide committee on quality. The Committee deliberated and drafted important quality policies as well as promoted activities with the officer in charge of overall Group Quality Assurance as chair. The members are made up of the presidents of business areas, executives in charge of quality for business areas, and executives of head office divisions.

## Creating Workplaces Where Everyone Has a Voice

Our president and other senior management visit worksites to engage in a dialogue where top management and employees have an equal standing for an active exchange of ideas.

In FY2019, we launched Quality Assurance (QA) teams made up of members from design, technology and quality departments at our plants in Japan to address any problems or issues faced on-site. IHI promotes ideal workplaces where employees can work in good health by solving problems from a Quality Assurance (QA) rather than Quality Control (QC) perspective based on communication and facts about the situation unique to each site.

### IHI Group Code of Action

1. We truly understand and will comply with any and all applicable rules.
2. We do not engage in any wrongdoing.
3. We respect human rights.
4. We make safety and quality for our customers a top priority.
5. We enter into fair and legitimate transactions.
6. We never impair the safety of ourselves or our colleagues.
7. We strictly manage and control information.
8. If we discover an issue, we report it immediately.

## Quality Improvement Promotion System



### IHI Group Quality Declaration

We, the IHI Group shall:

1. Always put quality first.
2. Continue improving quality via *Sangen-Shugi* and communication.
3. Listen sincerely to issues, swiftly take action and share accurate information.
4. Provide quality assurance through compliance with rules and working appropriately.
5. All strive for the satisfaction of our customers.

# Report on Large-Scale Project Risks

## Project Risk Management for Large-Scale Projects

The Project Risk Management Division was established in April 2017 following extensive losses on large-scale overseas projects from FY2014 through FY2016. The division has been strengthening the risk management system in collaboration with the risk management groups of each business unit.

To minimize project risks, the division performs pre-order and pre-investment reviews, and monitors projects that are under way. Present and former employees who are knowledgeable about IHI businesses, as well as outside experts, are appointed as certified reviewers, and conduct thorough, multifaceted reviews. In addition, given that some projects can take as long as four or five years, interim reviews timed to significant milestones are conducted to assess whether initial targets are being met.

## Embedding Risk Management into the Corporate Culture

The number of major downside events occurring in large-scale projects has been declining. Lessons learned are being incorporated into the risk management framework, and those lessons are now at the stage of being embedded as part of the IHI Group's corporate culture.

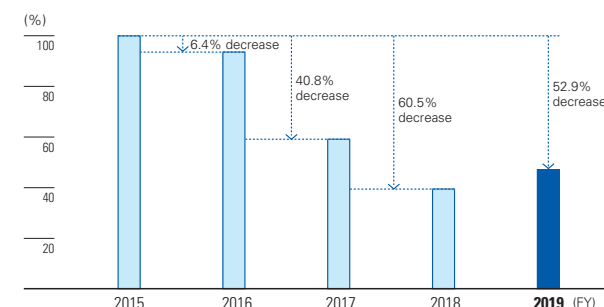
In FY2019, IHI took measures to prevent recurrence of downside events, including systematizing project risk management expertise and developing more practical training that incorporates case studies.

## Impact of COVID-19 on Projects

To date, there have been no instances of the COVID-19 pandemic having a significant impact on the execution of projects. However,

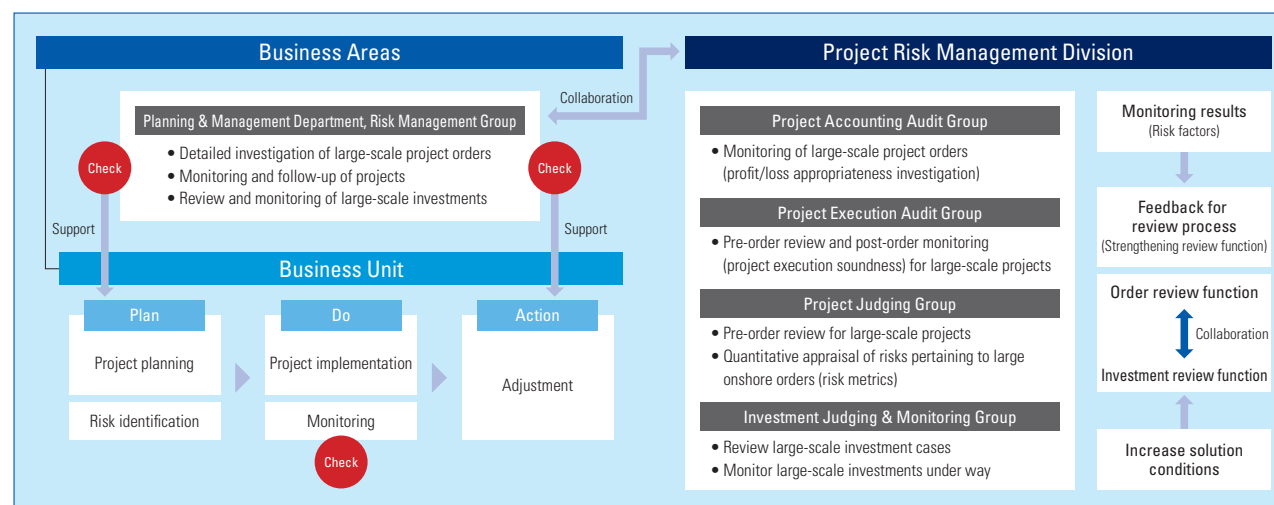
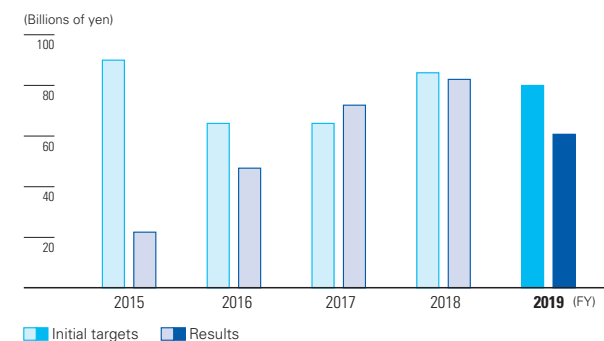
at certain overseas construction projects, restrictions on the movement of construction personnel, the temporary withdrawal of locally stationed Japanese staff and other effects have arisen, and we are therefore monitoring these situations carefully. On the front lines of projects, measures are being taken to minimize the impact on work, such as establishing online management systems that enable prompt and safe communication with customers at the site.

## Number of Downside Events on Large-Scale Projects



Note: Graph shows the number of downside events that resulted in a significant discrepancy between estimated and actual costs on large-scale projects subject to monitoring.

## Operating Profit Initial Targets and Results



## Initiatives to Address Climate Change

### Approach

Climate change has an enormous social and economic impact and is a vital social issue for companies to address in order to realize sustainability. The IHI Group sees climate change as one important management issue and is doing everything possible to combat it.

Our products and services strive to reduce CO<sub>2</sub> emissions throughout the entire lifecycle. We monitor the environmental impact from business activities at our plants, offices and other business establishments to help us reduce CO<sub>2</sub> emissions.

In May 2019, the IHI Group became a signatory to the Task Force on Climate-related Financial Disclosures (TCFD) by resolution of the Board of Directors. This framework plays a role as a tool to formulate strategies able to strengthen risk management and cultivate business opportunities.

### TCFD Initiatives

In FY2019, the IHI Group conducted simple scenario analyses of four business domains with a significantly large impact on climate change: the Energy Business, Vehicular Turbochargers Business, Bridges/Water Gates Business, and the Civil Aero Engines Business.

The first step set (1) a carbon-neutral world as the highest transition risk and (2) a world greatly impacted by climate change as the highest physical risk in our own independent scenarios drafted with reference to external scenarios drafted by the International Energy Agency (IEA) and Intergovernmental Panel on Climate Change (IPCC). The second step identified risks and opportunities for all four business domains. The third step assessed the impact on each business. The fourth and last step drafted countermeasures according to our findings.

### IHI Group Scenarios

- (1) A carbon-neutral world  
This scenario presents a world where society at large shifts to mitigate climate change to stop all greenhouse gas emissions.
- (2) A world greatly impacted by climate change  
This scenario presents a world that needs to adapt to the physical impact to directly confront drastic devastation by natural disasters.

### Risks, Opportunities and Countermeasures

IHI divides the risks and opportunities identified for each of the four business domains and the countermeasures into two categories: 1. Risks, opportunities, and countermeasures shared across all businesses, and 2. Risks, opportunities, and countermeasures specific to each business.

Countermeasures set to address the two extreme worlds anticipated by these IHI scenarios enhance the resilience of IHI Group businesses against future risks.

#### 1. Main Risks and Countermeasures Shared Across All Businesses

(1) Transition risks and countermeasures for a carbon-neutral world		
Category	Main topics	Main countermeasures and transitioning to opportunities
Policies, laws and regulations	Introduction of carbon taxes, stronger industrial waste regulations, rising costs accompanying the adoption of renewable energy and energy-efficient equipment, etc.	Reduce costs in business activities through efficient production and distribution as well as the proper management of energy consumption
Technologies	Rising costs for research and development to realize carbon-neutral products and services, failed technological development, etc.	Concentrate investments in technological development while staying acutely aware of policies, technologies, markets, and other social trends
Markets	Declining demand for products and services with high CO <sub>2</sub> emissions, etc.	Actively draft and promote business plans that always anticipate multiple business scenarios to adapt to dramatic changes in market structures
Reputation	Lost opportunities due to poor evaluations of our response to climate change, declining social credibility, etc.	Disseminate easy-to-understand information about products and services that can help both mitigate and adapt to climate change
(2) Physical risks and countermeasures in a world greatly impacted by climate change		
Category	Main topics	Main countermeasures
Acute/Chronic	Ceased business activities due to damaged offices and plants caused by typhoons, floods, or other natural disasters, etc.	Incorporate the response to climate change into the business continuity plans of plants and offices to ensure the safety of officers and employees and strengthen the supply chain



## 2. Main Risks, Opportunities, and Countermeasures Specific to Each Business (Four Main Business Domains)

(1) Risks, opportunities and main countermeasures in a carbon-neutral world				
	Energy Business	Vehicular Turbochargers Business	Bridges/Water Gates Business	Civil Aero Engines Business
Risks	<ul style="list-style-type: none"> <li>Declining demand for large fossil fuel power generation equipment</li> </ul>	<ul style="list-style-type: none"> <li>Declining demand for combustion engine vehicles unable to address carbon-neutral requirements and falling demand for existing turbochargers</li> </ul>	<ul style="list-style-type: none"> <li>Increasing procurement costs (carbon tax, etc.) for materials with high CO<sub>2</sub> emissions (concrete, steel, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Declining demand for aircraft due to carbon-neutral requirements and standardization of alternative high-speed means of transportation</li> </ul>
Opportunities	<ul style="list-style-type: none"> <li>Increasing demand for fuel conversion, carbon capture and storage (CCUS)<sup>1</sup> and other decarbonization technologies</li> <li>Increasing demand for regulated power supplies, storage energy, and Power-to-X to provide a stable energy supply as renewable energy becomes the standard</li> </ul>	<ul style="list-style-type: none"> <li>Potential to secure market competitiveness and leverage an increase in demand for turbochargers by being first to market with new turbocharger products (electric products in addition to existing models) for carbon-neutral electric vehicles (PHEV, HEV, FCV, etc.)<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>Increasing demand for roads (bridges and tunnels) to provide a more efficient transportation network</li> <li>Increasing demand for railway construction due to expansion of railway systems overseas</li> </ul>	<ul style="list-style-type: none"> <li>Increasing demand for the development of aircraft engines supporting carbon-neutral requirements and more opportunities for applications of electrification of engines and utilization of advanced material technologies</li> </ul>
Main countermeasures	<ul style="list-style-type: none"> <li>Rapidly deploy carbon-neutral technologies to society</li> <li>Promote technological development to stabilize the energy supply</li> <li>Expand the lifecycle business through remote monitoring and other Internet of Things (IoT) technologies</li> </ul>	<ul style="list-style-type: none"> <li>Rapid development and commercialization of turbochargers for electric vehicles that comply with carbon-neutral requirement trends</li> </ul>	<ul style="list-style-type: none"> <li>Achieve labor savings and remote operation through the promotion of digital transformation</li> <li>Shorten construction schedules and reduce labor costs through improvements to construction methods</li> </ul>	<ul style="list-style-type: none"> <li>Early commercialization of electric engines and advanced technologies such as advanced composites</li> </ul>
(2) Risks, opportunities and main countermeasures in a world greatly impacted by climate change				
	Energy Business	Vehicular Turbochargers Business	Bridges/Water Gates Business	Civil Aero Engines Business
Risks	<ul style="list-style-type: none"> <li>Extreme delays due to on-site construction stoppages or disasters caused by frequent severe weather</li> </ul>	<ul style="list-style-type: none"> <li>Suspension of production due to disrupted supply chains caused by frequent severe weather</li> </ul>	<ul style="list-style-type: none"> <li>Extreme delays due to on-site construction stoppages or disasters caused by frequent severe weather</li> </ul>	<ul style="list-style-type: none"> <li>Suspension of production due to disrupted supply chains caused by frequent severe weather</li> </ul>
Opportunities	<ul style="list-style-type: none"> <li>Contributing in early recovery of equipment damaged in severe weather</li> <li>Increasing demand for digital technologies to promote labor savings and remote operation</li> </ul>	<ul style="list-style-type: none"> <li>No opportunities unique to this business</li> </ul>	<ul style="list-style-type: none"> <li>Increasing demand to build robust national infrastructure</li> <li>Contributing in early recovery of infrastructure damaged in severe weather</li> </ul>	<ul style="list-style-type: none"> <li>No opportunities unique to this business</li> </ul>
Main countermeasures	<ul style="list-style-type: none"> <li>Expand the lifecycle business through remote monitoring and other Internet of Things (IoT) technologies</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen supply chains</li> </ul>	<ul style="list-style-type: none"> <li>Expand business beyond lifecycle business with wider perspective to include disaster prevention business</li> <li>Create technologies and systems that contribute to maintenance, disaster prevention, disaster mitigation, and quick recovery of infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen supply chains</li> </ul>

1. Technologies for carbon dioxide capture, utilization and storage (CCUS).

2. Electric vehicles

PHEV: Plug-in hybrid electric vehicles

HEV: Hybrid electric vehicles

FCV: Fuel cell vehicles

# Financial Summary

IHI Corporation and consolidated subsidiaries / For respective fiscal years ended March 31

FY	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Key financial highlights (Billions of yen)											
Orders received	970.4	1,200.9	1,269.6	1,225.6	1,458.9	1,664.3	1,605.3	1,389.8	1,505.0	1,399.2	1,373.9
Net sales	1,242.7	1,187.2	1,221.8	1,256.0	1,304.0	1,455.8	1,539.3	1,486.3	1,590.3	1,483.4	1,386.5
Operating profit	47.1	61.3	43.3	42.1	53.2	63.2	22.0	47.3	72.2	82.4	60.7
Share of profit (loss) of entities accounted for using equity method	0.4	0.3	0.6	4.3	5.3	(1.7)	1.1	(3.5)	(33.0)	4.1	(12.9)
Total non-operating income	(14.1)	(9.9)	(1.6)	(5.9)	0.0	(6.7)	(12.3)	(25.3)	(50.8)	(16.7)	(28.5)
Ordinary profit	33.0	51.4	41.7	36.2	53.2	56.5	9.7	22.0	21.4	65.7	32.2
Profit attributable to owners of parent	17.3	29.7	23.8	33.3	33.1	9.0	1.5	5.2	8.2	39.8	12.8
R&D expenses	25.5	29.2	30.0	30.2	33.5	37.0	41.6	35.5	38.6	36.5	38.1
Capital expenditure <sup>1</sup>	37.5	86.3	53.5	55.0	54.5	63.9	50.8	52.7	59.2	67.3	80.6
Depreciation <sup>1</sup>	38.2	38.2	41.1	41.7	40.4	43.2	46.7	46.6	44.8	42.9	53.8
Total assets	1,412.4	1,361.4	1,338.1	1,364.2	1,496.3	1,690.8	1,715.0	1,692.8	1,633.4	1,664.5	1,740.7
Interest-bearing liabilities	432.0	373.3	345.2	353.8	357.8	410.6	374.5	371.9	322.2	355.0	488.1
Net assets	227.0	253.6	258.4	299.2	362.5	359.5	333.3	337.6	350.2	381.6	353.7
Employees	24,890	26,035	26,915	26,618	27,562	28,533	29,494	29,659	29,706	29,286	28,964
Per share data (Yen)											
Basic earnings per share <sup>2</sup>	118.51	202.94	162.58	228.14	225.13	58.84	9.90	33.98	53.71	258.53	84.21
Book value per share <sup>3</sup>	1,446.63	1,623.33	1,708.36	1,970.77	2,236.81	2,240.31	2,061.63	2,060.33	2,103.22	2,263.12	2,195.96
Annual dividends per share	20.00	30.00	40.00	50.00	60.00	60.00	30.00	0.00	60.00	70.00	50.00
Net sales by region (Billions of yen)											
United States	139.2	126.1	125.7	147.1	212.7	270.8	336.1	319.8	350.7	326.4	363.9
Europe	70.3	90.8	99.4	93.0	152.2	171.0	139.9	116.1	132.6	102.2	68.6
Asia and other	315.1	295.1	295.9	246.2	253.7	316.2	320.9	321.5	324.7	284.9	230.5
Japan	718.1	675.2	700.8	769.7	685.4	697.8	742.4	728.9	782.3	769.9	723.4
Net sales by business segment (Billions of yen)											
Resources, Energy & Environment	—	306.4	312.3	321.5	344.0	415.3	452.4	427.3	490.4	377.0	327.7
Social Infrastructure & Offshore Facilities	—	122.4	114.7	117.8	150.3	188.6	168.1	157.7	154.5	143.1	152.8
Industrial Systems & General-Purpose Machinery	—	282.2	318.7	382.5	397.8	411.7	404.7	411.6	459.0	441.0	406.4
Aero Engine, Space & Defense	—	273.7	299.4	338.4	406.0	434.8	500.2	471.9	463.7	492.2	480.8
Financial indices (%)											
Percentage of overseas sales	42	43	43	39	47	52	52	51	51	48	48
Operating margin	3.8	5.2	3.5	3.4	4.1	4.3	1.4	3.2	4.5	5.6	4.4
ROIC (return on invested capital) <sup>4</sup>	4.8	6.2	4.6	4.5	5.3	5.8	2.3	5.0	7.7	8.7	5.7
ROA (return on assets) <sup>5</sup>	1.2	2.1	1.8	2.5	2.3	0.6	0.1	0.3	0.5	2.4	0.8
ROE (return on equity) <sup>6</sup>	8.6	13.2	9.8	12.4	10.5	2.6	0.5	1.6	2.6	11.8	3.8
Debt-to-equity ratio (times) <sup>7</sup>	1.90	1.47	1.34	1.18	0.99	1.14	1.12	1.10	0.92	0.93	1.38
Equity to total assets	15.0	17.5	18.7	21.1	23.1	20.5	18.6	18.8	19.9	21.0	18.7

FY	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Balance sheet information (Billions of yen)											
Current assets	941.7	853.4	844.3	814.7	901.2	1,053.7	1,100.5	1,073.8	993.4	987.8	1,076.0
Non-current assets	470.6	508.0	493.7	549.4	595.1	637.1	614.5	618.9	640.0	676.6	664.7
Total assets	1,412.4	1,361.4	1,338.1	1,364.2	1,496.3	1,690.8	1,715.0	1,692.8	1,633.4	1,664.5	1,740.7
Current liabilities	758.1	691.1	689.6	665.4	726.2	795.9	882.7	876.2	811.6	823.1	909.0
Provision for construction warranties, Provision for loss on construction contracts	35.7	47.2	44.7	40.4	43.8	65.3	97.5	85.2	80.9	69.1	62.6
Non-current liabilities	427.1	416.6	389.9	399.5	407.5	535.3	498.9	478.9	471.6	459.7	478.0
Total liabilities	1,185.3	1,107.8	1,079.6	1,064.9	1,133.8	1,331.2	1,381.6	1,355.2	1,283.2	1,282.8	1,387.0
Shareholders' equity	204.6	234.6	254.3	282.7	332.2	313.5	305.8	309.9	313.2	343.4	329.2
Total net assets	227.0	253.6	258.4	299.2	362.5	359.5	333.3	337.6	350.2	381.6	353.7
Total liabilities and net assets	1,412.4	1,361.4	1,338.1	1,364.2	1,496.3	1,690.8	1,715.0	1,692.8	1,633.4	1,664.5	1,740.7
Cash flow statement information (Billions of yen)											
Cash flows from operating activities	76.7	95.5	24.7	74.3	39.2	63.5	95.3	65.3	99.0	46.4	14.5
Cash flows from investing activities	(62.7)	(77.7)	(37.7)	(61.0)	(62.2)	(74.6)	(35.5)	(28.9)	(47.9)	(79.2)	(75.8)
Cash flows from financing activities	(1.8)	(25.9)	(38.5)	(3.1)	11.3	33.4	(47.5)	(21.9)	(57.3)	16.4	115.2
Change in interest-bearing liabilities	4.9	(58.7)	(28.1)	8.6	4.0	52.8	(36.1)	(2.6)	(49.7)	32.8	133.0
Free cash flow <sup>8</sup>	13.9	17.7	(12.9)	13.3	(23.0)	(11.0)	59.8	36.4	51.0	(32.8)	(61.3)

1. The calculation method for capital expenditure and depreciation changed from FY2019.

2. Profit attributable to owners of parent ÷ Average number of shares outstanding during period

3. Net assets ÷ Total number of shares outstanding

4. (Operating profit + Interest and dividend income) after tax ÷ (Owners' equity + Interest-bearing liabilities)

5. Profit attributable to owners of parent ÷ (Average of total assets at end of previous fiscal year and end of current fiscal year)

6. Profit attributable to owners of parent ÷ (Average of owners' equity at end of previous fiscal year and end of current fiscal year)

7. Net interest-bearing liabilities ÷ Net assets

8. Cash flows from operating activities + Cash flows from investing activities

## External Evaluation

 <p><b>S&amp;P/JPX Carbon Efficient Index</b> The S&amp;P/JPX Carbon Efficient Index selected the IHI Group as a brand satisfying environmental information disclosure and carbon efficiency (carbon emissions per unit of revenue) standards according to their constituent selection and weighting process.</p>	 <p><b>Kurumin Certification</b> The Minister of Health, Labour and Welfare recognized IHI Corporation as a company that supports child raising and granted us the Kurumin certification.</p>	 <p><b>Eruboshi Certification</b> The Minister of Health, Labour and Welfare certified IHI Corporation as an Eruboshi Company (2nd level) for excellence in efforts to promote the participation and advancement of women in the workplace.</p>
 <p><b>Health &amp; Productivity Companies 2020 (White 500)</b> The Ministry of Economy, Trade and Industry and the Nippon Kenko Kaigi (Japan Health Council) launched the White 500 program to recognize excellence in employee health management from a corporate management standpoint. The White 500 program recognized ten IHI Group companies as Health &amp; Productivity Companies in 2020.</p>	 <p><b>Resilience Certification</b> The IHI Group renewed the Resilience Certification acquired in 2016 with the aim of improving its business continuity as a company that supports social infrastructure. Resilience Certification is a certification system of the Association for Resilience Japan based on the guidelines for the certification of organizations contributing to national resilience. This certification certifies business operators that endorse the ideas of strengthening national resilience published by the Cabinet Secretariat's National Resilience Promotion Office and proactively work to ensure their business continuity.</p>	 <p><b>PRIDE Index Gold Award 2019</b> work with Pride (wwP) awarded IHI the PRIDE Index 2019 Gold Award, its highest honor, for the second consecutive year. The goal of the PRIDE Index is to help build working environments friendly to LGBT and other gender minorities. wwP recognized IHI Corporation because of its human resources policies for LGBT, launch of a consultation desk, expansion of an ally program, and training to promote greater understanding about gender minorities.</p>

# Non-Financial Summary

Material issue	Theme	Index	Scope of data	Results				
				FY2016	FY2017	FY2018	FY2019	
Governance – Principled Corporate Management –								
Corporate governance	Corporate governance	Average attendance rate of outside directors	Board of Directors meetings (%)	IHI	96.2	95.3	98.6	98.1
		Average attendance rate of outside Audit & Supervisory Board members	Board of Directors meetings (%)	IHI	92.3	96.0	92.6	100
			Audit & Supervisory Board meetings (%)	IHI	93.0	100	100	100
Compliance	Legal compliance	Number of law violations / Number of guidance cases	Competition laws	IHI and consolidated subsidiaries	0	0	0	0
			Anticorruption laws	IHI and consolidated subsidiaries	0	0	0	0
			Laws/regulations relating to PR activities	IHI and consolidated subsidiaries	0	0	0	0
		Expenditure to organizations	Political organizations (millions of yen)	IHI	10	10	10	10
			Economic organizations (millions of yen)	IHI	41	42	48	56
			Other major industry organizations (millions of yen)	IHI	55	55	101	120
		Number of Compliance Hotline reports	Compliance Hotline reports	<sup>1</sup>	218	209	238	239
		Number of compliance training participants	Officer Training	IHI and subsidiaries in Japan	55	50	47	—
			Line Manager Training	IHI and subsidiaries in Japan	73	83	75	72
			Quality & Compliance Training (Japan)	IHI and subsidiaries in Japan	—	—	—	27,866
			Quality & Compliance Training (Overseas)	Overseas subsidiaries	—	—	—	1,774
			e-Learning (Japan)	IHI and subsidiaries in Japan	18,859	18,020	18,234	18,164
			e-Learning (Overseas)	Overseas subsidiaries	1,392	1,261	1,126	1,214
Risk management	Intellectual property protection	Patents held by region	Patents in Japan	IHI	4,157	3,915	4,120	4,150
			Patents overseas	IHI	2,744	2,598	3,047	3,502
Information security	Information security measures	Information security measures level evaluation (out of five) (score)		IHI and consolidated subsidiaries	—	3.0	2.9	3.2

1. IHI and affiliated companies in Japan in FY2016. IHI, affiliated companies in Japan, and some affiliated companies overseas (USA and Brazil) in FY2017. IHI, affiliated companies in Japan, and some affiliated companies overseas (USA, Brazil, Asia Pacific, China, and Korea) in FY2018 and FY2019.



Material issue	Theme	Index	Scope of data	Results					
				FY2016	FY2017	FY2018	FY2019		
Society – Materialize an Affluent Society –									
Managing human resources	Number of employees	Consolidated number of employees		IHI and consolidated subsidiaries	29,659	29,706	29,286	28,964	
		Number of employees (IHI)		IHI	8,630	8,256	8,011	7,741	
				Male	IHI	7,625	7,245	6,994	6,730
				Female	IHI	1,005	1,011	1,017	1,011
				Ratio of female employees (%)	IHI	11.6	12.2	12.7	13.1
	Average years of service	All employees		IHI	14.5	14.8	14.9	15.8	
				Male	IHI	14.8	15.1	15.1	16.0
				Female	IHI	12.2	12.5	13.2	14.5
	Turnover rate	Total turnover rate		IHI	3.9	4.0	4.3	3.5	
				Rate of retirement due to personal reasons (%)	IHI	1.4	2.0	2.0	2.0
				Turnover rate within 3 years of joining the company (%)	IHI	5.8	5.7	7.4	6.8
	Employee-awareness surveys	Response ratio (%)		IHI and affiliated companies	87.6	90.9	91.7	91.4	
	Diversity and inclusion	Employment	Number of new graduate hires		IHI	288	245	155	153
					Male	IHI	248	210	135
Female					IHI	40	35	20	30
Female recruitment rate (%)					IHI	13.9	14.3	12.9	19.6
Number of mid-career hires			IHI	153	29	78	37		
Recruitment ratio of people with disabilities (%)			IHI	2.14	2.03	2.21	2.39		
Re-employment rate of employees at retirement age (%)			IHI	84	87	84	81		
Ratio of employees from abroad (%)			IHI	1.0	1.1	1.0	1.0		
Local managers at overseas sites			China, Singapore, and USA	20	23	22	23		
Gender diversity		Number of female officers		IHI	1	3	4	3	
				Ratio of female officers (%)	IHI	6	16	24	19
		Number of female managers		IHI	66	68	74	83	
				Ratio of female managers (%)	IHI	2.5	2.6	2.8	3.0
				Ratio of female general managers (%)	IHI	0.7	0.8	0.8	0.8
				Ratio of female section managers (%)	IHI	1.8	1.8	2.0	2.2

Material issue	Theme	Index		Scope of data	Results			
					FY2016	FY2017	FY2018	FY2019
Diversity and inclusion	Work-life balance	Employees with reduced work hours		IHI	149	159	158	161
		Employees who have taken childcare leave		IHI	674	677	689	779
		Employees who have taken parental leave		IHI	89	111	113	132
		Percentage of employees who return to work after parental leave (%)		IHI	100	100	100	99.2
		Employees who have taken nursing care leave		IHI	11	18	6	7
		Average annual paid vacation days taken		IHI	16.50	17.63	18.36	19.40
		Monthly average overtime (hours)		IHI	23.90	22.90	22.50	21.10
	Human resource development	Stratified training	Participants	IHI and affiliated companies in Japan	3,300	2,900	3,300	3,276
			Training hours	IHI and affiliated companies in Japan	112,000	101,000	112,000	106,208
		Open lectures	Participants	IHI and affiliated companies in Japan	5,800	5,800	6,200	3,343
			Training hours	IHI and affiliated companies in Japan	46,000	44,000	47,000	25,073
		Average annual training hours per employee <sup>2</sup>		IHI and affiliated companies in Japan	17.4	16.7	16.7	21.8
	Occupational health and safety	Participation rate of medical check-ups (%)		IHI and 34 affiliated companies	70	69	70	71
		Participation rate of stress checks (%)		IHI and 34 affiliated companies	90	91	96	94
		Absenteeism (employees who take three or more months of leave) (%)		IHI and 34 affiliated companies	0.9	0.9	0.9	1.0
		Presenteeism (employees with restricted hours) (%)		IHI and 34 affiliated companies	2.1	1.6	1.7	1.6
		Smoking rate (%)		IHI and 34 affiliated companies	29	28	28	27
		Lost time injuries frequency rate		IHI and 30 affiliated companies	0.33	0.57	0.26	0.40
		Total injuries frequency rate		IHI and 30 affiliated companies	1.31	1.64	1.11	1.49
		Rate of occupational diseases		IHI and 34 affiliated companies	—	—	0.165	0.165
		Occupational accidents <sup>3</sup>		IHI and 30 affiliated companies	68 (1)	87 (1)	55 (0)	71 (0)
			Employees <sup>3</sup>	IHI and 30 affiliated companies	41 (0)	52 (0)	28 (0)	42 (0)
			Temporary employees <sup>3</sup>	IHI and 30 affiliated companies	0 (0)	4 (0)	4 (0)	4 (0)
			Partners <sup>3</sup>	IHI and 30 affiliated companies	27 (1)	31 (1)	23 (0)	25 (0)
	Labor-management partnership	Employee union membership rate	Membership rate (%)	IHI and 6 consolidated subsidiaries	73	74	73	73
		Number of labor complaints received		IHI	0	0	0	0
Corporate citizenship	Social contribution activities	Social contribution expenses (millions of yen)		<sup>4</sup>	206	331	635	519

2. Calculated from stratified training and open lectures. FY2019 also includes Quality & Compliance Training.

3. Figure inside parentheses indicates fatal incidents.

4. IHI and affiliated companies in FY2016 and FY2017. IHI and consolidated subsidiaries in FY2018 and FY2019.

Material issue	Theme	Index		Scope of data	Results			
					FY2016	FY2017	FY2018	FY2019
Environment – Reduce Environmental Impact –								
Climate change	CO <sub>2</sub>	CO <sub>2</sub> emissions (t-CO <sub>2</sub> )		IHI and consolidated subsidiaries	316,914	330,162	329,602	254,227
		Scope 1 (t-CO <sub>2</sub> )		IHI and consolidated subsidiaries	—	—	80,032	64,724
		Scope 2 (market-based) (t-CO <sub>2</sub> )		IHI and consolidated subsidiaries	—	—	249,570	189,502
		CO <sub>2</sub> emissions intensity <sup>5</sup> (t-CO <sub>2</sub> /100 million yen)		IHI and consolidated subsidiaries	21.3	20.8	22.2	18.3
	Energy	Energy consumption <sup>6</sup> (TJ)		IHI and consolidated subsidiaries	6,015	6,087	5,828	2,468
		Fuel consumption (TJ)		IHI and consolidated subsidiaries	—	—	—	1,044
		Electricity consumption (TJ)		IHI and consolidated subsidiaries	—	—	—	1,398
		Steam consumption (TJ)		IHI and consolidated subsidiaries	—	—	—	0
		Renewable energy used (TJ)		IHI and consolidated subsidiaries	—	—	—	26
		Energy consumption intensity <sup>5</sup> (TJ/10 billion yen)		IHI and consolidated subsidiaries	40.5	38.3	39.3	17.8
	External evaluation	Evaluation of CDP climate change		IHI and consolidated subsidiaries	A– (Leadership)	B (Management)	B (Management)	B (Management)
Circular economy	Waste	Waste generated (tons)		IHI and consolidated subsidiaries	30,531	28,691	29,010	27,564
		Toxic waste generated (tons)		IHI and consolidated subsidiaries	—	—	—	164
		Amount recycled (valuable resources) (tons)		IHI and consolidated subsidiaries	—	—	—	61,799
	Water	Water withdrawal <sup>7</sup> (1,000 m <sup>3</sup> )		IHI and consolidated subsidiaries	4,169	3,776	4,182	4,251
		Public water (1,000 m <sup>3</sup> )		IHI and consolidated subsidiaries	—	—	—	750
		Industrial water (1,000 m <sup>3</sup> )		IHI and consolidated subsidiaries	—	—	—	868
		Groundwater (1,000 m <sup>3</sup> )		IHI and consolidated subsidiaries	—	—	—	1,948
		Rainwater, rivers, lakes, etc. (1,000 m <sup>3</sup> )		IHI and consolidated subsidiaries	—	—	—	685
Environmental protection	Compliance with environmental laws and regulations	Significant environmental accidents		IHI and consolidated subsidiaries	0	0	0	0
		Major violation of environmental laws/regulations		IHI and consolidated subsidiaries	0	0	0	0
		Number of cases IHI paid fines, penalties, etc.		IHI and consolidated subsidiaries	0	0	0	0
	Costs to reduce environmental impact	Investments (millions of yen)		IHI	864	713	696	652
		Expenditures (millions of yen)		IHI	73	79	143	78

5. Net sales as the denominator.

6. Changed the method of calculating energy consumption since FY2019.

7. Changed from amount of water consumption to amount of water withdrawal since FY2019.

# Consolidated Financial Statements

## Consolidated Balance Sheet

(Millions of yen)

	March 31, 2019	March 31, 2020
<b>ASSETS</b>		
Current assets		
Cash and deposits	94,951	147,228
Notes and accounts receivable – trade	377,695	403,832
Securities	—	21
Finished goods	23,084	18,417
Work in process	276,238	289,277
Raw materials and supplies	142,588	137,848
Other	77,351	83,410
Allowance for doubtful accounts	(4,043)	(4,024)
Total current assets	987,864	1,076,009
Non-current assets		
Property, plant and equipment		
Buildings and structures, net	137,156	154,217
Machinery, equipment and vehicles, net	76,697	76,183
Land	99,217	96,579
Leased assets, net	15,962	26,288
Construction in progress	10,100	11,706
Other, net	28,262	32,522
Total property, plant and equipment	367,394	397,495
Intangible assets		
Goodwill	10,032	7,456
Software	18,060	19,837
Other	5,992	4,869
Total intangible assets	34,084	32,162
Investments and other assets		
Investment securities	117,967	63,514
Deferred tax assets	116,802	112,440
Net defined benefit asset	31	7
Other	41,763	60,410
Allowance for doubtful accounts	(1,376)	(1,255)
Total investments and other assets	275,187	235,116
Total non-current assets	676,665	664,773
Total assets	1,664,529	1,740,782

(Millions of yen)

	March 31, 2019	March 31, 2020
<b>LIABILITIES</b>		
Current liabilities		
Notes and accounts payable – trade	290,043	262,587
Short-term loans payable	111,785	185,600
Commercial papers	—	56,000
Current portion of bonds	20,000	10,000
Accrued expenses	88,520	88,082
Income taxes payable	7,384	6,012
Advances received	157,546	151,790
Provision for bonuses	28,089	26,672
Provision for construction warranties	47,968	42,759
Provision for loss on construction contracts	21,212	19,929
Other provision	1,079	1,141
Other	49,483	58,433
Total current liabilities	823,109	909,005
Non-current liabilities		
Bonds payable	30,000	50,000
Long-term loans payable	175,813	159,223
Lease obligations	14,307	22,089
Deferred tax liabilities for land revaluation	4,953	4,950
Net defined benefit liability	160,244	166,193
Provision for loss on business of subsidiaries and affiliates	1,212	1,249
Other provision	1,132	1,068
Other	72,067	73,259
Total non-current liabilities	459,728	478,031
Total liabilities	1,282,837	1,387,036
<b>NET ASSETS</b>		
Shareholders' equity		
Capital stock	107,165	107,165
Capital surplus	53,410	51,780
Retained earnings	184,092	186,170
Treasury shares	(1,170)	(15,899)
Total shareholders' equity	343,497	329,216
Accumulated other comprehensive income		
Valuation difference on available-for-sale securities	1,063	(679)
Deferred gains or losses on hedges	(190)	(252)
Revaluation reserve for land	5,321	5,321
Foreign currency translation adjustment	2,808	(2,067)
Remeasurements of defined benefit plans	(3,319)	(5,164)
Total accumulated other comprehensive income	5,683	(2,841)
Subscription rights to shares	659	533
Non-controlling interests	31,853	26,838
Total net assets	381,692	353,746
Total liabilities and net assets	1,664,529	1,740,782



## Consolidated Statement of Income

(Millions of yen)

	April 1, 2018 to March 31, 2019	April 1, 2019 to March 31, 2020
Net sales	1,483,442	1,386,503
Cost of sales	1,205,713	1,131,775
Gross profit	277,729	254,728
Selling, general and administrative expenses	195,241	193,931
Operating profit	82,488	60,797
<b>Non-operating income</b>		
Interest income	913	703
Dividend income	1,133	1,168
Share of profit of entities accounted for using equity method	4,108	—
Foreign exchange gains	5	—
Reversal of accrued expenses for compensation for damage	—	1,340
Other income	5,199	3,334
Total non-operating income	11,358	6,545
<b>Non-operating expenses</b>		
Interest expenses	3,227	3,963
Share of loss of entities accounted for using equity method	—	12,991
Foreign exchange losses	—	2,083
Burden share of losses for delayed construction of SPB tanks	6,679	—
Other expenses	18,191	16,054
Total non-operating expenses	28,097	35,091
Ordinary profit	65,749	32,251
<b>Extraordinary income</b>		
Gain on sale of non-current assets	—	4,409
Gain on transfer of intellectual property assets	—	3,837
Gain on transfer of equity interest of subsidiaries and associates	—	2,200
Gain on insurance claims	—	1,108
Gain on sales of shares of subsidiaries and associates	4,199	236
Gain on transfer of business	1,108	—
Total extraordinary income	5,307	11,790
<b>Extraordinary losses</b>		
Loss on valuation of investment securities	—	4,836
Impairment loss	1,610	426
Total extraordinary losses	1,610	5,262
Profit before income taxes	69,446	38,779
Income taxes – current	16,925	14,970
Income taxes for prior periods	4,304	—
Income taxes – deferred	2,977	5,759
Total income taxes	24,206	20,729
Profit	45,240	18,050
Profit attributable to non-controlling interests	5,351	5,238
Profit attributable to owners of parent	39,889	12,812

## Consolidated Statement of Comprehensive Income

(Millions of yen)

	April 1, 2018 to March 31, 2019	April 1, 2019 to March 31, 2020
Profit	45,240	18,050
<b>Other comprehensive income</b>		
Valuation difference on available-for-sale securities	(808)	(1,741)
Deferred gains or losses on hedges	(163)	(75)
Revaluation reserve for land	(12)	—
Foreign currency translation adjustment	(605)	(6,183)
Remeasurements of defined benefit plans, net of tax	(3,612)	(2,031)
Share of other comprehensive income of entities accounted for using equity method	(443)	590
Total other comprehensive income	(5,643)	(9,440)
Comprehensive income	39,597	8,610
<b>Comprehensive income attributable to</b>		
Comprehensive income attributable to owners of parent	34,405	4,487
Comprehensive income attributable to non-controlling interests	5,192	4,123

## Consolidated Statement of Changes in Equity

April 1, 2018 to March 31, 2019

(Millions of yen)

	Shareholders' equity				
	Capital stock	Capital surplus	Retained earnings	Treasury shares	Total shareholders' equity
Balance at beginning of period	107,165	53,406	153,564	(879)	313,256
Changes of items during period					
Dividends of surplus			(9,267)		(9,267)
Profit attributable to owners of parent			39,889		39,889
Purchase of treasury shares				(424)	(424)
Disposal of treasury shares				133	133
Change in ownership interest of parent due to transactions with non-controlling interests		4			4
Net decrease from newly consolidated subsidiaries			(126)		(126)
Reversal of revaluation reserve for land			32		32
Net changes of items other than shareholders' equity					
Total changes of items during period	—	4	30,528	(291)	30,241
Balance at end of period	107,165	53,410	184,092	(1,170)	343,497

	Accumulated other comprehensive income							
	Valuation difference on available-for-sale securities	Deferred gains or losses on hedges	Revaluation reserve for land	Foreign currency translation adjustment	Remeasurements of defined benefit plans	Total accumulated other comprehensive income	Subscription rights to shares	Non-controlling interests
Balance at beginning of period	2,034	(286)	5,359	3,679	559	11,345	792	24,824
Changes of items during period								
Dividends of surplus								(9,267)
Profit attributable to owners of parent								39,889
Purchase of treasury shares								(424)
Disposal of treasury shares								133
Change in ownership interest of parent due to transactions with non-controlling interests								4
Net decrease from newly consolidated subsidiaries								(126)
Reversal of revaluation reserve for land								32
Net changes of items other than shareholders' equity	(971)	96	(38)	(871)	(3,878)	(5,662)	(133)	7,029
Total changes of items during period	(971)	96	(38)	(871)	(3,878)	(5,662)	(133)	7,029
Balance at current period	1,063	(190)	5,321	2,808	(3,319)	5,683	659	31,853

April 1, 2019 to March 31, 2020

(Millions of yen)

	Shareholders' equity				
	Capital stock	Capital surplus	Retained earnings	Treasury shares	Total shareholders' equity
Balance at beginning of period	107,165	53,410	184,092	(1,170)	343,497
Changes of items during period					
Dividends of surplus			(10,816)		(10,816)
Profit attributable to owners of parent			12,812		12,812
Purchase of treasury shares				(14,851)	(14,851)
Disposal of treasury shares		4		122	126
Change in ownership interest of parent due to transactions with non-controlling interests		(1,634)			(1,634)
Net increase from newly consolidated subsidiaries			82		82
Reversal of revaluation reserve for land					—
Net changes of items other than shareholders' equity					
Total changes of items during period	—	(1,630)	2,078	(14,729)	(14,281)
Balance at end of period	107,165	51,780	186,170	(15,899)	329,216

	Accumulated other comprehensive income							
	Valuation difference on available-for-sale securities	Deferred gains or losses on hedges	Revaluation reserve for land	Foreign currency translation adjustment	Remeasurements of defined benefit plans	Total accumulated other comprehensive income	Subscription rights to shares	Non-controlling interests
Balance at beginning of period	1,063	(190)	5,321	2,808	(3,319)	5,683	659	31,853
Changes of items during period								
Dividends of surplus								(10,816)
Profit attributable to owners of parent								12,812
Purchase of treasury shares								(14,851)
Disposal of treasury shares								126
Change in ownership interest of parent due to transactions with non-controlling interests								(1,634)
Net increase from newly consolidated subsidiaries								82
Reversal of revaluation reserve for land								—
Net changes of items other than shareholders' equity	(1,742)	(62)	—	(4,875)	(1,845)	(8,524)	(126)	(5,015)
Total changes of items during period	(1,742)	(62)	—	(4,875)	(1,845)	(8,524)	(126)	(5,015)
Balance at current period	(679)	(252)	5,321	(2,067)	(5,164)	(2,841)	533	26,838

## Consolidated Statement of Cash Flows

(Millions of yen)

	April 1, 2018 to March 31, 2019	April 1, 2019 to March 31, 2020
<b>Cash flows from operating activities</b>		
Profit before income taxes	69,446	38,779
Depreciation	53,200	57,659
Depreciation and amortization on other	8,413	7,497
Impairment loss	1,610	426
Increase (decrease) in allowance for doubtful accounts	(587)	(102)
Increase (decrease) in provision for bonuses	2,161	(1,265)
Increase (decrease) in provision for construction warranties	(5,505)	(4,913)
Increase (decrease) in provision for loss on construction contracts	(6,517)	(1,162)
Increase (decrease) in net defined benefit liability	909	2,447
Interest and dividend income	(2,046)	(1,871)
Interest expenses	3,227	3,963
Foreign exchange losses (gains)	21	(244)
Loss (gain) on sales of short-term and long-term investment securities	(37)	722
Loss (gain) on valuation of short-term and long-term investment securities	540	5,544
Share of loss (profit) of entities accounted for using equity method	(4,108)	12,991
Loss (gain) on sales or disposal of property, plant and equipment	3,728	(2,734)
Loss (gain) on transfer of intellectual property assets	—	(3,837)
Loss (gain) on transfer of business	(664)	—
Loss (gain) on sales of shares of subsidiaries and associates	(4,199)	(236)
Loss (gain) on transfer of equity interest of subsidiaries and associates	—	(2,200)
Gain on insurance claims	—	(1,108)
Decrease (increase) in notes and accounts receivable – trade	25,842	(31,439)
Increase (decrease) in advances received	(19,507)	(4,845)
Decrease (increase) in advance payments	(7,611)	2,139
Decrease (increase) in inventories	(14,794)	(8,704)
Increase (decrease) in notes and accounts payable – trade	(15,813)	(23,024)
Increase (decrease) in accrued expenses	178	35
Decrease (increase) in other current assets	(8,715)	(10,418)
Increase (decrease) in other current liabilities	(5,374)	(7,042)
Decrease (increase) in consumption taxes refund receivable	(3,309)	1,058
Other, net	(1,243)	3,253
Subtotal	69,246	31,369
Interest and dividend income received	2,520	2,107
Interest expenses paid	(3,179)	(3,826)
Proceeds from insurance income	—	1,737
Income taxes paid	(22,185)	(16,877)
Net cash provided by (used in) operating activities	46,402	14,510

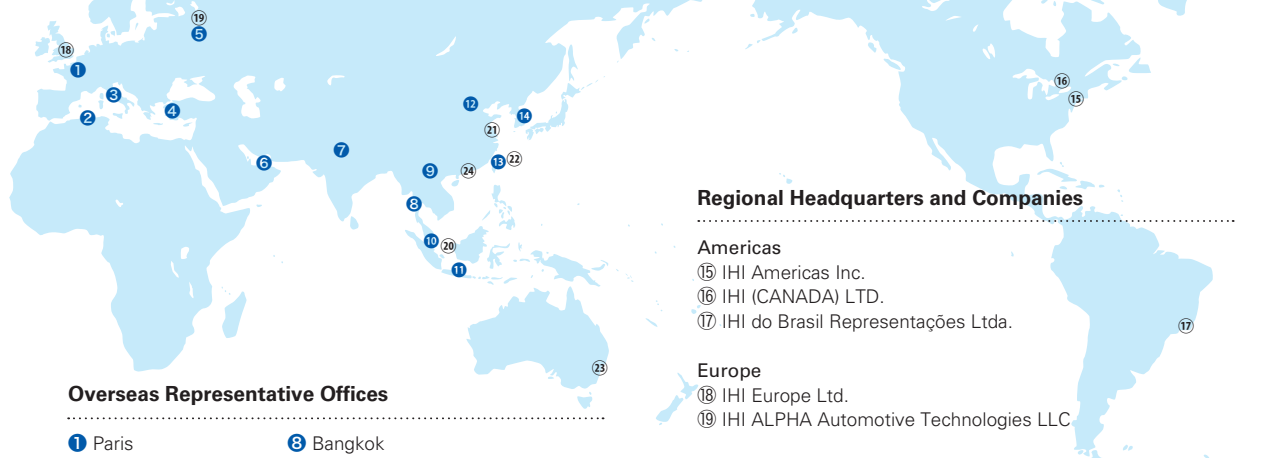
(Millions of yen)

	April 1, 2018 to March 31, 2019	April 1, 2019 to March 31, 2020
<b>Cash flows from investing activities</b>		
Decrease (increase) in time deposits	(652)	529
Purchase of short-term and long-term investment securities	(18,272)	(23,182)
Proceeds from sales and redemption of short-term and long-term investment securities	7,081	6,469
Purchase of property, plant and equipment and intangible assets	(64,195)	(66,351)
Proceeds from (payments for) sales or disposal of property, plant and equipment and intangible assets	(393)	6,614
Proceeds from transfer of intellectual property rights	—	1,898
Proceeds from transfer of business	2,834	—
Purchase of shares of subsidiaries resulting in change in scope of consolidation	(1,003)	—
Proceeds from transfer of equity interest of subsidiaries resulting in change in scope of consolidation	—	7,352
Decrease (increase) in short-term loans receivable	188	(38)
Payments of long-term loans receivable	(1,147)	(22)
Collection of long-term loans receivable	37	248
Decrease (increase) in other investments	(9,739)	(11,707)
(Decrease) increase in other non-current liabilities	5,968	2,303
Other, net	13	(9)
Net cash provided by (used in) investing activities	(79,280)	(75,896)
<b>Cash flows from financing activities</b>		
Net increase (decrease) in short-term loans payable	36,733	84,004
Net increase (decrease) in commercial papers	—	56,000
Proceeds from long-term loans payable	52,614	47,055
Repayments of long-term loans payable	(58,186)	(49,527)
Proceeds from issuance of bonds	—	30,000
Redemption of bonds	—	(20,000)
Proceeds from sales and leasebacks	1,459	436
Repayments of lease obligations	(6,709)	(5,276)
Decrease (increase) in treasury shares	(5)	(14,490)
Payments made to trust account for acquisition of treasury shares	(419)	(361)
Purchase of treasury shares of subsidiaries	(1)	(1)
Cash dividends paid	(9,241)	(10,791)
Proceeds from share issuance to non-controlling shareholders	3,855	1,299
Dividends paid to non-controlling interests	(3,623)	(3,084)
Payments from changes in ownership interests in subsidiaries that do not result in change in scope of consolidation	(14)	—
Net cash provided by (used in) financing activities	16,463	115,264
Effect of exchange rate change on cash and cash equivalents	1,743	(1,301)
Net increase (decrease) in cash and cash equivalents	(14,672)	52,577
Cash and cash equivalents at beginning of period	107,323	92,608
Increase in cash and cash equivalents from consolidation of non-consolidated subsidiaries	523	299
Decrease in cash and cash equivalents resulting from exclusion of subsidiaries from consolidation	(566)	—
Cash and cash equivalents at end of period	92,608	145,484

## Corporate Data (As of March 31, 2020)

Name	IHI Corporation
Head office	Toyosu IHI Building, 3-1-1 Toyosu, Koto-ku, Tokyo 135-8710, Japan Tel: +81-3-6204-7800
President and COO	Hiroshi Ide
Founded	December 5, 1853
Incorporated	January 17, 1889
Capital	107.1 billion yen
Employees (consolidated)	28,964
Works	6
Branches in Japan	8
Overseas representative offices	14
Group companies	In Japan: 65 (47 subsidiaries, 18 affiliates) Overseas: 151 (128 subsidiaries, 23 affiliates)
Securities code	7013
Stock exchange listings	Tokyo, Nagoya, Sapporo, Fukuoka
Share unit	100
Total number of authorized shares	300,000,000
Outstanding shares	149,019,280 (not including 5,660,674 treasury shares)
Shareholders	77,076
Fiscal year	April 1 to March 31 of following year
General shareholders' meeting	June of each year
Record date for year-end dividend	March 31 of each year
Record date for interim dividend	September 30 of each year
Shareholder registry administrator/ Special account managing institution	Sumitomo Mitsui Trust Bank, Limited 1-4-1 Marunouchi, Chiyoda-ku, Tokyo 100-8233, Japan  (Contact for mail or telephone correspondence) Sumitomo Mitsui Trust Bank, Limited Stock Transfer Agency Business Planning Department 2-8-4 Izumi, Suginami-ku, Tokyo 168-0063, Japan 0120-782-031 (toll-free in Japan)

### Global Network



#### Overseas Representative Offices

- |             |                |
|-------------|----------------|
| ① Paris     | ⑧ Bangkok      |
| ② Algeria   | ⑨ Hanoi        |
| ③ Rome      | ⑩ Kuala Lumpur |
| ④ Istanbul  | ⑪ Jakarta      |
| ⑤ Moscow    | ⑫ Beijing      |
| ⑥ Dubai     | ⑬ Taipei       |
| ⑦ New Delhi | ⑭ Seoul        |

#### Regional Headquarters and Companies

##### Americas

- ⑮ IHI Americas Inc.
- ⑯ IHI (CANADA) LTD.
- ⑰ IHI do Brasil Representações Ltda.

##### Europe

- ⑱ IHI Europe Ltd.
- ⑲ IHI ALPHA Automotive Technologies LLC

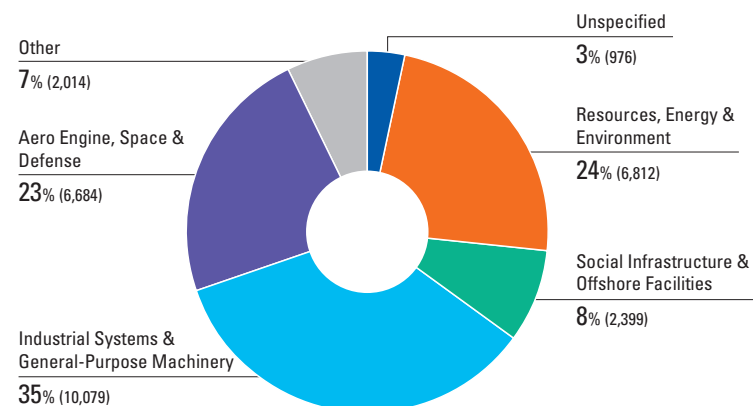
##### Asia-Pacific

- ⑳ IHI ASIA PACIFIC PTE. LTD.
- ㉑ IHI (Shanghai) Management Co., Ltd.
- ㉒ IHI Taiwan Corporation
- ㉓ IHI ENGINEERING AUSTRALIA PTY. LTD.
- ㉔ IHI (HK) Ltd.

### Employees by Business Area

All employees

**28,964**



Note: The number of employees is the number of officially employed individuals, including those seconded to the IHI Group from other companies and excluding Group employees seconded to other companies.

Temporary workers represent less than 10% percent of employees and are therefore not included.

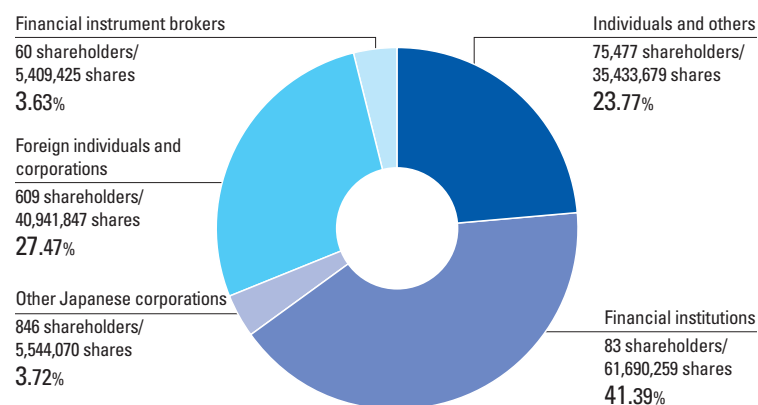


## Major Shareholders

Name	Number of shares held (thousand shares)	Shareholding ratio (%)
The Master Trust Bank of Japan, Ltd. (Holder in Trust)	12,330	8.27
Japan Trustee Services Bank, Ltd. (Holder in Trust)	10,770	7.22
The Dai-ichi Life Insurance Company, Limited	5,406	3.62
Trust & Custody Services Bank, Ltd. as trustee for Mizuho Bank Retirement Benefit Trust Account re-entrusted by Mizuho Trust and Banking Co., Ltd.	4,597	3.08
Japan Trustee Services Bank, Ltd. (Holder in Trust 5)	2,937	1.97
State Street Bank And Trust Company 505001	2,882	1.93
IHI Kyoeikai	2,677	1.79
Sumitomo Life Insurance Company	2,262	1.51
Japan Trustee Services Bank, Ltd. (Holder in Trust 9)	2,233	1.49
IHI Employee Stock Ownership Association	2,214	1.48

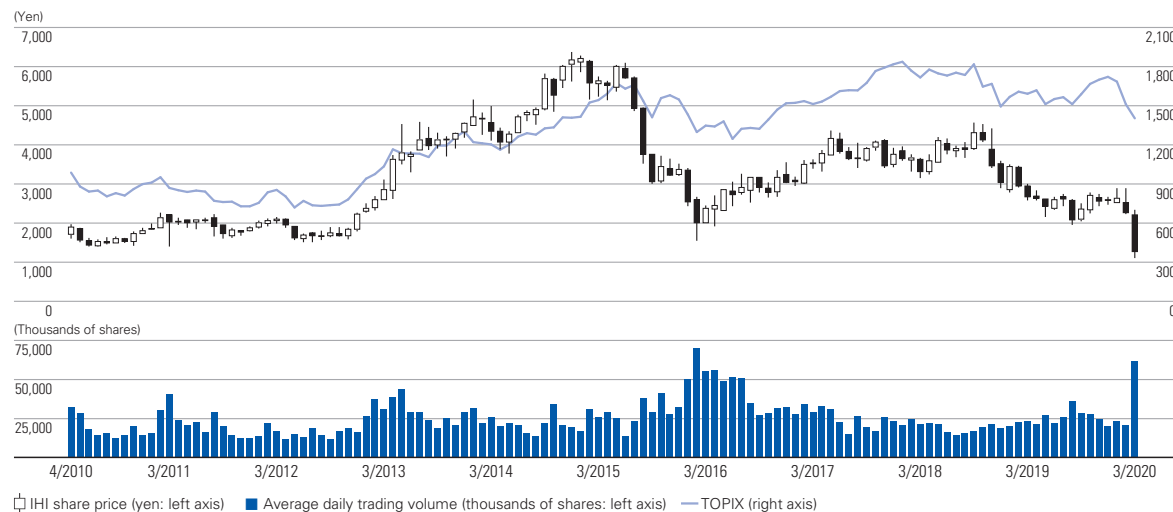
Notes: 1. Number of shares held and shareholding ratios are rounded down.  
2. Shareholding ratios are calculated excluding treasury shares (5,660,674 shares).

## Shareholder Composition



Note: Due to rounding, the total percentage may not add up to 100%.

## IHI Stock Performance and Average Daily Trading Volume



The Company conducted a consolidation of common stock on a 10 for 1 basis on October 1, 2017. Data regarding share price and average daily trading volume prior to the consolidation of common stock is calculated on the basis of the consolidation having been implemented.

## About IHI Integrated Report 2020

### Scope

IHI Corporation and its major Group companies

### Period

This report covers FY2019, which began on April 1, 2019 and ended on March 31, 2020. However, information prior to and after this period may also be included.

### Guidelines

- *International Integrated Reporting Framework*, International Integrated Reporting Council
- *GRI Sustainability Reporting Standards*, Global Reporting Initiative

### Inquiries

Please contact us via the inquiry form on the IHI website.  
<https://www.ihi.co.jp/en/contact/>

### Cautionary Statement

This report contains facts, both past and present, about the IHI Group, as well as forward-looking projections based on our current management plans and policies. These forward-looking projections are made with the information available at the time and are based on numerous assumptions, and are subject to changes in the business environment and operations. Actual results may differ materially from the forecasts.

## Guide to Disclosure

### Framework for Sustainability Information Disclosure

In response to the requests of stakeholders, the IHI Group discloses information through multiple media.

Main Content	Integrated Reporting	Latest Information
Social, environmental	 Sustainability Data Book	 Website Sustainability <a href="https://www.ihi.co.jp/csr/english/">https://www.ihi.co.jp/csr/english/</a>
Economic	 Integrated Report	 Website Investor Relations (IR) <a href="https://www.ihi.co.jp/en/ir/">https://www.ihi.co.jp/en/ir/</a>



## IHI Corporation

### Corporate Planning Division

Toyosu IHI Building, 1-1, Toyosu 3-chome, Koto-ku, Tokyo 135-8710, Japan

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