

Doctor

# Kawasaki Report 2019



# Kawasaki Group Mission Statement

Kawasaki formulated the Kawasaki Group Mission Statement as a compass directing the activities of the Kawasaki Group. The statement incorporates the Group's social mission and, to increase the Kawasaki brand value, shared values, the underlying principles of management activities, and guidelines for the daily conduct of each and every member of the organization.

# **Group Mission**

# Kawasaki, working as one for the good of the planet

- We are the Kawasaki Group, a global technology leader with diverse integrated strengths.
- We create new value-for a better environment and
- a brighter future for generations to come.

# Kawasaki Value

- We respond to our customers' requirements
- We constantly achieve new heights in technology
- We pursue originality and innovation

# The Kawasaki Group Management Principles

- 1 Trust As an integrated technology leader, the Kawasaki Group is committed to providing high-performance products and services of superior safety and quality. By doing so, we will win the trust of our customers and the community.
- 2 Harmonious coexistence The importance of corporate social responsibility (CSR) permeates all aspects of our business. This stance reflects the Kawasaki Group's corporate ideal of harmonious coexistence with the environment, society as a whole, local communities and individuals.
- 3 People The Kawasaki Group's corporate culture is built on integrity, vitality, organizational strength and mutual respect for people through all levels of the Group. We nurture a global team for a global era.
- 4 Strategy Enhance corporate value based on the guiding principles of "selective focusing of resources," "emphasis on quality over quantity," and "risk management."

# The Kawasaki Group Action Guidelines

- 1. Always look at the bigger picture. Think and act from a long-term, global perspective.
- 2. Meet difficult challenges head-on. Aim high and never be afraid to try something new.
- 3. Be driven by your aspirations and goals. Work toward success by always dedicating yourself to your tasks.
- 4. Earn the trust of the community through high ethical standards and the example you set for others.
- 5. Keep striving for self-improvement. Act on your own initiative as a confident professional.
- 6. Be a part of Team Kawasaki. Share your pride and sense of fulfillment in a iob well done.

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Scope

Period

# Guidelines

In preparing the report, the editorial office referred to the Sustainability Reporting Standards issued by the Global Reporting Initiative (GRI), the International Integrated Reporting Framework issued by the International Integrated Reporting Council (IIRC), the Environmental Reporting Guidelines (2012 Edition) issued by the Ministry of the Environment, and the Guidance for Integrated Corporate Disclosure and Company-Investor Dialogue for Collaborative Value Creation issued by the Ministry of Economy, Trade and Industry.

Contact Us Please make inquiries through the inquiry form on our website https://global.kawasaki.com/en/corp/profile/contact/

### Editorial Policy

- Since fiscal 2013, the Kawasaki Group has published the Kawasaki Report as an integrated report
- The report serves as a tool for communication with stakeholders and includes information about the Group's efforts to create value for society and boost enterprise value, management policies, business environment and strategy, and environmental, social and governance (ESG)-related content.
- For more information on many of the topics touched upon in this report, please visit our website.
- IR information: https://global.kawasaki.com/en/corp/ir/
- CSR information: https://global.kawasaki.com/en/corp/sustainability/
- Environmental information: https://global.kawasaki.com/en/corp/sustainability/ environment/index.html

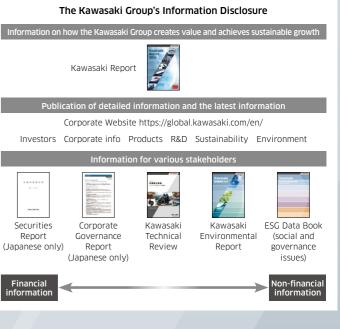
This report covers fiscal 2018 (April 1, 2018 to March 31, 2019), but some fiscal 2019 content is also included. Please note that in Kawasaki Report 2019, the Company has adopted the fiscal year notation that designates the stated fiscal by the calendar year in which it begins. The year under review in this report is thus fiscal 2018, the year from April 1, 2018 to March 31, 2019. The notation used in previous publications may differ.

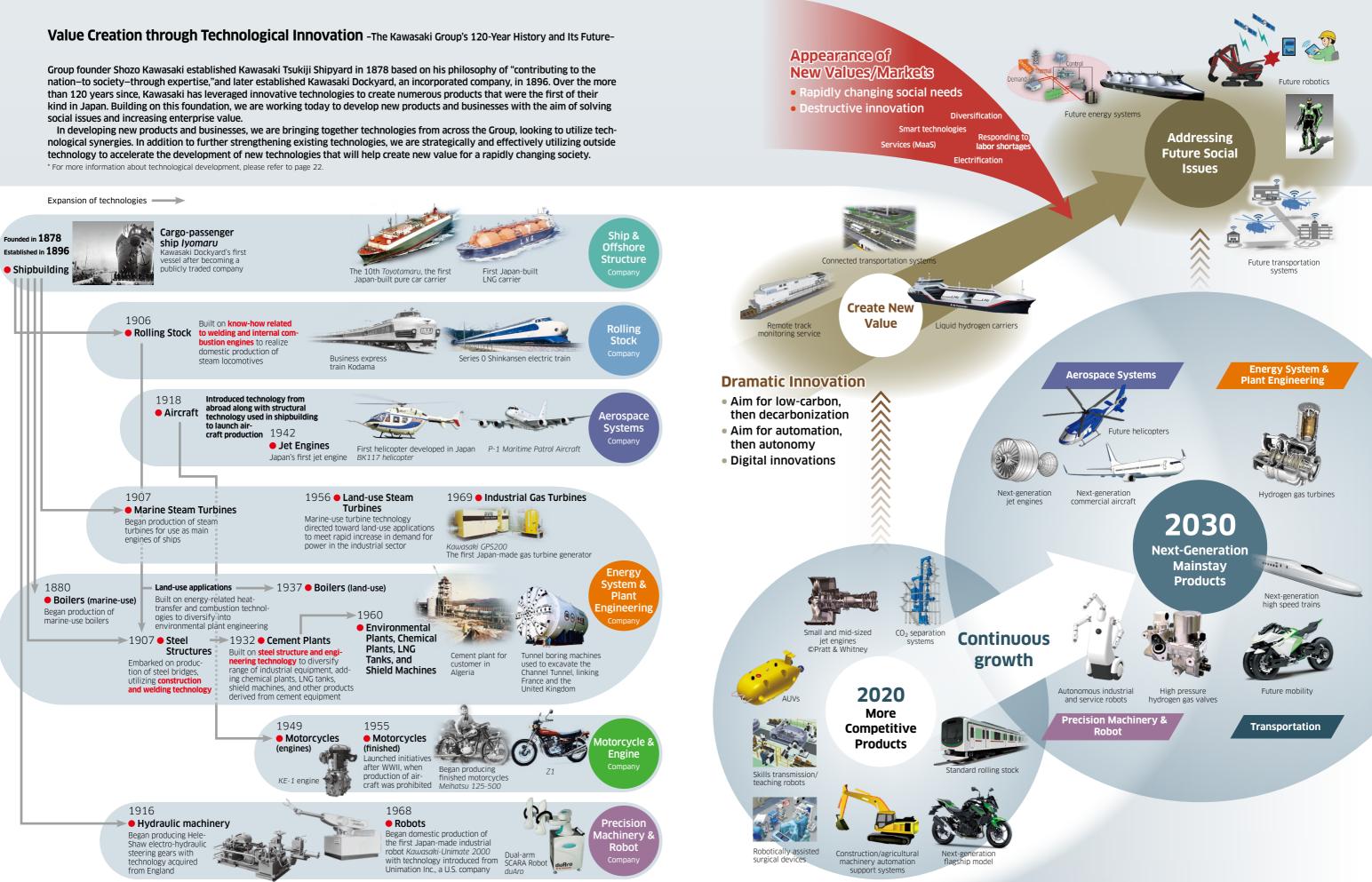
The report covers Kawasaki Heavy Industries, Ltd., its 94 consolidated subsidiaries (40 in Japan and 54 overseas) and 17 equity-method associates. Some data, however, refer to the parent company alone.

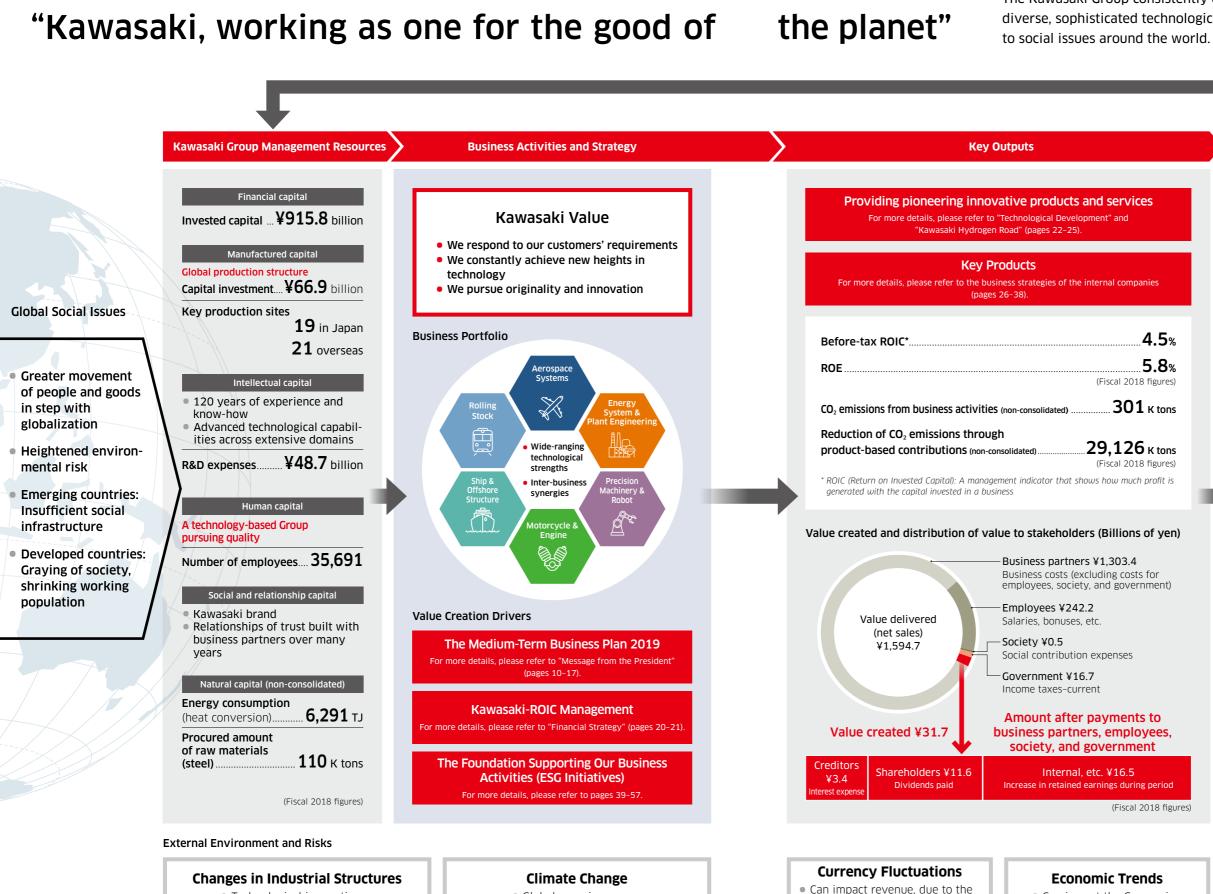


### Frequency of Publication

- Annually, in principle
- Previous edition-November 2018
- Next edition-September 2020







Global warming

Major natural disasters

- Technological innovation • The evolution of AI and IoT

# The Kawasaki Group consistently creates new value by drawing on diverse, sophisticated technological capabilities to contribute to solutions

# **Created Social Value**

Provide safe and secure, clean, comfortable movement of people and goods by land, sea, and air

Create clean energy

Improve social infrastructure, especially in emerging countries

Respond to the needs of an aging society and shortage of labor through automation

• Can impact the Group via

capital expenditure

Group's large proportion of

overseas sales

# Social Value Created through Our Businesses

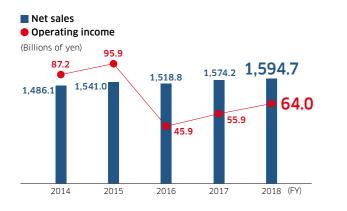
In fiscal 2017, in the process of identifying material issues<sup>\*</sup> the Kawasaki Group designated four ways of creating social value through its businesses as its greatest priorities over the long term. These are providing safe and secure, clean, comfortable movement of people and goods by land, sea, and air; creating clean energy; improving social infrastructure, especially in emerging countries; and responding to the needs of an aging society and

shortage of labor through automation. At the same time, management identified Sustainable Development Goals (SDGs) that the Group should contribute to and set non-financial targets to reach by 2030. Kawasaki will regularly disclose its progress toward these targets while working to maximize social value, achieve sustainable growth, and contribute to the realization of the SDGs.

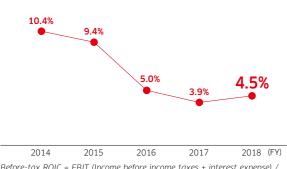
Creat	ted Social Value	Releva Shared	int SDGs Individual	Division	Vision for 2030	2030 Target/KPI
			Ship & Offshore Structure Company	Contribute to a significant decrease in emissions of nitrogen oxide (NOx) and sulfur oxide (SOx) from ships by promoting the increased use of LNG-fueled ships. Develop and build large hydrogen-fueled liquefied hydrogen carriers to help realize a CO <sub>2</sub> -emission free society.	<ul> <li>LNG-fueled ships/large hydrogen-fueled liquefied hydrogen carriers built annually: 1</li> <li>Orders received for LNG fuel gas supply systems annually: Multiple</li> </ul>	
se comf	iding safe and cure, clean, ortable move- of people and		3 600 MAIN 	Rolling Stock Company	Help to build better global transportation infrastructure by manufacturing rolling stock that is safe and comfortable to ride in, highly reliable, highly cost efficient over its lifecycle and energy saving to minimize the burden on the environment.	<ul> <li>Rolling stock units delivered: 1,000</li> <li>Improve efficiency and reduce need for specialized skills in maintenance, maintain and improve safe, reliable transport, and contribute to the enhancement of services and added value provided by railway operators</li> </ul>
go	ods by land, ea, and air			Aerospace Systems Company	Provide air transportation systems combining excellent environ- mental performance with high safety and reliability.	<ul> <li>Provide environmentally friendly aircraft, helicopters, and engines to the market and expand the scope of participation in the development of these products</li> </ul>
				Motorcycle & Engine Company	Develop, manufacture, and deliver environmentally friendly motorcycles as well as models with "fun-to-ride" appeal and advanced rider-support features.	<ul> <li>Provide motorcycles with advanced rider-support features, such as Cooperative Intelligent Transport Systems (C-ITS), as well as motorcy- cles powered by clean energy, including electric motorcycles and hybrid motorcycles</li> </ul>
Creatii	ng clean energy	9 Network Instantian Network Instantian 12 REPORTED COORDINATION 13 CLARE	7 Attended and Call Information State Construction 8 Information And Construction C	Corporate Technology Division	Provide equipment, such as hydrogen loading and unloading facilities, liquefaction systems, carriers, and hydrogen-fuel gas turbines and contribute to the development of a hydrogen-powered society as a supplier of liquefied hydrogen transportation infrastructure systems and packages.	<ul> <li>CO<sub>2</sub> reduction through use of hydrogen energy: 3 million tons</li> <li>Hydrogen transport volume: 225,000 tons per year</li> </ul>
		ving social astructure, ecially in ing countriesImage: CompanyUses technologies and quality underpinned by sop product development expertise, manufacturing tech engineering know-how to globally provide product es that help protect the environment and earn high satisfaction, mainly in are areas of energy and thePrecision Machinery Business DivisionMake Kawasaki hydraulic machinery and systems to standard and achieve stable production and supply development of next-generation construction mach human- and environment-friendly to contribute to ment of infrastructure, mainly in emerging countrie the development and sale of energy-saving product oriented products, and renewable energy-oriented contribute to the reduction of environmental burder new technologies, such as ICT, IoT, and AI, with Kaw	A distinctive equipment, system, and plant manufacturer that uses technologies and quality underpinned by sophisticated product development expertise, manufacturing technology, and engineering know-how to globally provide products and servic- es that help protect the environment and earn high customer satisfaction, mainly in are areas of energy and the environment.	<ul> <li>Expand share of distributed power generation market with the industry's most efficient, environmentally friendly devices</li> <li>Constantly provide highly efficient, energy-saving power generation facilities and devices, infrastructure-related facilities, and environment-related facilities</li> </ul>		
inf es	Improving social infrastructure, especially in emerging countries			Machinery Business	Make Kawasaki hydraulic machinery and systems the global standard and achieve stable production and supply. Support the development of next-generation construction machinery that is human- and environment-friendly to contribute to the improve- ment of infrastructure, mainly in emerging countries. Promote the development and sale of energy-saving products, hydrogen- oriented products, and renewable energy-oriented products to contribute to the reduction of environmental burden. Combine new technologies, such as ICT, IoT, and AI, with Kawasaki's robot technology and hydraulic control technology to create new value.	• Hydraulic machinery production and delivery volume: 1.4 million units
need societ of la	oonding to the ds of an aging y and shortage abor through utomation		3 data maran 	Robot Business Division	Improve access to high-quality medical care through the devel- opment of medical robots in developed countries facing demo- graphic graying and use robot technology to support medical supplies production, nursing and medical care, and the develop- ment of therapies and treatments that reduce the physical bur- den on patients while developing and manufacturing robots that collaborate with humans in work operations and making them intelligent enough to help address labor shortages, mainly in developed countries.	Robots delivered: 100,000



# **Performance Highlights**



 Before-tax ROIC (Return on invested capital) (%)



Before-tax ROIC = EBIT (Income before income taxes + interest expense) / Invested capital (Interest-bearing debt + Shareholders' equity)

### Capital expenditures

Share of net sales by segment\*

Other ¥95.1 billion

(Billions of yen)

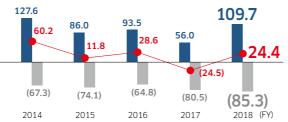
Research and development expenses

82.7 82.1 80.0 76 3 66.9 43.6 2014 2015 2016 2017 2018 (FY)

¥463.9 billion

¥222.0 billion

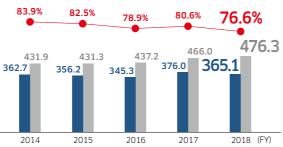
Cash flows from operating activities Cash flows from investing activities Free cash flows (Billions of yen)



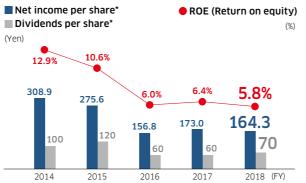
Net debt equity ratio

(%)

Net interest-bearing debt Shareholders' equity (Billions of yen)

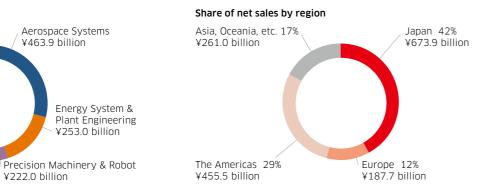


Net debt equity ratio = Net interest-bearing debt (Interest-bearing debt - Cash on hand and in banks) / Shareholders' equity



Return on equity = Profit attributable to owners of the parent / Shareholders' equity

\* Effective October 1, 2017, a 1-for-10 share consolidation was implemented for ordinary shares. Figures above are calculated assuming the share consolidation was conducted on April 1, 2014

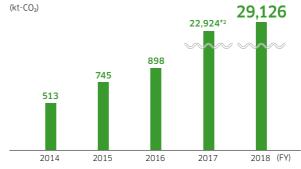


\* In April 2018, the former Aerospace Company and the jet engine business of the former Gas Turbine & Machinery Company were integrated into the newly established Aerospace Systems Company and the former Plant & Infrastructure Company and the energy and marine-related businesses of the former Gas Turbine & Machinery Company were integrated into the newly established Energy System & Plant Engineering Company. In addition, the former Precision Machinery Company was renamed the Precision Machinery & Robot Company

# CO<sub>2</sub> emissions from business activities (non-consolidated) (kt-CO<sub>2</sub>)



Reduction of CO<sub>2</sub> emissions through product-based contributions (non-consolidated)\*1

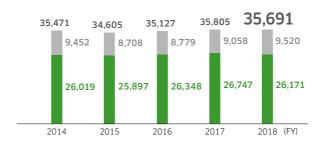


\*1 Estimates based on actual delivery record \*2 The calculation rule has been revised for fiscal 2017. For details, please see

page 54.

# Number of employees

📕 Overseas Group companies 📕 Japan (People)



# Distribution of employees/companies by region Asia, Oceania, etc. 14% 5,131 employees/ 30 companies The Americas 10% 3,639 employees/ 14 companies Europe 2% 750 employees/ 10 companies Japan 73% 26.171 employees/ 41 companies

Motorcycle & Engine

¥356.8 billion

Rolling Stock

¥78.9 billion

¥124.6 billion

Ship & Offshore Structure

# **ESG-Related External Evaluations**

The Dow Jones Sustainability Index is a leading Sustainability Investing (SI) index which assesses and selects leading sustainability-driven companies in terms of economic, environmental, and social criteria.

Created by the global index provider FTSE Russell (the trading name of FTSE International Limited and Frank Russell Company), the FTSE4Good Index Series is designed to measure the performance of companies demonstrating strong environmental, social and governance (ESG) practices. The FTSE-4Good indices are used by a wide variety of market participants to create and assess responsible investment funds and other products.

The FTSE Blossom Japan Index is designed to measure the performance of Japanese companies that demonstrate strong environmental, social and governance (ESG) practices. The index is constructed so that industry weights align with the Japanese equity market and uses the globally established FTSE4Good Index Inclusion Rules, which are drawn from existing international standards, including the United Nations Sustainable Development Goals (SDGs).

MSCI ESG Leaders Indexes include companies with high ESG ratings relative to their sector peers.

MEMBER OF Dow Jones Sustainability Indices In Collaboration with RobecoSAM 👀





MSCI SSG

2019 Constituent Leaders Indexes

THE INCLUSION OF Kawasaki Heavy Industries, Ltd. IN ANY MS INDEX, AND THE USE OF MSCI LOGOS, TRADEMARK: SERVICE MARKS OR INDEX NAMES HEREIN, DO NC CONSTITUTE A SPONSORSHIP, ENDORSEMENT O PROMOTION OF Kawasaki Heavy Industries, Ltd. BY MSCI OF NNY OF ITS AFFILIATES. THE MSCI INDEXES ARE THE EXCLUSIVE PROPERTY OF MSCI MSCI AND THE MSCI INDEX VAMES AND LOGOS ARE TRADEMARKS OR SERVICE MARKS OF MSCI OR ITS AFFILIATES.

The S&P/JPX Carbon Efficient Index uses as its parent index the Tokyo Stock Price Index (TOPIX), a leading stock index used to represent the movement of the Japanese market and weights companies based on their environmental information disclosure and carbon efficiency (carbon emissions per unit of net sales)





Health and Productivity Management Outstanding Organizations (White 500) certification by Nippon Kenko Kaigi



Eruboshi (2nd level) certification by Ministry of Health Labor and Welfare



Kurumin (2 stars) certification by Ministry of Health Labor and Welfare



**Message from the President** 

# By resolving social issues through wide-ranging business, we will increase Kawasaki's enterprise value.

# Beginning the New Medium-Term Business Plan

Over the past three years, the Kawasaki Group has advanced initiatives aimed at achieving the goals for fiscal 2018 laid out in our medium-term business plan, MTBP 2016. We steadily invested in areas with strong future potential, such as aerospace systems and precision machinery and robots, aiming for medium- and long-term growth. Unfortunately, however, quantitative results fell considerably short of our initial goals (Figure 1). This was due in large part to losses recorded each year from major projects, but these losses alone cannot fully explain what happened.

We embarked upon the medium-term plan having mapped out paths to our goals in each business, but our reading of trends in the business environment was inadequate. As a result, we made dispersed investments, some in low-growth, low-return, high-risk fields, weakening the Company's earnings power and worsening its cash flows.

Given this, we fundamentally revised the formulation process for the new medium-term business plan,

# Figure 1: MTBP 2016 Quantitative Goals and Results

# Before-tax ROIC

Operating income (Billions of yen)

Cash flows from operating activities (Billions of yen)

Net D/E Ratio

MTBP 2019. Previously, each internal company would draft is own business plan, and then, based on these, we would all meet to work out the Company-wide plan. This time, however, the head office divisions and internal companies began by thoroughly discussing the assumptions about mega-trends and individual business strategies that underlie business planning. Furthermore, to ensure that we meet the targets of MTBP 2019, we will carefully monitor the likelihood of achievement of each internal company's plans and business environment risks on an ongoing basis.

The business environment is changing greatly, and we cannot expect to survive by standing still. Aware that the period of the new medium-term management plan will decide the future of Kawasaki, we will implement decisive measures to build a foundation for the achievement of our vision for fiscal 2030, including efforts to reform business models, organizational structures and internal culture.

Goal for FY2018	Result in FY2018
	Resolt III 12010
11.0%	4.5%
100.0	64.0
100.0	04.0
140.0	109.7
140.0	105.7
70%-80%	76.6%



# **Reviewing MTBP 2016**

Figure 2, below, provides an overview of the key measures (actions 1-5) of MTBP 2016.

As shown under Action 1, investment in fields expected to drive growth over the medium and long terms, such as aerospace systems and robots, progressed as planned, and we expect to see returns in the form of revenue from fiscal 2021 onward.

However, as indicated under Action 2, we recorded losses on large projects in ships, rolling stock and other businesses and allowed profitability to decrease in other businesses. As a result, we did not meet our quantitative targets.

As for Action 3, we made progress on realizing synergy effects in certain fields, but maximizing these effects at the Company-wide level remains a challenge.

Furthermore, as shown under actions 4 and 5, our business selection and concentration criteria were insufficiently clear, and business replacement stalled. This was a significant reason that profitability did not increase as planned. We still have a ways to go in developing crossorganizational functions and systems needed for overall optimization, and we have incorporated this as a task to address in the new medium-term business plan.

Under the new plan, we will strive to more fundamentally improve and strengthen our earnings power.

Figure 2: Results of Key Measures under MTBP 2016 (Actions to Promote ROIC Management)

- Profitability significantly decreased in several businesses; strengthening the financial base is an urgent requirement
- Returns from ongoing investment of resources in growth fields are approaching

		Results
Action 1	Plan and execute growth strategies through the strengthening of core competence in each business unit (BU)*	<ul> <li>Anticipating the beginning of returns from ongoing investment of resources in growth fields</li> <li>Completed a new plant for the 777X and started shipments</li> <li>Completed one jet engine development cycle</li> <li>Steady progress in developing medical robots (currently in the final phase)</li> </ul>
Action 2	Set appropriate indicators, with a focus on ROIC, and create specific action plans for achievement	Recorded deficits on major projects in several businesses Due to decreased profitability as a result of this and other factors, most quantitative goals (including ROIC) were not achieved
Action 3	Pursue synergy effects through integrated operations to create new value	<ul> <li>Mechanisms for realizing synergies in growth fields progressed in certain areas, but Company-wide maximization remains a task</li> <li>Progressed steadily toward demonstration tests of the CO<sub>2</sub>-free hydrogen supply chain in fiscal 2020</li> <li>Created synergies in the energy field and Aerospace Systems segment through organizational integration</li> </ul>
Action 4	Define scale-down or withdrawal strategies broken down to each sub-BU and product	Business selection and concentration criteria were unclear and execution was not fast enough • Withdrew from offshore vessels
Action 5	Create a portfolio focusing on profitability, stability, and growth	Cross-organizational functions and systems were insufficient to realize overall optimization

The MTBP 2019 within Our Long-Term Vision

In light of such factors as mega-trends in the business environment and the Sustainable Development Goals, we have designated an operating income margin of 10% or more (with annual net sales growth of 5% or more) as our vision for Kawasaki in fiscal 2030 (Figure 3). To achieve this vision, over the three years of MTBP 2019, we will make selective investment, aiming for further growth, with strengthening our financial

# Figure 3: Long-Term Vision and the MTBP 2019

MTBP 2016	MTBP 2019
	Goals for FY2021 (mileston
Profitability declined and quanti- tative goals were not achieved	Before-tax ROIC: 10% or mor
However, development of medi- um- to long-term growth driver businesses progressed as planned	Operating income margin: 6% or more
Expecting to begin reaping returns from fiscal 2021	FCF: ¥120 billion or more over 3 years
	Strength Selective investme
	← Sales growt
FY2016-2018	FY2019-2021

# **Basic Policies of MTBP 2019**

In light of the lessons learned from MTBP 2016, we have designated four basic policies for MTBP 2019: 1. Strengthen the financial base, 2. Total optimization of the business portfolio, 3. Business model innovation, and 4. Innovate company organization/culture.

Figure 4: Basic MTBP 2019 Policies		
1	Strengthen the financial base	Return to the p to improve ope ment), and stre
2	Total optimization of the busi- ness portfolio	Implement care and budgets fro mega-trends and and optimal sc
3	Business model innovation ("Changing Forward")	Make good use value through sticking to in-h
4	Innovate company organization/ culture ("Changing Forward")	Construct cross tems for total o ing challenges

\*BU: Business unit

base a top priority. While we regard the final year of plan, fiscal 2021, as only a milestone on the way to fiscal 2030, we have set the targets for fiscal 2021 of before-tax ROIC of 10% or more, operating income margin of 6% or more and free cash flows (FCF) of ¥120 billion or more (over three years). I would next like to describe the initiatives we will advance to achieve these targets.



philosophy of emphasizing quality over quantity erational quality (including project risk manageengthen the financial base toward future growth

refully selected investments of labor, resources, rom the viewpoint of total optimization. Consider and the SDGs. Clarify each business's role, targets, cale and form.

e of core competencies to increase enterprise business and value chain innovations (without house development and production)

s-organizational functions and management sysoptimization and a company culture to face evolv-

# Kev Measures under MTBP 2019

To reinforce the Company's earnings power and corporate strength over the three years ending fiscal 2021, we will implement the following four key measures.

# 1 Strengthen the financial base

In order to address the pressing issue of strengthening the financial base, increasing our earnings power and improving cash flows will be top priorities. Specifically, because functions needed to pursue overall optimization have been inadequate, we implemented organizational reforms in April 2019 with the goal of enhancing strategy formulation and execution functions in head office divisions. I think that this will better enable us to avoid getting overly caught up in individual fiscal year profit and loss management and instead develop business strategy focused on the medium and long terms.

Previously, the business units (BUs) each carried out financial management based on ROIC. Going forward, the BUs will also advance comparisons of benchmarks with competitor companies to set goals for business activities, such as target operating income margins. By implementing thoroughgoing target management, we will work to improve the Company's earnings power.

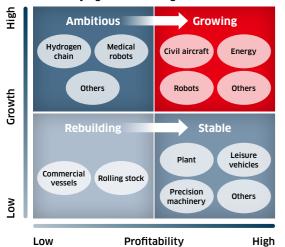
# Strengthening Project Risk Management and Building a Quality Management System

# Strengthening Project Risk Management

In light of the losses on major projects recorded in recent years, during the previous medium-term business plan, we implemented such countermeasures as requiring stricter evaluations before accepting orders, reinforcing monitoring during contract fulfillment. and sharing examples of projects that went poorly. These efforts have steadily borne results. Under MTBP 2019, we will continue these initiatives while reinforcing Group-level risk asset control, including

# **Business Position Clarification and Rebuilding**

Figure 5: Revitalizing Individual Businesses by Clarifying Roles and Targets



that on both the financial and engineering fronts. to better correspond to management resources invested. **Ouality Control System** 

The incident with the manufacturing defect in the series N700 Shinkansen bogie caused our stakeholders tremendous difficulty and concern, and for this, again, I am deeply sorry. We are implementing exhaustive corrective measures at every level to ensure that such a problem never occurs again. Spurred by this incident, we established the TQM Department\* to reinforce cross-organizational functions for effectively and efficiently evaluating and improving the quality management systems and standards of each business segment (the internal companies). In addition to supporting the reinforcement of quality management in the business segments, going forward, we will expand the scope of quality management to management divisions to strengthen management quality.

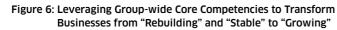
\* TQM: Total quality management

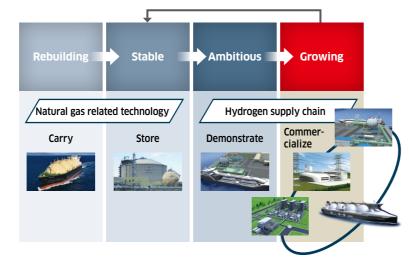
# 2 Total Portfolio Optimization

To make selective investments aimed at future growth, we will revitalize individual businesses by clarifying the position and role of each (Figure 5).

This business positioning is not permanent; it will be periodically and flexibly revised as needed.

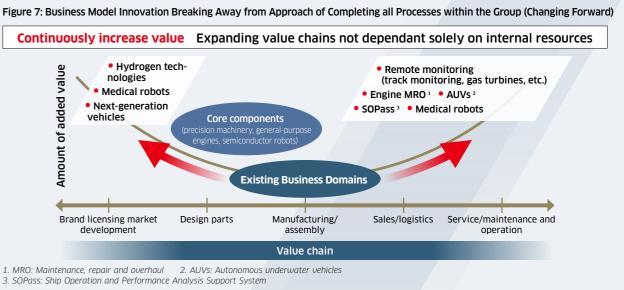
In addition to the above, even in businesses in which improving profitability is challenging due to commoditization or other factors, we will realize business innovation by such means as combining the core competencies of multiple businesses to put them back on growth tracks. The example in Figure 6, below, shows how commercial vessels and cold storage technologies can, through hydrogen supply chain initiatives, be transformed back into businesses with future growth potential.

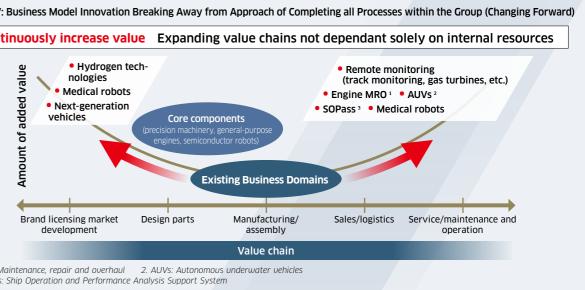




# **3** Business Model Innovation

Until now, our main business domains have been manufacturing and sales, with certain core components lifting overall profitability. We aim to increase earnings power by shifting from our existing







3 SOPass: Ship Operation and Performance Analysis Support System

# 4 Innovate Company Organization/Culture through K-Win Activitie

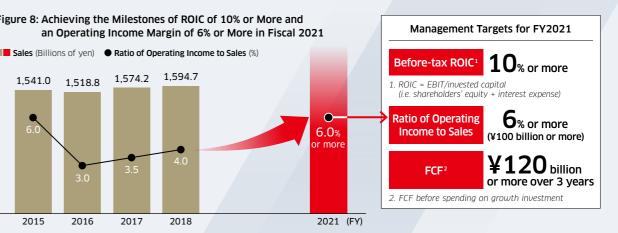
K-Win Activities (short for Kawasaki Workstyle Innovation Activities) began in fiscal 2016 as an effort to promote workstyle reforms. As these activities have evolved, their scope has widened to

# **MTBP 2019 Quantitative Targets**

The global economic outlook is currently unclear, reflecting U.S.-China trade frictions and the deceleration of growth in the Chinese economy. However, by steadily implementing the initiatives described above, we aim to achieve our management goals for fiscal 2021 of before-tax ROIC of 10% or more. FCF of

# Figure 8: Achieving the Milestones of ROIC of 10% or More and

Sales (Billions of yen) • Ratio of Operating Income to Sales (%)



business domains to upstream and downstream businesses that are higher on the so-called smile curve. Furthermore, by bringing in innovation from outside the Group, we will realize dramatic growth not possible merely by building on our existing businesses.

encompass overall corporate reform activities. We will advance organizational and corporate culture reforms to establish an internal climate of boldly taking on change and embody the Group taglines "Changing Forward" and "Powering your potential." Note: For more information on K-Win Activities, please refer to pages 56-57.

¥120 billion or more (three-year total) and an operating income margin ratio of 6% or more (with operating income of ¥100 billion or more). At the same time, we will advance investment aimed at business growth from fiscal 2022 onward.

# initiatives to address such CSR issues as the realization of a low-carbon society, corporate governance, human resource development, human rights, compliance and supply chain management. In particular, we have designated four ways of creating social value through our businesses as topmost priorities over the long term. These are providing safe and secure, clean, comfortable movement of people and goods by land, sea and air; creating clean energy; improving social infrastructure, especially in emerging countries; and responding to the needs of an aging society and shortage of labor through automation. In pursuing these, the Kawasaki Group will contribute to the achievement of the SDGs. For each of these ways of creating social value, we have established visions and non-financial targets for fiscal 2030 that we will use to track progress. Under the MTBP 2019, we will evolve the business portfolio through the pursuit of Group synergy and innovation while maximizing social value and contributing to the realization of the SDGs.

# **Shareholder Returns**

The Kawasaki Group believes that it can best serve shareholders' interests by continuously investing in the cutting-edge R&D and innovative capital expenditure necessary for future growth while steadily generating profit in excess of capital costs and strong cash flows to increase its enterprise value and share price over the long term.

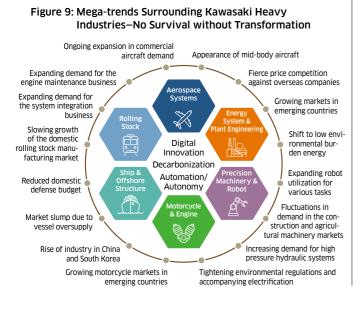
To this end, while maintaining a basic policy of balancing and strengthening our financial base by increasing shareholders' equity and decreasing interestbearing debt, raising the share price through R&D and capital expenditure, and returning profits to shareholders via dividends, we have set a benchmark of 30% for the medium- to long-term consolidated payout ratio.

# **Corporate Governance and Engagement**

The Kawasaki Group constantly works to maintain and enhance a robust corporate governance system commensurate with its position as a corporate group with

# Kawasaki's Vision for Fiscal 2030 and Long-Term Direction

In formulating the MTBP 2019, the head office divisions and internal companies discussed the megatrends in Kawasaki's business environment and strategy going forward. In addition, through the Group's diverse businesses, we will contribute to the achievement of the United Nations' Sustainable Development Goals (SDGs).

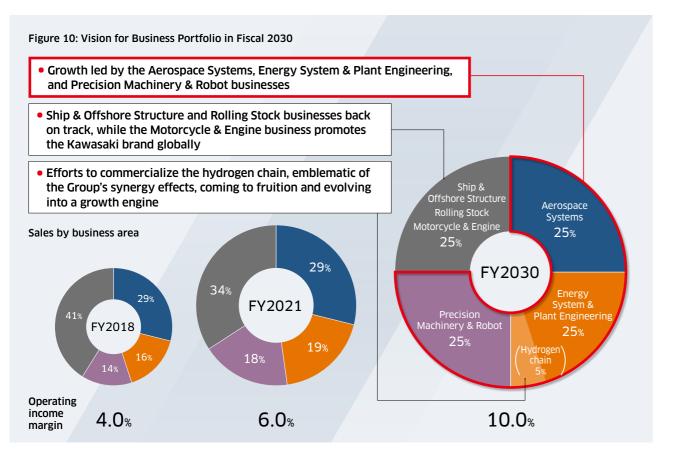


Through such initiatives, by fiscal 2030, we aim to nurture the Aerospace Systems, Energy System & Plant Engineering, and Precision Machinery & Robot businesses into growth drivers and to solidify efforts to commercialize the hydrogen chain–which is emblematic of the Group's synergy effects–and develop it into a growth engine.

In addition, while the Ship & Offshore Structure and Rolling Stock businesses are currently being rebuilt, after MTBP 2019, we aim to have them stably back on track, while the Motorcycle & Engine business promotes the Kawasaki brand globally.

We also aim for a balanced net sales mix in fiscal 2030, divided into four approximately equal parts, namely those from the Aerospace Systems, Energy System & Plant Engineering, and Precision Machinery & Robot businesses, and the total of the Ship & Offshore Structure, Rolling Stock and Motorcycle & Engine businesses.

Furthermore, in light of the changing business environment and the expectations and demands of our diversifying stakeholders, we will strengthen our ESG initiatives. Under MTBP 2019, having identified material issues for fulfilling the Kawasaki Group's CSR, under the new CSR activity framework, we will work to create social value through our businesses and advance





global businesses. Since appointing our first outside director in 2013, we have increased the number of outside directors to three while seeking to maintain an appropriate balance of management oversight and business execution functions. The total portion of directors and audit & supervisory board members that are outside officers stands at 37.5% (6 out of 16). The outside members provide opinions based on their diverse experience outside the Company, contributing to lively, open discussion at Board of Directors meetings. We furthermore strive to maintain management with a high level of transparency for a wide range of stakeholders through such means as proactive and constructive engagement with shareholders.

# "Changing forward"

The Kawasaki Group traces its roots back to 1878, when Shozo Kawasaki established Kawasaki Tsukiji Shipyard. The Group has grown, of course, since then and has utilized diverse, sophisticated technological capabilities to create unique, innovative products and services that address all sorts of social issues.

In recent years, the world has undergone incredible changes, and the speed of change is accelerating. In addition, a wave of innovation is building with the rise of full-scale use of information and communication technology (ICT) and the Internet of Things (IoT) as well as artificial intelligence (AI), which has the potential to significantly alter the way we do business and the content thereof. I believe we ourselves must evolve if we are to respond quickly to the new environment. With this sense of urgency in mind, I am promoting a forward-looking perspective on change within the Group under the banner "Changing forward." I will personally lead the way in taking on new challenges in the management of the Company and the Group.

As always, we will strive to realize our Group Mission, "Kawasaki, working as one for the good of the planet," and continue to create value for all stakeholders.

# **Quality Management**



Refocusing on across-the-board, thoroughgoing quality management, we are promoting Total Quality Management (TQM).

# Sukeyuki Namiki

Representative Director, Vice President and Senior Executive Officer Assistant to the President, General Supervisor of Technology, Production and Procurement, Officer in Charge of Quality Management and the Rolling Stock Company

# Drawing Lessons from a Major Incident, We Redoubled the Priority We Place on Prevention

In December 2017, partial crack was found on the bogie frame of a series N700 Shinkansen railcar manufactured by Kawasaki Heavy Industries. After this incident, we set up the Companywide Quality Control Committee. Including external specialists, the committee investigated the causes of the manufacturing defects and discussed corrective measures aimed at prevention. Participating in the committee as then president of the Aerospace Systems Company, I found it significant and meaningful, as it brought objective viewpoints into the investigation of the incident.

Dr. Takeshi Nakajo, a professor at Chuo University, served as chair of the committee, and highly knowledgeable specialists contributed useful, insightful suggestions, putting us on the right path as a *monozukuri* manufacturer.

The committee concluded that the main causes of the manufacturing defects were poor quality management attributable to excessive dependence on the manufacturing frontlines and the absence of a robust risk management policy systematically requiring taking preventive measures against defects when subcontractors are replaced.

# **Thoroughgoing Measures to Reclaim Trust**

First, we reviewed the entire operational process. It was obvious that the root causes of this problem lay within business units whose processes are routinely dependent on the manufacturing front lines. In response, we promoted concurrent activities that transcend sectional boundaries to step up the preliminarily verification of any manufacturing issues. This resulted in information sharing between business units charged with design and development and those charged with sales, procurement, manufacturing and quality assurance. By striving to ensure built-in quality, we are ensuring that robust measures are introduced at even earlier stages, for example, product design discussion meetings.

The committee's investigation suggested another shortfall; Kawasaki Production System (KPS) activities had yet to be fully embraced. In response, we took a top-down approach and implemented KPS throughout the organization to make it easier to confirm operational conformity. Adoption of KPS began at the motorcycle division, moved on to the aerospace systems division and is now well established. KPS standardizes operational procedures and mandates that each procedure is observed and the outcomes of each process recorded. This ensures that any abnormality is swiftly addressed and nonconforming process corrected. Having fully embraced KPS, we are ceaselessly endeavoring to improve quality via a cycle of (1) detecting abnormalities; (2) pausing to determine the cause; and (3) implementing improvements.

The insufficiency of information sharing with regard to changes in subcontractors is also being addressed through the reinforcement of risk management. Any change carries the element of risk, so we have made it a rule for upstream sections to quickly inform downstream sections of every alteration. Manufacturing records are also being examined to identify issues and incorporate takeaways into future projects.

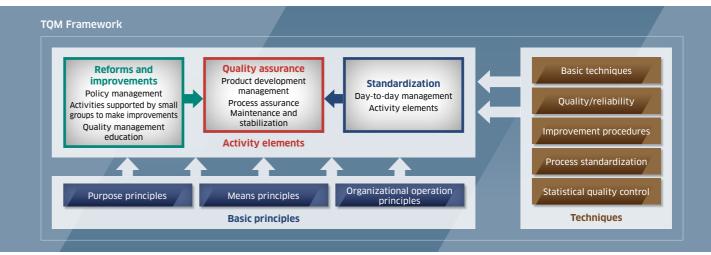
Moreover, we learned a major lesson about the consequences of poor cross-departmental communications. In addition to enhancing vertical upstream-downstream twoway business unit communication, we are facilitating horizontal coordination between departments. A broader range of employees is now being encouraged to engage in discussion that transcends organizational boundaries.

Furthermore, we overhauled our employee education systems. With a shared sense of crisis, all business units are engaged in robust staff education on operational process and quality management.

Thanks to these measures, over the past year I have seen positive changes at the Rolling Stock Company. The prevailing culture is now even more conducive to information sharing and open discussion. Everyone has taken the incident seriously and is strongly determined to regain the public's trust. This determination continues to drive us toward further improvement.

# Promoting TQM to Establish an Overarching Quality Management Structure

In addition to the initiatives discussed above, we sought to



upgrade Total Quality Management (TQM), our system of quality management and in-house quality standard evaluation and enhancement.

We believe TQM represents our commitment to ceaseless quality improvement. Improving product quality requires the involvement of top management as well as every employee in every relevant department, so in fiscal 2018 we carried out across-the-board quality inspections embracing the TQM perspective, beginning with the Rolling Stock Company and going on to all other business segments. In fiscal 2018 we established the TQM Promotion

Department and focused on three areas: policy management, day-to-day management and quality management education.

Policy management entails rolling out policies determined by top management at each organizational layer and their full adoption by frontline workers. It is important to ensure that takeaways from issues identified in the course of operations are shared vertically with upstream sections and horizontally with other departments for policy optimization.

In day-to-day management, we prioritize the standardfostering an open organizational culture. ization of operations and detection of abnormalities, to this While TOM helps us put customers first, it also enhances end engaging in KPS activities to break down the time employees' sense of fulfillment. Therefore, everyone at frame allotted for and compile records about each opera-Kawasaki is committed to ceaselessly improving quality tional process. We are able to identify potential issues and and standardizing operations while determining and opportunities for improvement, for example, taking four countering the root causes of abnormalities, thereby minutes to execute a three-minute process. The detection of shoring up its foundations and contributing to a strong and abnormalities requires monitoring and quick response sysresilient organization in line with our corporate slogan, tems. From a broader perspective, we aim to ensure that "Changing Forward." managers are on the lookout for abnormalities that may Looking ahead, through the Companywide Quality have become normalized in routine operations.

With regard to "quality management education," we have positioned the MTBP 2019 as a starting point and are reviewing the educational curriculum in place at the corporate level under the initiative of the TQM Promotion Department. Similar efforts are under way at each business segment. We are thus redeveloping our platforms for employee education and sharing information as necessary.

The Companywide Quality Meeting facilitates the sharing of best practices as some business segments have already determined TQM-based quality policies and created relevant guidelines. The TQM Promotion Department helps each business segment realize its ideals by working with relevant segment staff to assess the segment's current status, spot any ambiguities or issues, and take action as appropriate.

Driving current initiatives is our sense of crisis since the N700 Shinkansen railcar incident. We recognize that the incident may have stemmed in part from pitfalls found in manufacturing operations generally, not just at the Rolling Stock Company. All Group employees must therefore learn to spot such pitfalls and devise ways to prevent incidents. The foundation of these efforts is TQM, which is highly compatible with KPS. I am determined to foster a quality-oriented corporate culture by leveraging the activities of both.

# Organizational Strength through Active Discussion

When the across-the-board TQM initiative launch was announced, some argued against it. I welcomed these questions, as I believe that active discussion is key to fostering an open organizational culture.

Looking ahead, through the Companywide Quality Meeting we will clarify where improvement is called for and implement countermeasures based on the variety of ideas put forward.

Deep reflection on the aforementioned incident and our work since has made us more aware of the need to thoroughly embrace TQM. Having begun in fiscal 2019, we will strive toward a corporate culture in which TQM is firmly embraced by setting short-, medium- and long-term targets.

# **Financial Strategy**



Promoting ROIC management, we will optimize our overall operations while achieving business model reform.

# Kenji Tomida

Representative Director, Vice President and Senior Executive Officer Assistant to the President, General Supervisor of Finance and Human Resources

# Positioning of Kawasaki-ROIC Management in the MTBP 2019

Engaged in the simultaneous pursuit of overall profitability, corporate growth and operational stability while striking a balance between investment and return, the Kawasaki Group has been utilizing ROIC as its key management indicator since fiscal 2000. In fiscal 2013, this approach was upgraded and we launched Kawasaki-ROIC Management, which, unlike our previous segment-focused management approach, deals with operations at the more granular business-unit (BU) level, allowing precise ROIC management. The before-tax ROIC target for all BUs is set at 8%, a hurdle chosen to ensure that each records profit in excess of capital cost.

The Kawasaki Group consists of a variety of operations with different business cycles, and a conglomerate of this kind typically sets the target for each BU with due consideration given to its business cycle. However, our management framework aims to prompt any BUs failing to clear their threshold within a certain time frame to execute thoroughgoing structural reforms. Unfortunately, the overall Group failed to clear the 8% hurdle under the MTBP 2016. Despite expansion in growth-driving businesses thanks to ongoing investment, a significant decline in the profitability of multiple businesses due to such factors as losses recorded in connection with major projects negatively impacted results.

Drawing lessons from these results, we have stepped up project risk management. Under the MTBP 2019, we are placing the utmost priority on reinforcing our financial position and applying cash flow-focused management to enhance our ROIC. To that end, we have identified our 2021 goals as a before-tax ROIC of 10%, an operating income margin of 6% and operating income of ¥100 billion. Moreover, by continuing to advance selection and concentration, we expect to approach an operating income margin of 10% around fiscal 2030.

# Growth Investment Selection Based on a Cash Flow Model

Looking back, ongoing growth investment carried out by each business segment over the course of the three-year period of the MTBP 2016 overburdened our overall cash flows. Learning from this, the MTBP 2019 breaks down BUs in each business segment into four categories: "growing BU," "ambitious BU," "stable BU" and "reforming BU." Each BU is expected to fulfill their role in their category while taking a selective approach to investment, with the aim of optimizing the overall business portfolio.

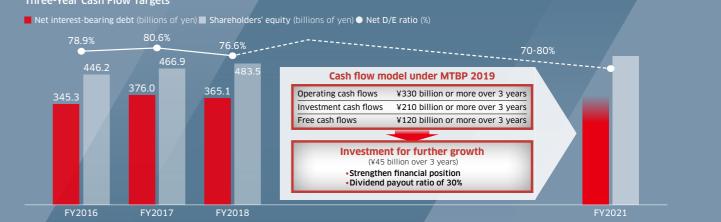
Under the MTBP 2019 cash flow model, our basic goal is to secure operating cash flows totaling ¥330 billion or more over the plan's three years. Relevant Head Office departments will work with each internal company to conduct balance-sheet analyses and identify points needing improvement. We will strive to secure free cash flows of ¥120 billion while keeping outflows attributable to investment below ¥210 billion. Furthermore, we will take a flexible approach to M&A, for which we have set aside a three-year budget of ¥45 billion for growth investments. This should reinforce our financial position while allowing a dividend payout ratio of 30%. Striking a balance between securing cash inflows and investing, we will control our net D/E ratio at 70% to 80%.

# Strengthening Our Management System

We are acutely aware of the need to establish a highly effective management system for the smooth running of a conglomerate and overall operational optimization. In particular, we need to create mechanisms for bridging information gaps between Head Office departments and business segment departments and assessing changes in the business environment.

Thus, in April 2019, the former Finance Division was made the Finance and Control Division with the Corporate Management Department created to operate under it. With this department leading the way, we will optimize overall operations through internal control and roll out digital





innovation, modeled on our fast-growing robot business operations, throughout the Company. We will also push ahead with digitization throughout the value chain, looking to create seamless business processes and introduce automation technologies for ease of monitoring.

Also, to prevent losses, we will even more closely monitor each project to detect warning signs as early as possible and will tighten our grip on risk-weighted assets in a way that is consistent with our financial strength, applying the lens of risk tolerance in the course of managing overall Group operations.

# "Changing Forward": Pursuing Business Model Reforms

Our initiatives under the MTBP 2019 are formulated employing a "backcasting" method based on the business ideals we envision for fiscal 2030.

We expect that around 2030 our existing businesses will be growing consistently thanks to current efforts to enhance product competitiveness. We will also have experienced a transition from low-carbon to de-carbonization solutions and from automated to autonomous machinery while seeing the creation of new value via dramatic innovation associated with digital transformation. These breakthroughs will help create systems, products and services that lead to solutions to the social issues of the future.

Accordingly, the aerospace systems business, which expects robust results in the final year of the MTBP 2019 and beyond, will accelerate its efforts to create next-generation jet engines and aircraft.

Meanwhile, the robot business, which is ready to take In short, the Kawasaki Group boasts a number of busisteps toward the next growth stage, will significantly expand nesses with significant potential for growth in fiscal 2030 the scope of its business fields by commercializing autonoand beyond. To fully realize their potential, we will mous robotic technologies that apply IoT and AI to help strengthen our financial position while developing a highly resolve issues arising from demographic graying and labor effective management system to optimize overall operashortages. Medical robots are also expected to be a strong tions and aid in the creation of new business models. growth driver. In the energy and environment business, Through these and other efforts, we will secure further despite the need for heavy investment in de-carbonization growth for the Kawasaki Group and improve our enterprise solutions to meet clean energy demand, we anticipate future value to embody our corporate slogan, "Changing Forward." revenue from our hydrogen energy business.

As a result, the aerospace systems business, the energy and environment business (which includes the hydrogen chain business), the precision machinery and robot business, and the inland and marine transport business will each account for around 25% of consolidated net sales in fiscal 2030, achieving a well-balanced business portfolio. Taking into account the future outlook for mega trends in the period leading up to 2030, we expect that investment priority will be placed on the aerospace systems business, the precision machinery and robot business and the energy business centered on hydrogen.

Business expansion also requires business model reforms that mean breaking away from the traditional manufacturing approach of completing all processes within the Group. For example, we aim to reform facility services,

maintenance and operations, including the provision of aftersales services for gas turbines and rolling stock. Within our existing business infrastructure, we will thus expand our value chains while collaborating with external corporations. Eventually, we will be able to establish a subscription model that yields stable and secure recurring fee revenues.

Other reforms include the development of a licensing business. We expect our unique hydrogen technologies to help us secure an advantage the future emergence of hydrogen power generation. Specifically, as a leader in the area of low-carbon and de-carbonization solutions encompassing a broad range of the hydrogen supply chain, we will be able to take advantage of the large number of intellectual properties and core technologies we possess to expand our hydrogen business while seeking alliances with a variety of partners around the globe.

# **Technological Development**



We will create new value for future generations via the pursuit of technological innovation.

# Hiroshi Nakatani

Managing Executive Officer, CIO General Manager, Corporate Technology Division General Manager, Technical Institute General Manager, Manufacturing Improvement Center

# **Evolution Employing Digital Innovation**

At Kawasaki Heavy Industries, the Corporate Technology Division has long been collaborating with each business segment to promote product development. In line with the FY2019 MTBP, we are striving to step up such collaboration with emphasis on dramatic innovation as part of a push to create new products and businesses aimed at meeting rapidly evolving market needs. We consider dramatic innovation essential to satisfying latent customer needs, helping resolve future issues, and creating solutions for future generations. I believe that much will be accomplished via breakthroughs in digital technologies. For example, we have positioned future energy systems, transportation systems and robotics as growth fields and are discussing the services we need to create. We are also striving to ensure that staff at the Corporate Technology Division and those at business segments share a common idea of the future products and businesses that will make it possible to deliver solutions. In this way, we are identifying technological targets that must be achieved in order to realize further advances.

In fiscal 2018, the Information Planning Center, formerly part of Head Office's Corporate Planning Division, was reassigned to the Corporate Technology Division and renamed the IT Strategy Planning Center. The Corporate Technology Division is now better positioned to accelerate efforts aimed at embodying our corporate slogan, "Changing Forward."

We expect digital innovation to help broaden our business fields. As a manufacturer, we have largely depended on earnings from assembly and production. Digital innovation, however, allows us to expand our scope of services to include operations previously undertaken by our customers.

We are now enhancing the value of our services through the provision of a comprehensive set of systems, rather than just products, and improved maintenance efficiency. For example, to enhance customer value in our garbage incinerator operation assistance service an AI-driven system analyzes images of the matter being incinerated and automatically calculates the volume of garbage needed for the desired output from the generator the furnace is feeding. We aim to upgrade this system to plan garbage supply

volumes based on market electricity demand.

By thus applying prediction and optimization technologies, we will help customers streamline their operations. This is how digital innovation works, and we believe our efforts to develop efficient facility management systems will contribute to the realization of greater goals, like the SDGs.

# Preparing for the Emergence of a Hydrogen-Powered Society

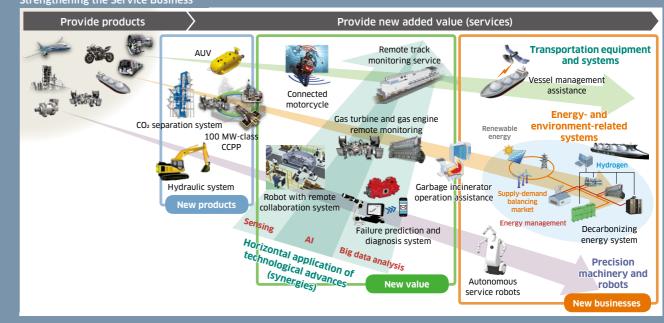
After the Paris Agreement, signatory countries began pursuing the collective target of keeping the global temperature rise in this century to less than 2°C (ideally, less than 1.5°C) above pre-industrial levels. This agreement also aims to reduce emissions of greenhouse gases (GHGs), including CO<sub>2</sub>, to virtually zero in the second half of this century. We are determined to fulfill our responsibilities as a corporate citizen in response to this international shift in focus from low-carbon to de-carbonization, which will bring with it new business opportunities. Accordingly, we are pushing ahead with various initiatives in preparation for the emergence of a society in which hydrogen-fueled clean energy is a major type of power.

The creation of the decarbonized society requires three factors. First, a robust power network must be built despite the intrinsic instability of the renewable energy supply. Our network-based remote facility operation systems will help adjust outputs from power generation facilities, such as gas engines and gas turbines, in response to changes in demandsupply status. Our technologies will thus benefit both the energy market and power suppliers.

The second factor is carbon recycling. We envision a new material chain that prevents the external release of CO<sub>2</sub> emissions and is nondependent on fossil fuels. Despite cost challenges, a growing number of customers are investing in such green energy solutions.

Finally, we believe that the promotion of clean energy will result in the creation of a society powered by hydrogen energy. Over a two-year period ended in fiscal 2018, we were engaged in the verification testing of "Kobe Smart Community." Specifically, we established a hydrogen cogeneration power generation facility on Kobe Port Island

# Strengthening the Service Business



using our gas turbine technologies to supply energy and heat to surrounding communities, confirming the safety and feasibility of the cogeneration system.

Plans call for carrying out technological verification associated with importing hydrogen from Australia in 2020. Australia boasts abundant, easily accessed reserves of brown coal that have long been underutilized due to transportation difficulties. To address this issue, we aim to establish a lowcost process for extracting hydrogen on site. Hydrogen can then be efficiently transported to Japan and utilized for power generation, other industrial purposes, or as a fuel for vehicles. As a number of major international events are expected to be held in Japan in 2020 and beyond, we will focus on introducing our blueprint for the hydrogen-powered society of the future to visitors from around the world.

# Enhancing Manufacturing through **Digital Innovation**

We are engaged in process innovation aimed at enhancing operational efficiency. For example, taking advantage of digital innovation, we are striving to incorporate virtual reality (VR) and augmented reality (AR) technologies into our design and development operations.

Most recently, VR was utilized in the course of developing a new railcar in the Seibu 40000 series. Focusing on ensuring a barrier-free environment, we used a VR-supported design process to confirm freedom of movement within railcars for passengers with disabilities, thus reducing the time and money spent on prototype development.

Moreover, we have been introducing ICT/IoT technologies as part of the push to realize manufacturing reforms at our factories. For example, the Corporate Technology Division is working with the Aerospace Systems Company to promote the Smart-K project, which involves introducing robots at our Nagoya and Gifu facilities and establishing a cutting-edge, RFID\*-driven product traceability management system. We expect these technologies to support timely decision making with regard to changes in production orders while optimizing facility operations.

\* RFID (radio frequency identification): Wireless, automated recognition systems and technologies

# The Corporate Technology Division Provides a Vision of the Future

Our matrix-type based operations maximize performance with fewer employees. Thus staff from the Corporate Technology Division can closely collaborate with staff in each business segment from the product planning stage onward and the allocation of resources can be optimized to meet various, often contradictory, development requirements. With multiple projects currently under way, specialists at the Corporate Technology Division are taking advantage of their technological expertise to promote product development at business segments.

Furthermore, matrix-based operations enhance our ability to realize synergies through the sharing of insights gleaned from past projects. For example, a recent project aimed at developing gas engines utilized combustion chamber flow and combustion analysis techniques developed through motorcycle development. This project supported the development of a highly efficient gas engine with worldleading performance in an extremely short period of time.

Conversely, the Ninja H2, a motorcycle boasting a supercharger, was developed via the application of highspeed rotating technologies originally utilized in gas turbines. In short, we are leveraging technological synergies in various ways to enhance project development efficiency.

The Corporate Technology Division's mission includes proposing products and services capable of resolving social issues and, to this end, envisioning the technologies it must create in the near future to identify solutions that will support future generations. To this end, in addition to in-house development, the division collaborates with startups, utilizing input from these and other open innovation initiatives being undertaken worldwide as endeavors to efficiently meet society's evolving needs.

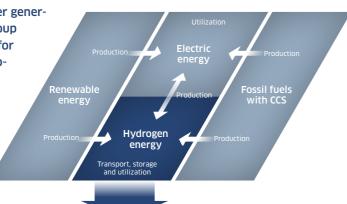
Looking ahead, for the division to help Kawasaki Heavy Industries maintain sustainable operations, it will have to take on the kind of challenges that cannot be overcome by upgrading or optimizing existing products and strive toward technological breakthroughs and business model reforms. We are confident that we will overcome such challenges, create innovative products and new value, and satisfy the future needs of society.

**Connecting Hydrogen Production and Consumption Sites** 

# Kawasaki Hydrogen Road

Hydrogen emits no CO<sub>2</sub> when combusted and can be easily produced from a variety of raw materials. Hydrogen is therefore a highly promising source of clean energy, capable of helping counter global warming and resource

depletion-two major environmental problems-if it can be made widely available as a fuel for vehicles or power generation. Kawasaki's accumulated technological and Group capabilities enable it to provide the key equipment for a seamless hydrogen supply chain encompassing production, transportation, storage and utilization. Leveraging this strength, we are developing and commercializing new hydrogen infrastructure technologies. By doing so, we are working to create an affluent society through the safe, affordable and stable supply of hydrogen.



Hydrogen Energy Supply Chain

# Production

# -253°C: Realizing Extreme Cold

Large-scale hydrogen-fueled power generation requires a large quantity of hydrogen. Kawasaki Heavy Industries is the first in Japan to develop an industrial hydrogen liquefaction system that employs only domestic technologies. In addition to producing hydrogen from brown coal, an underutilized resource, we have made it possible to easily handle a large volume of hydrogen by using cryogenic (-253°C) liquefaction to reduce its bulk.



# **I** ransportation

# Reduction in Volume to 1/800

Hydrogen produced overseas from underutilized resources is liquefied at -253°C to reduce its bulk to one eight-hundredth its volume as a gas. To transport this hydrogen safely and efficiently, we are developing the world's first liquefied hydrogen carrier ship.\* The demonstration ship is scheduled for completion in 2020, with plans for larger versions down the line.

Marine Transportation Supply Chain Derived from Unused Brown Coal subsidized by New Energy and Industrial Technology



# Example Initiative

# Initiating Demonstration Project Aimed at Establishing a Hydrogen Supply Chain Spanning Japan and Australia

Despite its significant potential, brown coal has largely been underutilized as it ignites easily when dried, making it difficult to transport safely. Latrobe Valley, in Victoria, Australia, boasts an abundant reserve of brown coal. This deposit is only five meters below the ground and is estimated to contain enough fuel to power all of Japan for 240 years at current usage levels. Solutions capable of converting brown coal into hydrogen can make this underutilized resource usable.

Kawasaki is working with partner companies toward demonstration under its Hydrogen Energy Supply Chain (HESC) Project to produce hydrogen from Latrobe Valley brown coal, liquefy it and transport it to Japan. The first hydrogen production and transportation testing is scheduled for 2020 to 2021.





# Creating Clean Energy

As it aims to contribute to the development of a hydrogenutilization via power generation employing gas turbines optipowered society, Kawasaki Heavy Industries is pursuing its mized for this fuel. goal of becoming a supplier of comprehensive system packages Applying CO<sub>2</sub> capture and storage (CCS) technologies at the associated with hydrogen transportation infrastructure by production stage when obtaining hydrogen from fossil fuels 2030 via the provision of hydrogen loading and unloading enables the use of hydrogen as a source of clean energy by facilities, liquefaction systems, carrier ships and gas turbines. controlling CO<sub>2</sub> emissions all the way from production to utilization. Once established, the hydrogen supply chain that Kawasaki To achieve this goal, we are working with partner companies to develop key hydrogen supply chain technologies. These techis building will be able to stably supply large quantities of clean nologies include those associated the production of hydrogen energy while considerably reducing CO<sub>2</sub> emissions. We have inifrom brown coal in Australia, with the aim of taking advantage tiated the construction of facilities for the demonstration of this of this underutilized resource, as well as technologies that prosupply chain. We have also successfully completed demonstraduce hydrogen in combination with renewable energy generation testing of heat and electricity supply via pure hydrogen tion processes and hydrogen liquefaction technologies. With combustion as well as water electrolysis hydrogen production. regard to the transportation of hydrogen, our large-capacity carrier ships are expected to play an essential role along with our loading and unloading facilities. Furthermore, we will support the storage of liquefied hydrogen as well as hydrogen

# Goal for the MTBP 2019 • Complete the demonstration of a hydrogen supply chain spanning Japan and Australia Initiated the construction of loading and unloading facilities for supply chain demonstration FY2018 results urban areas in Kobe

store hydrogen) in Hokkaido

# Storage

# 2,500 m<sup>3</sup> Liquefied Hydrogen Storage Tank

The development of storage tanks and transportation containers for liquefied hydrogen is essential to promoting the utilization of hydrogen in Japan. Kawasaki Heavy Industries boasts a long track record in the handling of liquefied hydrogen used as rocket fuel. Currently, we are striving to develop the largest liquefied hydrogen storage tank in Japan, which will boast vacuum insulated walls and a capacity of 2,500 m<sup>3</sup>.\*



Proiect for Establishment of Mass Hvdroaen Marine ransportation Suppl Chain Derived from Unused Brown Coal subsidized by NEDO

# Example Initiative

# Smart Community Technology Development Project Utilizing Hydrogen Cogeneration System<sup>1</sup> on Kobe Port Island

To demonstrate cogeneration employing hydrogen-fueled gas turbines, we established a cogeneration system utilizing a 1MW hydrogen- and natural gas-fueled turbine on the site of the former Kobe Minatojima Clean Center. We conducted this project with support from NEDO's<sup>2</sup> Subsidy to Industrial Technology Development Expense under a Specific Theme (fiscal 2015 to 2018) program in cooperation with Obayashi Corporation, Kobe City and a number of major companies based in the Kansai area. The project's results set the global precedent for hydrogen-fueled cogeneration systems that provide electricity and heat in an urban area.

1. A general term for systems that provide electricity and heat 2. NEDO: New Energy and Industrial Technology Development Organization



Succeeded in operating cogeneration facilities that employ the mixed combustion of natural gas and hydrogen as well as purely hydrogen-fueled cogeneration facilities in

Completed the demonstration of wind-powered water electrolysis hydrogen production (a "power-to-gas" process that utilizes surplus renewable energy to produce and



A demonstration plant installed on Kobe Port Island

# Utilization

# 100% Hydrogen-Fueled Power Generation

With the aim of commercializing power generation gas turbines that reduce environmental burden, we developed a unique combustion method employing a mix of 40% natural gas and 60% hydrogen. Furthermore, we developed technology for freely adjusting the fuel mix, anywhere from 100% natural gas to 100% hydrogen, without interrupting the power supply. We completed the demonstration of this technology at our facility on Kobe City's Port Island.<sup>1</sup> Going forward, we aim to develop a dry-combustion gas turbine for purely hydrogen-fueled power generation to reduce NOx emissions. To this end, a new demonstration project, launched in fiscal 2019, is now under



way at the Port Island facility.<sup>2</sup> 1. The Smart Community Technology Development Project Utilizing Hydrogen Cogeneration Syste subsidized by NEDO: The project succeeded in

the world's first cogeneration solely via hydrofor Low-NOx Hydrogen-fueled Gas Turbine Combustion Technology subsidized by NEDO



### Main Products

• Aircraft for the Japan Ministry of Defense • Parts for commercial aircraft • Commercial helicopters • Jet engines • Aerospace gearboxes Missiles/Space equipment

# Vision

A leading company that consistently creates new value for the world through excellent aerospace technologies and monozukuri manufacturing quality

Opportunit	ies	Risks		
Defense Aircraft	<ul> <li>Sustained domestic defense equip- ment development and production</li> </ul>	Defense Aircraft	<ul> <li>Reduced equipment prices due to defense budget streamlining</li> </ul>	
	<ul> <li>Prospects of defense equipment exports</li> </ul>	Commercial Aircraft	<ul> <li>Fiercely competitive environment, reflecting compe- tition for market share between Boeing and Airbus</li> </ul>	
Commercial Aircraft Jet Engines	<ul> <li>Medium- to long-term growth in air passenger and air freight volume, in line with economic growth in emerging countries</li> <li>Growing demand in line with expan- sion of commercial aircraft market</li> </ul>	Jet Engines	<ul> <li>Uncertainty regarding future of wide-body aircraft, due to the increased presence of LCCs*</li> <li>Rise of manufacturers in emerging countries</li> <li>Decreasing demand due to economic recession</li> <li>Development risks related to introducing cutting-edge technologies</li> </ul>	
Core Com	petence			
Aircraft	<ul> <li>Technological capabilities as manufacturer of finished aircraft with experience in the defense business (system integration capabilities)</li> </ul>			
	<ul> <li>Technological capabilities based on large-scale production facilities</li> </ul>	international j	oint development with Boeing, and sophisticated,	
	High quality and productivity through	igh the Kawaca	ki Droduction System (KDS)	

- High quality and productivity through the Kawasaki Production System (KPS) Jet Engines • Sophisticated technological capabilities built through international joint development projects and developing engines for defense aircraft
  - High quality and productivity through leading-edge production technology

# **Business Direction under MTBP 2019**

Defense Aircraft	<ul> <li>Steady progress on existing development projects and production contracts</li> <li>Expand orders for new projects</li> <li>Consider participation in next-generation aircraft projects</li> <li>Secure inclusion in new engine projects by improving development capabilities</li> <li>Provide additional development and production for projects in which we are already</li> <li>Consider entering the maintenance, repair, and overhaul (MRO) business</li> </ul>		
Commercial Aircraft Jet Engines			
Operating Environ	ment and Strategies	projects in which we already participate v	

As global air passenger and air freight volume expand over the medium to long term due to economic growth in emerging countries, we expect continued growth in demand for commercial aircraft and jet engines. In this operating environment, we will implement a range of strategies in pursuit of ongoing growth.

In the defense aircraft sector, we will move steadily toward mass production of the P-1 patrol aircraft and C-2 transport aircraft while seeking to capture orders for modernized and derivative types of aircraft. We will also export defense equipment in line with government policy.

In the commercial aircraft sector, we will further strengthen our relationship with Boeing and work to increase production capacity through streamlining using robotics and other means while advancing considerations of participation in next-generation aircraft programs.

In the jet engine sector, we will work to further stabilize quality, reduce costs, and reinforce supply chains for

while adopting IoT and other advanced technologies to improve productivity. We will further reinforce our technological strengths in compressors, combustors, and gears-strategic components for Kawasaki-and use these strengths as a foundation for participating in new projects. In addition, we aim to gradually secure engine maintenance capabilities with a view to entering the MRO business.

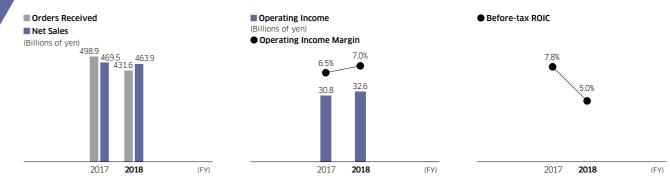
In April 2018, Kawasaki integrated the former Aerospace Company and the jet engine business of the former Gas Turbine & Machinery Company, creating the Aerospace

Systems Company. By integrating our aerospacerelated businesses, we are looking to continue to reinforce cost competitiveness, collaborate to expand business, and develop new businesses. Trent XWB ©Rolls-Royce plc



/ participating





# **Initiatives to Create Social Value**

The Aerospace Systems Company has designated as its vision for 2030 providing air transportation systems combining excellent environmental performance with excellent safety and reliability. To achieve this vision, we are participating in the development of Boeing 787 and 777X aircraft as well as jet engines, such as the Trent series and PW1100G-JM, to contribute to the steady supply of low fuel consumption aircraft and low fuel consumption engines. We will also focus on the production and sale of

Goals for the MTBP 2019	<ul> <li>Provide environmentally conscious air new programs</li> <li>Produce components for Boeing 787</li> <li>Sales of BK117 units: Produce finished</li> <li>Produce components for Trent 1000, PW1100G-J</li> </ul>
Fiscal 2018 Results	<ul> <li>Components for Boeing 787: 146 unit</li> <li>Sales of BK117 units: One finished un</li> <li>Produce components for Trent 1000, Tr</li> </ul>



\* Due to internal company reorganization, effective April 2018, only results for fiscal 2017 (restated) and fiscal 2018 are shown.

the BK117 low-noise helicopter, which is expected to be used in firefighting, disaster response, and ambulance services. Furthermore, we aim to participate in the joint international development of new, environmentally conscious aircraft and engines and thereby contribute to environmental improvement.



rcraft, helicopters, and engines and participate in

d units and components Trent XWB and M low fuel consumption engines s sold

it and 79 components rent XWB, and PW1100G-JM low fuel consumption engines

 Gas engines
 Diesel engines
 Steam turbines for marine and land applications
 Aerodynamic machinery/Marine propulsion systems Power plants I LNG tanks Municipal waste incineration plants

# Vision

A distinctive equipment, system, and plant manufacturer that uses technologies and quality underpinned by sophisticated product development expertise and engineering know-how to globally provide products and services that help protect the environment and earn high customer satisfaction, mainly in are areas of energy and the environment.

Risks

## **Opportunities**

- Growing demand for energy and infrastructure in emerging and resource-rich countries
- Growing demand for distributed gas-fueled power generation facilities prompted by lower LNG fuel prices
- Tightening environmental regulations
- Demand to build new or replace various power generation facilities following the Great East Japan Earthquake
- Demand for infrastructure replacement in Japan ahead of the 2020 Tokyo Olympics

# Core Competence

- Ability to provide solutions leveraging synergy from combining Kawasaki-brand products, such as the combined cycle power plant (CCPP) standard package, which combines a gas turbine, steam turbine, and waste heat recovery boiler, as well as gas engine/gas turbine hybrid projects
- Environment-friendly technologies and development capabilities in core products and systems as well as comprehensive engineering capabilities developed through wide-ranging projects
- Locally rooted sales system leveraging overseas sites

## **Business Direction under MTBP 2019**

- Create new technologies, products, and added value that contributes to reducing environmental burden
- Reinforce project responsiveness by effectively utilizing and sharing resources
- Advance overseas business development through initiatives closely tailored to local communities and customers and build a foundation for future earnings growth

# **Operating Environment and Strategies**

(GTG) n

In the energy and marine sectors, demand for gas-fired power generation is expanding, and distributed power generation needs are also increasing, especially in Asia. In this business environment, we will accelerate business development based on system solutions combining core products to achieve business growth, especially on the sales front in Southeast Asia.

In the plant sector, we anticipate stable domestic and overseas demand, reflecting infrastructure development and heightened interest in environmental protection, especially in emerging countries, including those in Southeast Asia. However, price competition is fierce, and finding ways to sharpen cost-competitiveness is an issue that requires our attention. In this environment, we aim to secure orders by providing unique, high-value-added

products and strengthening our sales systems and maintenance and after-sales services. When bidding for orders, we will be more selective, emphasizing profitability over scale. We will also reinforce quality assurance and risk management systems to reduce costs from defective products and improve profitability.

Furthermore, aiming to expand sales of the CCPP standard package, which combines a Kawasaki gas turbine. steam turbine and waste heat recovery boiler, we will reinforce our overseas sales systems. We are also advancing investment in hydrogen-related projects and product development aimed at future business growth and the realization of a carbon-free society. To this end, we plan to begin operations of a pilot hydrogen supply chain in 2020.



- Weakening investment incentive paralleling economic slowdowns in emerging countries and resource-rich countries
- Prolonged slump in the shipping market





# **Initiatives to Create Social Value**

The Energy System & Plant Engineering Company has designated as its vision for 2030 being a distinctive equipment, system, and plant manufacturer that uses technologies and quality underpinned by sophisticated product development expertise, manufacturing technology, and engineering know-how to globally provide products and services that help protect the environment and earn high customer satisfaction, mainly in are areas of energy and the environment.

To achieve this vision, we aim to advance both economic growth and environmental protection by providing energysaving, highly resource-efficient equipment, such as gas turbines that realize the world's highest level of efficiency and environmental performance, gas engines that realize the

Goals for the MTBP 2019	<ul> <li>Expand supply of Kawasaki's power and power-saving performance, in S ly, to meet needs for economic deve ing countries</li> </ul>
	<ul> <li>Develop products with greater envir ronmental regulations</li> <li>Advance development of hydrogen a</li> </ul>
Fiscal 2018 Results	<ul> <li>Deliveries of standard power genera</li> <li>Deliveries of waste incinerators: 3 u</li> </ul>

world's highest level of performance, and other power generation facilities. We are working to combine core products and incorporate in-house know-how, reinforce our ability to handle overseas projects, and create new solutions. We will contribute to infrastructure improvement by providing such products as tunnel boring machines and cryogenic storage facilities while also contributing to environmental protection in urban areas through deliveries of energy-saving waste incinerators, water treatment facilities, desulfurization/denitrification devices, and other systems.



plants, which boast world-class generating efficiency Southeast Asia, where electricity demand is growing rapidelopment and greater environmental friendliness in emerg-

ironmental burden alleviating effects and respond to envi-

gas turbines that contribute to CO<sub>2</sub> emissions reduction

ration facilities to overseas customers: 4 units units

# Ship & Offshore Structure

### Main Products

• Increasingly fierce competition with China and

• Prolonged slump in shipping market

# Vision

A shipbuilding and offshore structure engineering group pursuing innovation in cutting-edge fields with a focus on hydrogen technologies and low-temperature, high-pressure gas technology, submarine technology, and overseas projects.

# Opportunities

# Risks

South Korea

- Increasing demand for vessels with low environmental burden due to tightened environmental regulations
- Recovery in carrier demand, owing to growing demand for LNG
- Greater automation, using IoT and AI
- Expanding operations to meet needs for an increasing fleet of submarines

# Core Competence

- Low-temperature and high-pressure gas-related technologies accumulated through the development and construction of LNG and LPG carriers
- Quality and cost competitiveness of the overall Group, including Chinese joint ventures (NACKS, DACKS\*)
- Energy-saving, environmental burden-reducing technologies, and ability to develop new ship designs
- Sophisticated technology specific to submarines

\* NACKS, DACKS: Shipbuilding joint ventures established in Nantong, Jiangsu Province and Dalian, Liaoning Province, with China COSCO Shipping Corporation Limited (China COSCO)

# **Business Direction under MTBP 2019**

- Rebuild merchant ship business, with emphasis on deeper integration of operations at Sakaide Works, NACKS and DACKS
- Accelerate new product development and commercialization
- Steadily advance liquefied hydrogen carrier development

### **Operating Environment and Strategies**

For two years–fiscal 2015 and fiscal 2016–this business segment booked sizable losses, prompting business structure reforms led by the president. The basic policy driving these reforms is to maintain gas-related vessels as our main business while moving the axis of merchant ship construction from Japan to China. We have made steady progress in reducing fixed costs in Japan and increasing

Jetfoil Jetfoil Grad Grad Detfoil Detfoil Detfoil Detfoil Grad Detfoil Detfoil

our construction capacity in China. As large-scale LNG projects that had been stalled begin to firm up and various environmental regulations tighten, the market is expected to improve, and we aim to continue structural reforms.

In the merchant ship business, we will concentrate domestic construction at the Sakaide Works and reinforce base functions, such as human resource development and engineering, while promoting greater integration of operations with our Chinese joint ventures through such approaches as taking orders together and dividing construction between us. These efforts will help sharpen our cost competitiveness and improve profitability. In addition, we will pursue sales expansion of our ship operation and performance analysis support system (SOPass), which combines ship-related knowledge accumulated by Kawasaki with big data technology. In addition, we will steadily the advance development of liquefied hydrogen carriers.

In the submarine business, we will reinforce our R&D framework, aiming to secure orders for next-generation submarines. At the same time, we will apply our accumulated wealth of submarine-related technologies to the development of such products as autonomous under water vehicles (AUVs).





# **Initiatives to Create Social Value**

The Ship & Offshore Structure Company is contributing to environmental conservation by promoting the spread of LNG-fueled ships and developing and building large hydrogen-fueled liquefied hydrogen carriers. Compared with heavy oil, the use of LNG enables substantial reductions in emissions of atmospheric pollutants, such as nitrogen oxide (NOx) and sulfur oxide (SOx). By developing and building a variety of LNG-fueled vessels, we are helping to meet NOx and SOx emissions regulations for ships to prevent air pollution over the sea. Furthermore, we are providing our LNG-fueled propulsion systems for ships constructed by other shipbuilders, and working to commercialize LNG fuel gas supply systems (FGSSs) to

Goals for the MTBP 2019	<ul> <li>Complete construction of a small lique</li> <li>Complete the development and comm</li> <li>Receive multiple orders for LNG-fuele</li> <li>Receive orders for FGSSs</li> </ul>
Fiscal 2018 Results	<ul> <li>Developed a large LNG-fueled bulk car</li> <li>Advanced construction of a small lique</li> </ul>



promote the operation of environmentally friendly LNGfueled vessels around the world. We are also developing high-capacity liquefied hydrogen carriers. As hydrogen emits no CO<sub>2</sub> when used as fuel, it is the ultimate in clean energy. By commercializing the world's first ships that can economically carry large volumes of hydrogen, Kawasaki will promote the spread of hydrogen energy and contribute to the realization of a CO<sub>2</sub> emission-free society. In addition, we are developing hydrogen-fueled ship propulsion systems.



liquefied hydrogen carrier (pilot ship) ommercialization of FGSSs ueled ships

carrier in January 2019 iquefied hydrogen carrier

Risks

price competition

# Vision

The world's most trusted rolling stock system supplier, moving and inspiring customers worldwide based on strong teamwork and the highest level of technology and quality.

# Opportunities

- Continuous brisk demand for subway and commuter train systems in the North American market
- Brisk demand in emerging countries in Asia
- Firm replacement demand in the domestic market
- Expanding recurring demand, including that for components, maintenance, and repair and rebuild work across markets

## Core Competence

- High-tech expertise built on comprehensive heavy industry strengths
- Ability to fulfill contracts cultivated from extensive domestic and overseas track record
- Partnership capabilities with other companies in execution of overseas projects

## **Business Direction under MTBP 2019**

- Rebuild the quality control system, pursue orders with a thorough focus on profitability, and maintain and improve non-price competitiveness, leveraging outstanding technical expertise
- Steadily fulfill large orders already received in the North American market and work to secure orders in emerging Asian countries
- Aggressively develop highly profitable recurring revenue businesses that leverage our extensive track record of orders delivered and expand revenue across the rolling stock life cycle by reinforcing our core competence

# **Operating Environment and Strategies**

Against a backdrop of economic development in emerging countries and transport infrastructure repair and rebuild work under way in developed countries, demand for rolling stock remains strong, especially overseas. At the same time, demand in recurring revenue businesses, including components and maintenance, is expanding. However, the entry of manufacturers based in emerging countries has intensified competition, necessitating approaches to boost profitability through enhanced non-price competitiveness and business model reform.

This business recorded significant losses in fiscal 2017 and fiscal 2018. Taking this very seriously, we established the Rolling Stock Business Restructuring Committee, chaired by the president, to drastically reinforce project management and improve quality control. Furthermore, based on a policy of putting quality before quantity, we will focus on projects in which we can demonstrate Kawasaki's superiority while expanding recurring revenue businesses in Japan, aiming to increase profitability, which has been an issue.

• Manufacturers from emerging countries entering

the North American market, sparking fierce

• Country risk in new markets for Kawasaki

In the North American market, we will steadily fulfill existing orders from such customers as the New York City Department of Transportation. We will also work to build a stable revenue base by commercializing track monitoring using IoT and focusing on such businesses as components, repair and rebuild, and maintenance.

The Asian market presents huge growth potential. In this market, we will seek business expansion through such means as securing orders for projects financed by

ODA loans in emerging countries in line with the Japanese government's policies of promoting exports of railway infrastructure.

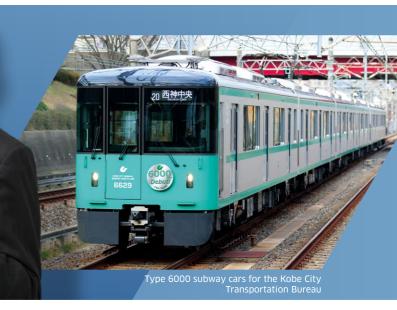
Series 2700 limited express diesel railcar for Shikoku Railway Company Kazutoshi Honkawa President, Rolling Stock Company



# **Initiatives to Create Social Value**

The Rolling Stock Company has designated as its vision for 2030 helping to build better global transportation infrastructure by manufacturing rolling stock that is safe and comfortable to ride in, highly reliable, highly cost efficient over its life cycle, and energy saving to minimize the burden on the environment. To this end, we will promote participation in high-speed train projects at home and abroad and continue to provide rolling stock to customers in Japan, North America, and Asia while seeking to participate in projects to build new rolling stock infrastructure in emerging Asian countries. In addition, to

Goals for the MTBP 2019	<ul> <li>Execute large projects in North Americ</li> <li>Execute projects financed by ODA load as planned</li> <li>Expand stock businesses to improve of dependable transportation</li> <li>Launch sales of components that level out component and service businesses</li> </ul>
Fiscal 2018 Results	<ul> <li>Rolling stock units delivered: 474</li> <li>Conducted tests with railway compani sensing and image analysis technologi</li> </ul>



better meet customer needs, we will further develop monitoring technologies that combine sensing, image analysis, and IoT technologies; work to maintain and improve safety and dependability; improve train maintenance efficiency; and contribute to the realization of train systems boasting excellent cost efficiency over their entire life cycle.



merica (R211 cars for the New York City Subway) as planned loans in Asia (Dhaka Metro MRT Line-6 in Bangladesh)

ve customer maintenance efficiency and maintain safe,

leverage sensing and image analysis technologies and roll esses aimed at improving maintenance efficiency

panies aimed at launching sales of components that leverage ologies

Motorcycles • Utility vehicles • All-terrain vehicles (ATVs)
 Personal watercraft (PWC) • General-purpose gasoline engines

# Vision

Guided by the "Kawasaki, working as one" philosophy, continue to grow as a manufacturer with primary focus on high-value-added domains in the power sports and general-purpose engine markets.

Opportunities	
Motorcycles	Medium- to long-term market expan- sion in emerging countries
	<ul> <li>Stable demand in developed countries and progress in the development of IoT applications, advanced safety fea- tures and other technologies</li> </ul>
Utility vehicles	• Expanding market in North America
General-nurnose	• Firm growth reflecting U.S. housing

# Risks

- Motorcycles

  Intensifying price competition in emerging markets
  Tightening environmental regulations

  Utility vehicles Intensifying price competition

  Rising materials prices and tariffs due
  - to escalating U.S.-China trade friction

# Core Competence

- Strong, clearly differentiated brands, such as Ninja and Z
- World-leading product development expertise
- Technological capabilities to develop and produce high-performance, high-quality products
- Global production, sales, and service structure

# **Business Direction under MTBP 2019**

gasoline engines market expansion

- Increase product competitiveness by introducing new models and expanding the model lineup
- Improve profit margins by raising sales prices and cutting costs and control growth in fixed costs, especially R&D expenses
- Promote inventory adjustment and other measures to increase free cash flows

# **Operating Environment and Strategies**

Markets in developed countries, especially for motorcycles in Europe and utility vehicles in the United States, are expected to continue to see stable growth, while strong medium- and long-term growth is expected in emerging markets. However, conditions are growing more challenging, as raw materials costs and tariffs increase, reflecting U.S.-China trade tensions, and new manufacturers in emerging countries enter markets. As such, Kawasaki needs to improve its productivity.

In this environment, we will anticipate the needs of customers and draw on world-class product development expertise and our strong, highly differentiated brands, such as *Ninja* and *Z*, to quickly bring attractive, highly competitive models to market. At the same, we will work to establish Kawasaki as a high-end brand through such means as customer relationship management. Furthermore, we will implement initiatives aimed at establishing and strengthening systems to control and streamline our global management resources from the perspective of overall optimization. By implementing this and other strategies, we will strengthen our financial platform (increase the operating income margin and free cash flow).

# **Initiatives to Create Social Value**

The Motorcycle & Engine Company has designated as its vision for 2030 developing, manufacturing and delivering environmentally friendly motorcycles, as well as models with "fun-to-ride" appeal and advanced rider-support features. To realize this vision, in line with the philosophy that drives product development at Kawasaki, the concepts of "Fun to Ride," "Ease of Riding," and "Better Environmental Performance," we are working to improve motorcycle performance, enhance rider-support features,

### MULE PRO-MX





and respond to tougher exhaust gas, noise, and other environmental regulations. With regard to C-ITS\* functions, Kawasaki has joined the Connected Motorcycle Consortium, established by the motorcycle industry to focus on development, and aims to put C-ITS-compliant motorcycles on the market as soon as possible. In electric motorcycles, hybrid motorcycles, and other motorcycles powered by clean energy, we are building and evaluating

Yuji Horiuchi

President, Motorcycle & Engine Company

Goals for the MTBP 2019	<ul> <li>Realize comfortable and convenient t with data transmission functions and support functions</li> <li>Clear the EU's strict emissions regulat</li> <li>Every fiscal year, achieve at least a 1 models over the previous models</li> <li>* WMTC: Worldwide-harmonized Motorcycle Test of</li> </ul>
Fiscal 2018 Results	<ul> <li>Ninja H2 SX: Achieved excellent fuel performance</li> <li>Versys 1000: Achieved smoother portem. Cleared the EU's Euro5 exhaust the selected speed with the push of a ment on long rides.</li> <li>2019MY Ninja H2 SX SE+ and Versys "RIDEOLOGY THE APP" enables users calls or messages on the motorcycle"</li> </ul>



- the performance of prototypes with an eye to future business development.
- \* C-ITS: Cooperative Intelligent Transport Systems



nt transportation by launching connected motorcycles and help users ride with confidence by adopting rider

lations and other environmental regulations around the world a 1.5% average increase in WMTC\* fuel economy on new

est Cycle

uel economy and low emission levels with world-class engine

power delivery with a new electronic throttle control sysust gas standard. A new electronic cruise control maintains of a button, helping reduce rider fatigue and increase enjoy-

rsys 1000 SE: Realized smartphone connectivity. The sers to set their riding mode and receive alerts of incoming cle's LCD display for more pleasant riding. Main Hydraulic components for construction machinery Products Hydraulic steering gears for marine products

 Hydraulic components for agricultural machinery
 Hydraulic components and systems for industrial machinery Hydraulic deck machinery for marine products
 Industrial robots
 Medical and pharmaceutical robots

Yasuhiko Hashimoto

President, Precision Machinery 8

Robot Compan

2015

2016

2017

# Vision

The world's top brand in motion control, creating and providing total solutions for providers of medical and healthcare services as well as for industry, including automobiles, construction machinery, and electronic equipment, with a focus on hydraulic components and robots boasting a level of performance and quality far surpassing that of any rival.

machinery

Robots

# Opportunities

- Hydraulic Expanding demand due to worldwide infrastructure building, mainly machinery in emerging countries
- Robots • Increasing fields of application through the realization of collabo
  - ration with humans in working operations Rising demand aimed at eliminating
  - labor shortages and improving quality • Progress in use of robots beyond
  - industrial applications (such as med-ical treatment and nursing care)

- Risks Hydraulic
- Shift to in-house production of hydraulic machinery by construction machinery manufacturers and mar-ket entry of manufacturers from emerging countries
- Rapid cooling of the Chinese construction equipment market
- Delayed recovery in the marine hydraulic equipment market due to sluggish conditions in the ship building industry, and intensifying price competition
- Increasingly fierce price competition with rival companies
- Prolonged stagnation in semiconductor markets

# Core Competence

Hydraulic machinery	<ul> <li>Accumulated world-class, leading-edge technology, systemization capabilities and brand power for excavator hydraulic machinery</li> <li>Ability to respond to customer requests</li> </ul>
Robots	• Ability to develop applications and make system proposals matched to diverse customer requirements
	<ul> <li>Global service structure</li> </ul>
Shared	<ul> <li>New product development capabilities in the field of motion control based on the integration of hydraulic technologies and robotics</li> </ul>
Business Dire	ection under MTBP 2019

• Maintain and expand high share of excavator market, pursue sales expansion in construction and agricul-Hydraulic tural machinery sectors, and advance product and market development with an awareness of mega-trends machinery Robots • Existing customer sectors: Increase market share by expanding the scope of applications for the automotive industry, line building operations, and sales in the human-robot collaborative product field • New customer sectors: Integrate robotics with IoT/AI technologies to establish new businesses, develop products based on synergies with hydraulic technologies, and launch and expand sales of robotically assisted surgical devices

# **Operating Environment and Strategies**

Sales of hydraulic machinery for the construction equipment market are expected to steadily grow over the medium and long terms in line with growing infrastructure development, mainly in emerging countries, even if market conditions change in the short term.

Kawasaki is the leader of the global market for excavatoruse hydraulic machinery. Going forward, we will maintain and expand our market share by leveraging world-class, leading-edge technology, the ability to turn such technology into systems, our brand strength, and responsiveness to customer needs. We will also actively explore promising new businesses, such as construction and agricultural machinery beyond excavators, to realize further growth and improve stability in segment performance.

In the industrial robot business, we expect demand in existing customer sectors to continue expanding to offset labor shortages and achieve higher quality. We also predict that robots will be used in a wider range of applications, including in collaboration with humans in work operations as well as in medical treatment and nursing care.

In existing customer sectors, we will expand applications for automakers, create products for EV and HV manufacturing, expand line building operations, and expand sales of *duAro*, a robot designed to collaborate with humans in work operations. In addition, we will expand sales and market share by providing solutions that draw on the Group's experience accumulated through robot development for a wide range of applications within the



Kawasaki Group and by enhancing the sales and service structure. In new customer sectors, we aim to establish new business fields by integrating robotics with IoT/AI, as with Successor,\* and to commercialize the robotically assisted surgical devices currently in development at Medicaroid, a joint venture with Sysmex Corporation.

2018

(FY)

2015

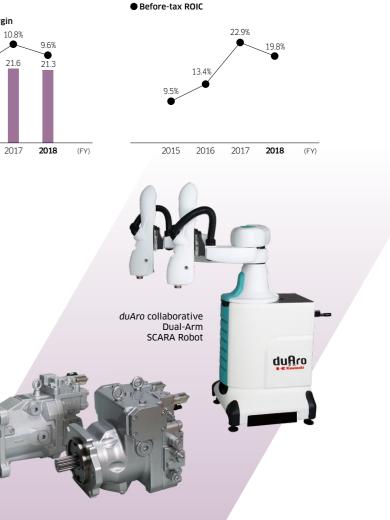
2016

We will continue to pursue synergy by integrating hydraulic machinery and robot production and developing new products combining the technologies of each. By doing so, we will reinforce the businesses of the Precision Machinery & Robot Company as a whole.

\* Successor: Technology in which expert engineers use remote controls with kinesthetic feedback to safely operate robots and perform tasks. The robots memorize these movements, which they can then convey to the next generation of operators. Using AI to learn from recorded inputs, the system can also generate automated operational programs.

> Hydraulic motor M7V (left) Hydraulic pump K8V (right)







### Initiatives to Create Social Value

# Precision Machinery Business Division

The Precision Machinery Business Division has designated the following as its vision for 2030.

- Make Kawasaki hydraulic machinery and systems the global standard by expanding sales to customers around the world and achieve stable production and supply
- Support the development of next-generation of humanand environment-friendly construction machinery through Kawasaki products to contribute to the improvement of infrastructure, mainly in emerging countries
- Promote the development and sale of energy-saving products, hydrogen-oriented products and renewable energy-oriented products to contribute to the reduction of environmental burden
- Combine new technologies, such as ICT, IoT and AI, with Kawasaki's robot technology and hydraulic control technology to create new value

To achieve this vision, we are working to establish systems for stable production and supply and advancing R&D into hydraulics systems aimed at creating ICT-linked. automated and unmanned next-generation construction machinery for customers while advancing product development and sales in the pursuit of full-scale entry into agricultural machinery and industrial vehicle sectors. In addition, following the adoption of our high-pressure hydrogen regulator by a European automaker, we have commenced primary mass-production and are now advancing development toward secondary massproduction. Also of note, total sales of Eco-Servo, an energy-saving and low-noise hydraulic hybrid system, have reached 4,000 units, and we are working on a compact electro-hydraulic actuator for humanoid robots, as well.



Goals for the MTBP 2019	<ul> <li>Establish production sites and stable supply systems that are globally optimized in terms of cost, quality and delivery time and further expand sales in the construction, agricultural, manufacturing and marine machinery fields in order to make Kawasaki products the global standard by supplying our hydraulic machinery and systems to customers around the world.</li> <li>Establish firm foundations in new businesses, such as high-pressure hydrogen regulators for automobiles and fields based on synergies with the robot business</li> <li>Hydraulic machinery production and delivery volume: 940,000 units</li> </ul>
Fiscal 2018 Results	<ul> <li>Hydraulic machinery production and delivery volume: 720,000 units</li> </ul>

# Robot Business Division

The Robot Business Division has designated as its vision for 2030 improving access to high-quality medical care through the development of medical robots in developed countries facing demographic graying as well as using robot technology to support medical supplies production, nursing and medical care and the development of therapies and treatments that reduce the physical burden on patients while developing and manufacturing robots that collaborate with humans in work operations and making them intelligent enough to help address labor shortages, mainly in developed countries. To achieve this vision, we have

positioned medical robots as a business that will support aging societies and established Medicaroid Corporation-a joint venture with Sysmex Corporation-through which we are developing robotically assisted surgical devices and applied robots using industrial robot technology with the goal of creating new businesses. We also seek to promote collaboration with humans in work operations, focusing mainly on *duAro*-our Dual-Arm SCARA Robot-to cultivate demand for greater automation at manufacturing sites.



Goals for the MTBP 2019	<ul> <li>Increase our market share with existing automotive sector customers, reinforce proposition capabilities for line building solutions, expand sales channels for general production equipment in China, expand sales of robots for use in collaborative work with humans, and introduce robotically assisted surgical devices in the medical field</li> <li>Promote the integration of IoT, AI and robotics technologies and the development of products based on synergies with hydraulics technologies</li> <li>Robots delivered: 40,000</li> </ul>
Fiscal 2018 Results	Robots delivered: 20,000

# Message from the Chairman of the Board

# Free, Open Discussion Makes **Our Governance More Effective**

The Kawasaki Group got its start in the shipbuilding business. Over the decades, by evolving in step with its stakeholders and the changing needs of society, the Group ventured into the rolling stock and aircraft businesses and then a wide range of other fields, such as energy and environmental engineering, industrial equipment, and motorcycles, developing into a comprehensive heavy industries enterprise.

Today, under the Group Mission, "Kawasaki, working as one for the good of the planet," we ambitiously strive to solve a wide range of social issues, using our wealth of technological prowess accumulated over the Group's 120-year history while helping to realize a sustainable society, as touted in the Sustainable Development Goals, and increasing our enterprise value.

Such global-scale social issues as climate change are growing more serious, and Kawasaki's business environment is rapidly changing. For the Kawasaki Group to grow going forward, it is essential that top management have an accurate understanding of the issues at hand and make decisions quickly. We must therefore strengthen our corporate governance to ensure that Group management meets stakeholder expectations by consistently making the best choices.

Based on this understanding, we are advancing a number of initiatives to build and reinforce corporate governance systems appropriate for the Group on an ongoing basis.

Specifically, on April 1, 2018, we revised the director and executive officer system, more clearly separating management execution from oversight and increasing the number of outside directors by one to reinforce the business execution oversight function of the Board of Directors.

Furthermore, at Board of Directors meetings, the directors and audit & supervisory board members, including independent outside officers, each engage in discussion based on their unique insight and experience and we strive to reach sound management decisions. When formulating the MTBP 2019, in addition to discussions at Board of Directors meetings, we held meetings with the directors, audit & supervisory board members, and executive officers about medium- and long-term management issues, seeking to enhance discussion.

We value the entire process leading to final decisions, in which all participants can freely share their views, regardless of their position, and seek to reach decisions based on thorough discussion. This kind of free and open culture is part of the unique character of the Kawasaki Group. Leveraging this, we aim to deepen discussions about corporate governance and build effective systems that are appropriate for the Kawasaki Group.



Shigeru Murayama Chairman of the Board

# Messages from the Outside Directors

The Kawasaki Group appoints outside directors who are capable of providing appropriate opinions and advice from an objective perspective independent of the Group's business execution based on abundant experience and specialized knowledge in fields other than those in which the Company operates.

The outside directors strive to strengthen their oversight function by providing opinions and advice that apply this perspective. Furthermore, they proactively take part in governance and provide guidance by such means as serving as the presiding officers of the Compensation Advisory Committee and Nomination Advisory Committee. By including the opinions of outside directors with diverse backgrounds in management, Kawasaki is further strengthening its corporate governance.

# Striving to help increase enterprise value by voicing the perspectives of the capital markets and investors

Kawasaki boasts a long tradition of developing businesses backed by strong technological prowess. Today, however, as society changes at an accelerating pace, management decisions must be made faster than ever before. In light of this, Kawasaki is working to build frameworks that will facilitate quicker response to change and promoting innovation in its corporate culture even as it pursues initiatives in new fields, such as robotics and hydrogen. Discussions at Board of Directors meetings are very lively, and we are moving forward with considerations related to enhancing governance, as well. Having been involved during a period of great change in the management of a securities exchange that, like Kawasaki, has a long history, I have seen first-hand the importance of quickly responding to changes in the business environment and how an organization can decline if fails to do so. As such, I commend Kawasaki for its efforts in this area, which represent an effort to adapt to the changing times.

However, I think that reinforcing our ability to effect total optimization, including that achieved by bringing together the technological strengths Kawasaki has in various fields to create synergy, as well as changing frameworks and mindsets to increase earnings power, remain as tasks going forward. These issues are reflected in Kawasaki's stock price, which serves as a mirror for the Company. The Board of Directors discussed these issues at length when formulating the new medium-term business plan, and we were able to include addressing them as major focuses. If Kawasaki can raise profits, create new technologies, and balance the cycle of the two, I am confident that it will be able to fully leverage its conglomerate advantage and grow. Based on my experience in the financial industry, I will do my utmost to avoid being caught up in the conventional wisdom of the manufacturing industry as I proactively voice the perspectives of capital markets and investors with regard to organizational reform and new business development to contribute the improvement of Kawasaki's enterprise value.



Michio Yoneda **Outside Director** 

Audit & Supervisory Board Member, Sumitomo Chemical Co., Ltd. Director (Outside Audit and Supervisory Committee), Asahi Broadcasting Corporation

# Transforming society through innovation, with corporate heritage as a compass

Today, as expanded capitalism and globalism near turning points, the very nature of manufacturing is on the verge of great change. This includes the creation of products and manufacturing processes with a greater focus on sustainability, a growing shift from merely selling products to businesses that also encompass services and operations, and the systemization of value chains via the integration of diverse information. To grow when the future outlook is so unclear, it is important to understand society's needs and leverage a wealth of ideas to find the way forward to dramatic innovation.

At such a time, I believe that companies must deeply examine their purpose in society and use their unique corporate heritage as an important compass in order to move forward. Kawasaki now aims to use the cutting-edge technologies it has honed to create new value and contribute to the development of society. By thus putting into practice its motto of "Changing Forward," Kawasaki seeks to take on major social responsibilities and develop further in the coming era. What is Kawasaki's heritage? Looking toward the future, what aspects of its heritage should it hold firm, what should it alter, and how should it take on the changes to come? Faced with tremendous change, I hope that Kawasaki will deeply consider these questions as it charts a vision for the future, rooted in its heritage, and come together with those who share that vision to transform society.

While people go on about VUCA,\* history is continuous, and there are certain inevitabilities in the way it unfolds. Based on my experience working for more than 40 years in manufacturing and technological development within the glass industry, I think that if we can be sensitive to and suss out these inevitabilities, create the differentiation that is the key to dramatic innovation, and fully map out victory scenarios before making decisions, results will surely follow. Going forward, I hope to support bold decision-making focused on Kawasaki's heritage and its future and aiming for corporate transformation.

\* VUCA: Volatility, uncertainty, complexity and ambiguity

# Focusing on risk management as a global conglomerate

Kawasaki is famous in America for its motorcycle business, so that was my image of Kawasaki before joining. I have been an external Director of Kawasaki Heavy Industries for one year and now truly appreciate its diversity of business lines and global footprint. For most of my career, I worked internationally as a financial services lawyer and understand the business benefits of having a global business as well as the complexity and different risk profile this brings.

Kawasaki operates in many countries, so it is subject to many types of risks at the country and global level. As the speed of information exchange and availability of data increases, it becomes easier to track global developments and risks more effectively.

As a conglomerate, Kawasaki's corporate governance system must oversee and manage the growth of each of its six unique businesses in various countries while assessing and balancing the level of risk exposure to create the best return for all its stakeholders. With higher legal complexity and more competition in the global market, it is necessary to ensure that there is an ability to centrally track and anticipate challenges that will occur. I believe that the Kawasaki management is focused on the right things from a risk management perspective, including pursuing efficient and systematic tracking of risks centrally, identifying synergies across businesses that can improve competitiveness and reduce costs, creating a global compliance framework and re-assessing the best business model for how to better centrally integrate its risk assessment while allowing for each company to grow within its specialty.



Yoshiaki Tamura **Outside Director** Director, DIC Corporation





Jenifer Rogers **Outside Director** General Council, Asia, Asurion Japan Holdings G.K.

Director, Mitsui & Co., Ltd. Director, Nissan Motor Co., Ltd.

# Basic Stance on Corporate Governance and Initiatives to Date

Guided by the Group Mission "Kawasaki, working as one for the good of the planet," the Kawasaki Group has established a corporate governance system centered on directors and audit & supervisory board members, with content appropriate for the global activities that the Group undertakes, and takes efforts to further improve the system. The basic stance on corporate governance for the Group as a whole is to raise enterprise value through effective and sound management while forming solid relationships with all stakeholders, including shareholders, customers, employees, and communities, through highly transparent management practices.

# Initiatives to Strengthen Corporate Governance

Year	Initiative
2001	Adopted the executive officer system Reduced the number of directors from 26 to 11
2002	Increased the number of outside audit & supervisory board members to two Adopted a performance-based compensation system
2005 •	Abolished the retirement benefit system for directors
2013 •	Appointed an outside director
2015 •	Increased the number of outside directors to two Took steps in response to the introduction of Japan's Corporate Governance Code Established the Nomination Advisory Committee and Compensation Advisory Committee Began evaluations of the effectiveness of the Board of Directors
201h	Added stock purchase funds to director's compensation
2017 •	Increased the number of outside audit & supervisory board members to three Revised matters requiring resolution by the Board of Directors (expanding the scope of delegation to executives)
2018	Increased the number of outside directors to three Revised the director and executive officer system
2019 •	Reduced the number of directors from 12 to 11

### Number of Outside Directors and Audit & Supervisory Board Members and Ratio to Total Officers (As of June 26, 2019)

	2000	2001	2013	2019
Directors	(0/26)		(1/10)	(3/11)
Audit & Supervisory Board Members	(0/26)	(1/3)	(1/10)	(3/11)
	2000			: L: Internal L: Outsid

2000	2019
Outside officers	Outside officers 37.5%
Women	Women
Non-Japanese nationals ${f U}$	Non-Japanese nationals $f L$

# **Corporate Governance System**

Kawasaki adopts the statutory auditor system with a Board of Directors and Audit & Supervisory Board, and appoints an independent auditor. The Company also maintains the discretionary Nomination Advisory Committee, Compensation Advisory Committee, Management Committee, and Executive Officers Committee. The composition and role of each of these organizations are described below.

### Board of Directors

The Board of Directors comprises 11 directors (authorized number: 18), with the chairman serving as the presiding officer. The number of outside directors (independent officers, as required by the Tokyo Stock Exchange) is three. The outside directors are independent of any role in the execution of business activities. Furthermore, the Nomination Advisory Committee and Compensation Advisory Committee have been established as advisory bodies to the Board of Director in an effort to strengthen its transparency and objectivity of the Board of Directors. A majority of the committees' members are outside officers, and the presiding officers of each are outside directors. The Nomination Advisory Committee discusses such matters as policy regarding the appointment of directors and audit & supervisory board members and the appropriateness of candidates for such positions. The Compensation Advisory Committee discusses such matters as director compensation policy and the appropriateness of the director compensation system. These committees provide reports and advice to the Board of Directors.

# Key Internal Committees Other than the Board of Directors and Audit & Supervisory Board

Nomination Advisory Committee	• An advisory body on the nomination of dire
Compensation Advisory Committee	• An advisory body on the compensation of a
Management Committee	<ul> <li>Includes executive directors and internal co</li> <li>Assists the president as an advisory body v</li> <li>Discusses important Group management po</li> </ul>
Executive Officers Committee	<ul> <li>Comprises all executive officers appointed</li> <li>Conveys business execution policy based o Board of Directors and the Management Co</li> <li>Venue for communicating necessary and im</li> </ul>
Corporate CSR Committee	<ul> <li>Discusses and decides on basic policy and i implementation</li> </ul>
Corporate Risk Management Committee	<ul> <li>Discusses and identifies important issues p implementation</li> </ul>
Major Project Committee	• Assesses risk and considers appropriate res
Project Risk Management Committee	• Regularly follows up on major projects duri

### The Kawasaki Group's Governance Structure (As of June 26, 2019)



### Audit & Supervisory Board

The Audit & Supervisory Board comprises five audit & supervisory board members (authorized number: five). To ensure the reliability of financial reports, the Company appoints internal audit & supervisory board members who have considerable knowledge of finance and accounting. Furthermore, to ensure the objectivity and neutrality of the supervisory function, the Company appoints three outside audit & supervisory board members (independent officers, as required by the Tokyo Stock Exchange) with no business relationships or other vested interests in the Company. The internal and outside audit & supervisory board members share information closely and work to enhance the Audit & Supervisory Board's supervisory function.

rectors and audit & supervisory board members

directors

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by the Board of Directors on management policy and management plans determined mainly by the ommitte

nportant information regarding business execution and exchanging opinions

important matters related to CSR for the Group as a whole and monitors

pertaining to risk management for the Group as a whole and monitors

sponses before the acceptance of major projects

ing execution

f Shareholders				
esolution on appointment		Resolution on ap	pointment	
Board Members isory Board)	•••••	Independent auditor		
udit Mu	utual cooperation	Audit		
Instruction		Auditing Department		i
ction Report	t			
	s operation exe d Office, interna	ecution divisions al companies)	Audit	
			Audit	
	Affiliated com	panies	<	

# **Evaluation of the Board of Directors' Effectiveness**

The Company strives to ensure that directors and audit & supervisory board members, including independent outside directors and audit & supervisory board members, engage in free, vigorous discussion based on their insights and experience at meetings of Kawasaki's Board of Directors and reach appropriate management decisions. As part of these efforts, since fiscal 2015, the Company annually evaluates and analyzes the effectiveness of the Board of Directors.

# **Evaluation Method**

**Evaluation Results and Response** 

The fiscal 2018 effectiveness evaluation was, as in previous years, carried out as follows.

- (1) A survey of all directors and audit & supervisory board members, based on advice from outside experts was made\*
- (2) The survey results were aggregated and analyzed by outside experts

The Board of Directors' discussion found that the Board's

effectiveness was appropriately ensured, based on such fac-

tors as its resolutions having been reached after active dis-

However, regarding the further enhancement of the Board of

Directors' oversight function, the directors and audit & super-

visory board members provided multiple opinions related to

such considerations as the Board's composition and the topics

it should discuss, sharing their understanding of tasks for the

Board. The Board will continue to engage in discussion from

various viewpoints and work to increase its effectiveness.

cussion among both the internal and outside members.

- (3) The aggregated information and analysis results were discussed at a Board of Directors meeting \* A survey comprising questions mainly about the overall operation of the
- Board of Directors and its discussions, designed with regard to the Company's particular characteristics

# Initiatives to Address Issues Identified in Previous Years

The main initiatives implemented in fiscal 2018 to address issues identified by previous evaluations of a Board of Directors' effectiveness were as follows.

- To reinforce the Board of Directors' oversight function, the number of outside directors was increased by one, with consideration given to ensuring the Board's diversity (in terms of nationality, gender, professional background, etc.). In addition, the Company revised its director and executive officer system, clarifying the respective roles of directors and executive officers.
- To enhance discussion of medium-to-long-term management issues, when formulating the medium-term business plan, in addition to discussions at Board of Directors meetings, the participants of these meetings (directors and audit & supervisory board members) held meetings with the executive officers several times, taking ample time and creating opportunities for deeper discussion.

# **Corporate Officer Compensation**

### Kawasaki's Approach to Corporate Officer Compensation

The compensation system for Kawasaki directors and audit & supervisory board members is designed to promote sustained improvement in corporate performance and enterprise value, align the interests of corporate officers with those of shareholders, secure outstanding human resources, and ensure a level of compensation commensurate with the duties of the individual officer.

### Director Compensation

Compensation for directors, excluding outside directors, consists of basic compensation, performance-based compensation and stock purchase funds.

Compensation for outside directors is set at a fixed level not tied to corporate performance, to ensure professional independence.

Directors' compensation is set within the maximum total compensation for directors (¥1,200 million per year), as resolved at the 189th Ordinary General Meeting of Shareholders (held on June 27, 2012). After receiving the results of deliberations by the Compensation Advisory Committee, the president, as delegated by the Board of Directors, decides director compensation in line with the Company's internal rules. A majority of the members and the presiding officer of the Compensation Advisory Committee are outside officers.

Audit & Supervisory Board Member Compensation

The compensation of audit & supervisory board members is set at a fixed level not tied to corporate performance to ensure professional independence. This compensation is determined by the Audit & Supervisory Board.

The total maximum compensation for audit & supervisory board members is ¥120 million per year (as resolved at the 194th Ordinary General Meeting of Shareholders held on June 28. 2017).

### Structure of Director Compensation

### Composition of Director Compensation (Excluding Outside Directors)

asic compensation	Based on position and responsibilities.
erformance-based compensation	Linked mainly to net income attributable to owners of th income"), consolidated ROIC and the ROIC of internal con
ock purchase funds	Each month, a fixed monthly amount is paid to the direct tion to a stock ownership plan for the purpose of alignin ests with those of shareholders and incentivizing director medium- to long-term enterprise value. This entire amou to the officers' stock ownership plan in order to purchas Company on a continuous basis.

# Performance-Based Compensation Indicators

Indicator	
Net income	Net income, which funds dividends, was selected as an
Consolidated ROIC	Consolidated ROIC was selected as an indicator because cy and aims to achieve ROIC of 8% or above.
Internal Company ROIC	Internal company ROIC was selected as an indicator bed

### Activities of the Board of Directors and Compensation Advisory Committee

Policy and systems related to director compensation are decided by resolution of the Board of Directors based on the deliberation of the Compensation Advisory Committee. A majority of the members and the presiding officer of the Compensation Advisory Committee are outside officers

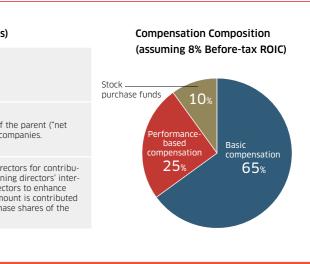
The Compensation Advisory Committee meets once a month, in principle. In fiscal 2018, the committee met 11 times. In addition the matters described above, the committee discussed the form of the corporate officer compensation system going forward. Note: For more information about the members of the Compensation Advisory Committee and their meeting attendance, please refer to page 46.

### Corporate Officer Compensation

# The following table provides a breakdown of fiscal 2018 corporate officer compensation.

	Total compensation (millions of yen)	Total compensation by compensation type (millions of yen)			Number of individuals
Type of officer		Basic compensation	Performance-based compensation	Stock purchase fund	receiving compensation
Directors (excluding outside directors)	568	408	97	62	12
Audit & supervisory board members (excluding outside audit & supervisory board members)	70	70	-	-	3
Outside directors and outside audit & supervi- sory board members	73	73	-	-	7

Notes: 1. The above numbers of officers include the directors (four, including one outside director) and audit & supervisory board members (one) who retired as of conclusion of the General Meeting of Shareholders held in June 2018 2. Performance-based compensation paid in fiscal 2018 is based on fiscal 2017 performance.



### Reason for Selection

an indicator to incentivize directors to increase shareholder value.

use Kawasaki has made ROIC management a part of its basic management poli-

ecause Kawasaki aims to achieve ROIC of 8% or above at each internal company.

# Corporate officers (As of October 1, 2019)

Directors								
	ime	Years of		Board of Directors		on Advisory mittee		ensation Committee
	ition ge	Service	Reasons for appointment		Member- ship	Meetings attended*		Meetings attended*
	Shigeru Murayama Chairman of the Board 69 years old	9	Mr. Murayama worked in technology and develop- ment in the Company's aerospace business for many years. He assumed the office of Senior Vice President in 2010 and President in 2013. He has served as Chairman of the Board since 2016. Presently, as Chairman of the Board, he demon- strates outstanding leadership, contributing signifi- cantly to the Company's business growth and the enhancement of its enterprise value.	17/17	_	_	_	_
	Yoshinori Kanehana Representative Director 65 years old	7	Mr. Kanehana worked in technology and develop- ment in the Company's rolling stock and overseas businesses for many years. He assumed the office of Senior Vice President in 2012 and Senior Executive Vice President in April 2016. He has served as President since June 2016. Presently, as President and Chief Executive Officer, he demon- strates outstanding leadership, contributing signifi- cantly to the Company's business growth and the enhancement of its enterprise value.	17/17	¥	12/12	1	11/11
	Kenji Tomida Representative Director 64 years old	5	Mr. Tomida worked in finance and accounting and corporate planning at the Company and its overseas businesses for many years. He was appointed Senior Vice President in 2014 and Senior Executive Vice President in 2017. Presently, as Director, Vice President and Senior Executive Officer, he is in charge of Company-wide finance, accounting, and human resources, contributing significantly to the Company's business growth and the enhancement of its enterprise value.	17/17	•	12/12	J	11/11
	Sukeyuki Namiki Representative Director 64 years old	1	Mr. Namiki worked in technology and development in the Company's aerospace business for many years. He was appointed Director and Managing Executive Officer in 2018. Presently, as Director, Vice President and Senior Executive Officer, he is in charge of Company-wide technology, production and procurement, Quality Control, and the Rolling Stock Company, contributing significantly to the Company's business growth and the enhancement of its enterprise value.	14/14	_	_	_	_
	Tatsuya Watanabe Director 62 years old	3	Mr. Watanabe worked in technology and develop- ment in the Company's plant and infrastructure business for many years. He was appointed Senior Vice President in 2016. Presently, as Director, Managing Executive Officer, and President of Energy System & Plant Engineering Company, he demon- strates outstanding leadership, contributing signifi- cantly to the Company's business growth and the enhancement of its enterprise value.	15/17	_	_	_	_
	Katsuya Yamamoto Director 61 years old	2	Mr. Yamamoto worked in planning and finance and accounting in the Company's plant and infrastruc- ture business as well as its precision machinery business for many years. He was appointed Senior Vice President in 2017. Presently, as Director, Managing Executive Officer, and General Manager of the Corporate Planning Division, he is in charge of overall corporate planning and investor relations, Corporate Communication, and the Ship & Offshore Structure Company, contributing significantly to the Company's business growth and the enhancement of its enterprise value.	17/17	_	_	_	_

				Board of	Audit &	Com	n Advisory nittee		nsation Committee
Name Position Age		Years of Service	Reasons for appointment	Directors Meetings attended*	Supervisory Board Meetings attended*	Member- ship	Meetings attended*	Member- ship	Meetings attended*
	Katsuyoshi Fukuma Audit & Supervisory Board Member 61 years old	3	Mr. Fukuma worked in the Company's plan- ning administration and finance and account- ing operations for many years and has substantial knowledge about finance and accounting. He is also very knowledgeable about the Company's businesses, having worked in business planning related to the Company's management and operations as Deputy General Manager of the Corporate Planning Division.	17/17	17/17	_	_	_	_
	Akio Nekoshima Audit & Supervisory Board Member 51 years old	1	Mr. Nekoshima gained wide-ranging experi- ence working for Mizuho Bank, Ltd., including in international operations. Beginning in 2012, he worked for the Company in finance and accounting as well as marketing and overseas-related operations. He was appoint- ed an executive officer of the Company in 2014. He is very knowledgeable about the Company's businesses, having served as General Manager of the Finance & Accounting Division and General Manager of the Marketing Division, and he has substantial knowledge about finance and accounting.	14/14	13/13	_	_	_	_
	Satoru Kohdera Dutside Audit & Supervisory Board Member 60 years old	2	Mr. Kohdera has served as President of the Hyogo-ken Bar Association, Vice President of the Japan Federation of Bar Associations and in other important positions. He possesses a wealth of experience as an attorney and deep insight into legal matters. He is satisfactorily carrying out his role in auditing the Company from an independent standpoint as an outside audit & supervisory board member	17/17	17/17	_	_	_	_
	Atsuko Ishii Dutside Audit & Supervisory Board Member 61 years old	2	Ms. Ishii has served in important positions at the Ministry of Health, Labour and Welfare, including Director-General of the Osaka Labour Bureau, Deputy Director-General, Director-General of the Equal Employment, Child and Family Policy Bureau, Director-General for General Policy and Evaluation, and Director-General of Social Welfare and War Victims' Relief Bureau. She possesses a wealth of knowledge and insight regarding Japan's labor administration and is satisfactorily carrying out her role in auditing the Company from an independent standpoint as an outside audit & supervisory board member.	17/17	17/17	_	_	_	_
	<b>Ryoichi</b> Saito Dutside Audit & Supervisory Board Member 59 years old	Newly appoint- ed	Mr. Saito has served in important positions at NSK Ltd., including Senior Vice President, Head of Corporate Planning Division HQ, Director, Representative, Executive Vice President, Head of Corporate Strategy Division HQ, and Crisis Management Committee Chairperson. He pos- sesses extensive management experience and deep insight into business planning, finance and accounting and risk management and is satisfac- torily carrying out his role in auditing the Company from an independent standpoint as an outside audit & supervisory board member.	-	_	J	_	J	_

**Executive Officers** President and Chief Executive Officer Yoshinori Kanehana Chief Executive Officer Vice Presidents and Senior Executive Officers Kenji Tomida Assistant to the President, in charge of Finance & Accounting and Human Resources Sukeyuki Namiki Assistant to the President, in charge of Technology, Production, Procurement, Quality Control, and Rolling Stock Company Managing Executive Officers Tatsuya Watanabe President, Energy System & Plant Engineering Company In charge of Corporate Planning, Investor Relations, Corporate Communication, and Ship & Offshore Structure Company, and Katsuya Yamamoto General Manager, Corporate Planning Division Ikuhiro Narimatsu In charge of Risk Management, General Administration, CSR, and Compliance, and Senior Manager, Risk Management Office Yoshinori Mochida President, Ship & Offshore Structure Company Yasuhiko Hashimoto President, Precision Machinery & Robot Company, in charge of promoting automation Takeshi Ohata Vice President, Energy System & Plant Engineering Company Kazutoshi Honkawa President, Rolling Stock Company Hiroyoshi Shimokawa President, Aerospace Systems Company Hiroshi Nakatani General Manager, Corporate Technology Division, Technical Institute, and Manufacturing Improvement Center, in charge of IT Strategy Yuji Horiuchi President, Motorcycle & Engine Company Executive Officers Eiichi Harada Deputy General Manager, Corporate Technology Division Yoshihiro Uetake Vice President, Aerospace Systems Company (in charge of Engine Business), and, in charge of Quality Control and KPS, and staff officer to Rolling Stock Company Ichiro Kono Vice President, Ship & Offshore Structure Company Akihisa Yamamoto In charge of Plant Department and special mission staff officer to Energy System & Plant Engineering Company Akira Matsufuji Vice President, Rolling Stock Company Mitsumasa Sato Vice President, Aerospace Systems Company(in charge of Aerospace segment) Makoto Shiota General Manager, Marketing Division Keigo Imamura General Manager, Planning & Control Division, Ship & Offshore Structure Company Nobuhisa Kato General Manager, Finance & Control Division Hidehiko Shimamura General Manager, Precision Machinery Business Division, Precision Machinery & Robot Company Shinii Fuiita General Manager, Robot Business Division, Precision Machinery & Robot Company General Manager, Human Resources Division Kouzou Tomiyama Hiroshi Ito General Manager, Planning Division, Motorcycle & Engine Company Yu Koshiyama General Manager, Commercial Engine Project Division, Aerospace Systems Company Hiroshi Murao In charge of Sales Management, staff officer to Rolling Stock Company Osamu Kobavashi General Manager, Commercial Aircraft Project Division, Aerospace Systems Company Akiyoshi Saiki Deputy General Manager, Corporate Technology Division, General Manager, System Technology Development Center Senior Manager, Energy System Division, and Senior Manager, CCPP Promotion Department, Energy System & Plant Naoki Murakami Engineering Company In charge of Technology, Plant Department, staff officer to Energy System & Plant Engineering Company Motohisa Amako

Fellows	
Shinji Koga	In charge of Production Improven
Toru Nohisa	In charge of Aircraft Engineering,
Tsutomu Fujigaki	In charge of Helicopter Projects, A
Tatsuhiko Goi	In charge of Gear System Technol

Tetsuii Yuasa

In charge of Production Improvement, Corporate Technology Division In charge of Aircraft Engineering, Aerospace Systems Company In charge of Helicopter Projects, Aerospace Systems Company In charge of Gear System Technology, Aerospace Systems Company In charge of Submarine & AUV Technology, Ship & Offshore Structure Company

\* Figures for fiscal 2018.

# **Compliance/Risk Management**

# Basic Stance on Compliance

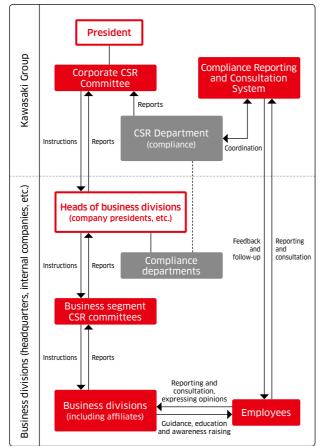
The Kawasaki Group Management Principles, part of the Kawasaki Group Mission Statement, extol the corporate virtue of "recognizing social responsibility and coexisting harmoniously with the environment, society as a whole, local communities, and individuals," and in the Kawasaki Group Action Guidelines, we ask each and every member of the Group to "earn the trust of the community through high ethical standards and the example you set for others."

We have established the Kawasaki Group Code of Conduct and set ethical standards to be the basis of decisions. At the same time, the Regulations Concerning the Kawasaki Group Code of Conduct, a set of internal rules, requires executives and employees to comply with the Code of Conduct.

# **Compliance Promotion Structure**

The Corporate CSR Committee comprises all directors and audit & supervisory board members and is chaired by the Kawasaki president. The committee meets at least twice a year (three meetings in fiscal 2018). Its functions are to discuss and determine measures to ensure that the Kawasaki Group fulfills its corporate social responsibilities and maintains thorough compliance, and to monitor the achievement levels and status of compliance efforts. To ensure that the objectives of the Corporate CSR Committee extend to all corporate structures, at the head office and internal companies, business segment CSR committee meetings are held at least twice a year to promote compliance throughout the Group.

# Compliance Promotion Structure



# Compliance Reporting and Consultation System (Whistle-blower System)

We have established the Compliance Reporting and Consultation System, with an outside lawyer acting as the contact, so that employees (including contract employees, temporary staff, and retired employees) of the Company and domestic consolidated subsidiaries can report or seek consultation regarding suspected violations of compliance practices relating to their operations.

Under the Compliance Reporting and Consultation System, employees report to or consult with an outside lawyer directly. The lawyer then investigates to determine whether or not there is in fact a compliance problem, and if a problem is found, advises the Company on how to remedy it. Furthermore, the lawyer reports the results of this process back to the employee who used the system. During the investigation, the employee's name is not disclosed to the Company without his or her permission.

The Group works to ensure that employees know how to use this system by providing information on it via such means as the Company intranet, Kawasaki Group Code of Conduct pamphlets, Compliance Guidebooks and Group newsletters.

There were 29 reports or consultations made through the Compliance Reporting and Consultation System in fiscal 2018.

### Number of Reports or Consultations (in fiscal 2018)

Contents of report or consultation	Cases
Abuse of authority	13
Personnel matters	5
Financial fraud	4
Sexual harassment	1
Blackmail and harassment	3
Others	3
Total	29

Note: The numbers of cases listed above refer to reports and consultations received, not those identified as actual compliance violations

# **Compliance Promotion Initiatives**

### Kawasaki Group Code of Conduct

In July 2017, we established the Kawasaki Group Code of Conduct as a set of ethical standards to guide the decision making of Kawasaki Group executives and employees. This code is a set of common conduct guidelines that all members of the Group must abide by, regardless of the situation or where in the world they are.

### Compliance Guidebook

The Compliance Guidebook provides knowledge that is necessary and useful for ensuring thorough compliance within the Company in an easy-to-understand way. The guidebook is distributed to all executives, employees, and temporary staff at all Group companies in Japan.

The Compliance Guidebook outlines the Group's compliance system and activities as well as the Compliance Reporting and Consultation System, which serves as the Group's internal whistle-blower system. The guidebook uses illustrations to present easy-to-understand examples of important compliance-related matters. It is divided into 20 sub-sections within

### Employee Awareness Surveys

The Kawasaki Group implements periodic employee awareness surveys to monitor internal compliance violation risks. Recent surveys aimed at measuring compliance awareness

# Basic Stance on Risk Management

In accordance with the Companies Act, the Kawasaki Board of Directors has adopted a basic policy for internal control systems. Based on this policy, the Company's Risk Management Regulations indicate that risks should be identified, classified, analyzed, and assessed and that risk management (avoidance, reduction, etc.) should be executed appropriately.

# Responding to Major Risks

To undertake integrated risk management on a Group-wide basis, each year, divisions responsible for operations re-check for the presence of risks, identify major risks that have the potential to significantly impact operations (Group-level risks), and monitor responses to these risks. Furthermore, they specify a few risk items from among those identified that require Group-wide response measures and specifically confirm the status of response to these at the Group-wide level.

With regard to individual risks associated with business execution, in accordance with such company regulations as



In recent years, risks to Kawasaki's business activities have been growing rapidly, reflecting changes in society, such as the establishment of systems in and outside Japan aimed at making corporate responsibility more explicit and stringent, growing trade friction, and the rising threat of cyber attacks. Accordingly, in addition to improving its business risk management systems, the The Kawasaki Group Code of Conduct contains 12 sections under the theme "Acting Correctly" and 10 sections under the theme "Working with Stakeholders."

six sections: "Securing the Trust of Customers and Business Partners," "Matters to Be Observed as a Corporate Citizen," "Data Protection," "Handling Financial Transactions," "The Workplace," and "Responsibilities of Managers." The guidebook also contains an index of the corresponding sections of the Kawasaki Group Code of Conduct and serves as a text for increasing compliance awareness.

The Compliance Guidebook is used in internal compliance training and educational activities. Since the first edition was issued in 2003, its content has been constantly updated in light of evolving compliance requirements around the world.

among employees were implemented in 2008, 2011, 2014 and 2018. Survey results are analyzed and reflected in subsequent initiatives.

In addition, to achieve sustained improvements in profitability and enterprise value, the Kawasaki Group Mission Statement identifies risk management as a guiding theme of the Kawasaki Group Management Principles.

the Major Project Risk Management Regulations, the relevant divisions must assess and analyze such risks in advance and fully consider appropriate responses. In particular, the Company practices even more thorough risk management for major projects with significant impact on operations, including that at the time of bidding and concluding agreements for such projects as well as regular follow-up by the Head Office and internal companies as needed after the project begins.

Kawasaki Group set up the Risk Management Office in April 2019 to carry out risk management, including early risk detection, prevention, and damage minimization, on a global scale, thereby reinforcing the resilience of business activities.

# **CSR Management and Human Rights**

# **Basic Policy on CSR**

We believe the Kawasaki Group's highest CSR priority is realizing the Group Mission, "Kawasaki, working as one for the good of the planet." Accordingly, we actively identify global social issues and aim to solve them by providing products and services driven by innovation and the pursuit of synergies within the Group. In addition, to earn and maintain the trust of society, we have made it the Kawasaki Group's basic policy on CSR activities to promote constructive dialogue with

stakeholders and reinforce initiatives in such areas as ensuring fair business practices, preventing corruption, and promoting consideration of the environment and human rights.

Based on this policy, we have identified material issues that define the scope of our CSR activities, informing Group-wide CSR management. We will continue CSR-related efforts based on stakeholder expectations and demands and thereby reinforce our foundation for value creation



In light of increasingly diverse stakeholder expectations and demands and changes in the business environment, the Kawasaki Group has reexamined and organized the impacts that its corporate activities have on society in order to identify material issues. We are handling the material issues identified based on the management approach defined under the GRI standards and have established KPIs that we use to regularly monitor progress.

### Materiality Matrix of Items Identified



# **CSR Activity Targets and Performance**

In fiscal 2017, management defined CSR-related material issues for the Kawasaki Group to address and reviewed the CSR activity framework, positioning material issues related to the creation of social value through business as top priorities to be achieved over the long term and all other material issues as CSR issues that underpin the management foundation. Under the new framework, we have clarified the

divisions and individuals responsible for as well as our ideals and key performance indicators for key items related to the creation of social value through business and environmental, societal, and governance (ESG) issues. We monitor accomplishments related to these key items every year. We implement a plan-do-check-act (PDCA) cycle while working to enhance our CSR activities.

For more information about Kawasaki's CSR activity targets and performance, please refer to Kawasaki's website. WEB https://global.kawasaki.com/en/corp/sustainability/overview/outline.html

# Stakeholder Engagement

The Kawasaki Group actively acknowledges the expectations and requests of stakeholders and aims to create social value by meeting those expectations and requests through its business activities while working to raise enterprise value. Through stakeholder dialogue, we strive to enhance information disclosure, deepen communication and thus strengthen bonds of mutual trust.

### Example Initiative

Kawasaki seeks to increase its enterprise value over the medium- to longterm by proactively engaging in dialogue with shareholders and investors to explain its business strategy and management policy while utilizing the insights gained from such dialogue in management. To this end, when shareholders or investors request a dialogue, the appropriate individuals, including directors and members of top management, meet with them. In addition, we conduct quarterly results briefings, business information sessions, plant tours and other informatory events on an ongoing basis.



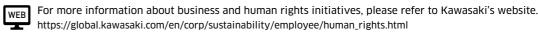
In addition, the opinions, and beliefs of shareholders and investors gleaned from dialogues are reported to the Board of Directors as appropriate and necessary.

For more information about stakeholder engagement, please refer to Kawasaki's website. WEB https://global.kawasaki.com/en/corp/sustainability/overview/stakeholder.html

# **Business and Human Rights Initiatives**

As value chains expand on a global scale, ensuring respect for the human rights of employees, suppliers, and all the other people involved in our businesses has become a more important focus that, in turn, increases the necessity of understanding and dealing with the human rights risks in Group-wide business activities.

The Kawasaki Group has enshrined respect for human rights in its business activities in the Kawasaki Group Code of Conduct. In June 2019, we adopted the Kawasaki Group Human Rights Policy by resolution of the Board of Directors. This policy states that, in line with the United Nations Guiding



Material issues		ue created through • businesses
iness activities roduct liability/safety prporate governance ompliance nti-corruption measures upply chain management mployee recruitment nd retention pw-carbon society usiness activities)	<ul> <li>Low-carbon society (product-based contributions)</li> </ul>	<ul> <li>Providing safe and secure, clean, and com- fortable movement of people and goods</li> <li>Creating clean energy</li> <li>Improving social infra- structure, especially in emerging countries</li> <li>Responding to the needs of an aging society and a shortage of labor through automation</li> </ul>
usiness and human rights		
nvironmental managemen eightened awareness as n environmentally friendly ocial contribution activitie	y brand	

### Importance to Kawasaki

High

Principles on Business and Human Rights, the Group will fulfill its responsibilities related to respecting the human rights of the stakeholders impacted by the Group's business activities.

To identify human rights risks in its business activities, in fiscal 2018, the Group implemented human rights risk assessments and impact assessments of its main businesses in cooperation with the U.S.-based nonprofit Business for Social Responsibility (BSR)

Going forward, we will formulate and implement measures to mitigate the significant risks identified through these assessments.

# Realizing a Low-carbon Society

Within the material issues identified in fiscal 2017, we have designated "the realization of a low-carbon society (product-based contributions)" and "the realization of a low-carbon society (business activities)" as particularly important. These entail, respectively, reducing CO<sub>2</sub> emissions by providing products with better environmental performance and reducing CO<sub>2</sub> emissions through such initiatives as energy-saving in manufacturing processes. We are advancing corporate activities accordingly.

Below is a look at Kawasaki's achievements related to these–CO<sub>2</sub> reduction through product-based contributions and business activities-in fiscal 2018, as well as a review of the results of the activities of the recently concluded Ninth Environmental Management Activities Plan (fiscal 2016 to 2018) and the key initiatives of the new 10th Environmental Management Activities Plan (fiscal 2019 to 2021).

# Realization of a Low-carbon Society: Product-based Contributions

About 90% of CO<sub>2</sub> emitted during the life cycles of our products is released during their use after they are sold. The Company therefore seeks to realize a low-carbon society by providing products that emit less CO<sub>2</sub> during use. In fiscal 2017, we established new rules for calculating the CO<sub>2</sub> emissions reduction achieved through product-based contributions in order to better quantify the contributions of highly energy efficient products to the mitigation of global warming.

Calculations based on these rules found that the CO<sub>2</sub> emissions reduction through products Kawasaki sold (non-consolidated basis) in fiscal 2018 was approximately 29.1 million tons. Large contributions were made by such products as the Green Gas Engine, which boasts world-leading powergeneration efficiency, and the M7V Series motors for HSTs,<sup>1</sup> both of which are Kawasaki-brand Green Products.<sup>2</sup>

Approximately **29.1** million tons of CO<sub>2</sub>

Fiscal 2018 Result (non-consolidated) Reduction of CO<sub>2</sub> Emissions through **Product-based Contributions** 



1 HST: Hydrostatic transmission: A non-stage transmission comprising a hydraulic nump and hydraulic motors.

2. The details of Kawasaki-brand Green Products are disclosed on Kawasaki's website:

http://global.kawasaki.com/en/corp/sustainability/green\_products/index.html#2018item

We launched the Kawasaki-brand Green Products' in-house registration program in 2013 for products that meet standards established by the Company related to energy efficiency and other factors. The number of registered products has continued increasing every year, reaching 54 in 2019.

# **Calculation Rules**

• Products to be assessed: Kawasaki-brand Green Products, products that use waste, waste heat, and renewable energy, as well as cogeneration systems and rolling stock pertaining to modal shift, etc., were selected for assessment.

• Period of assessment: We have adopted a flow-based approach<sup>3</sup> in which the period of assessment is the estimated useful life of products sold in a fiscal year, because the estimated useful lives of our products are long. This allows us to better calculate the difference in CO<sub>2</sub> emissions between our products and industry standard class products over the entire period of use.

3. Please refer to the "Guideline for Quantifying Greenhouse Gas Emission Reduction Contribution" (Ministry of Economy, Trade and Industry, March 2018).

# Realization of a Low-carbon Society: Business Activities

To reduce CO<sub>2</sub> emissions from business activities, Kawasaki has built energy-saving promotion structures for each business segment, and the entire Company is implementing a wide range of energy-saving initiatives.

Fiscal 2018 Result (non-consolidated) CO<sub>2</sub> Emissions Reduction Effect through Energy-saving in Business Activities

# Saving Energy in Composite Parts Manufacturing Lines

Because of the strict quality requirements for composite materials used in aircraft fuselages and components, these materials are manufactured in clean rooms with controlled air temperature and humidity. Previously, the composite materials were manufactured on separate lines in multiple clean rooms. By increasing the speed of manufacturing on these lines and optimizing the processes, we reduced the manufacturing time required per component, thereby enabling production at the same pace as before with one fewer line. Stopping the unused molding and processing line and turning off the air conditioning for its cleanroom vielded a reduction in annual CO<sub>2</sub> emissions of approximately 2,900 tons.

Furthermore, the area in which the air conditioning was turned off is now being used to store components prior to assembly.

# **Energy Saving in Melting and Holding Furnaces**

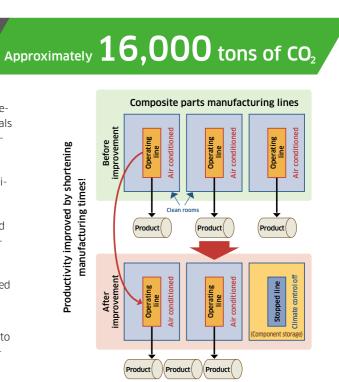
Melting and holding furnaces are a type of equipment used to melt down the aluminum materials for use in casting to produce motorcycle engine parts. Aluminum materials are fed into the furnace, where they are melted by melting burner, and a holding burner maintains the temperature of the molten aluminum until it is scooped out. The lid on the opening through which the molten aluminum is scooped out was previously opened and shut by hand. However, as it was not connected to the downstream scooping, it was simply left open whenever the furnace was in use, causing a great deal of heat dissipation and requiring the use of electric heaters to prevent the aluminum from cooling and solidifying.

Seizing the opportunity presented by the replacement of aging furnaces, we installed lids that are connected to the scooping apparatus to automatically open only when the aluminum is being scooped out, reducing heat dissipation. In addition, as a result of improvements to the efficiency of the holding burner and the heat insulation properties of the furnace's refractory materials, the electric heaters are no longer necessary, reducing the furnaces' electricity use by 95% and utility gas use by 35%, cutting annual CO<sub>2</sub> emissions by approximately 130 tons.

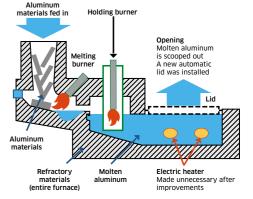
# Review of Activities under the Ninth Environmental Management Activities Plan and the Activities of the 10th Environmental Management Activities Plan

Under the Ninth Environmental Management Activities Plan (fiscal 2016-2018), we implemented energy-saving initiatives aimed at reducing CO<sub>2</sub> emissions from business activities and cutting energy costs. While we achieved our target of reducing annual resource and energy costs by 5% or more in all three years, we met our goal of reducing CO<sub>2</sub> emissions per unit of net sales by 3% or more only in some years. Furthermore, we revised the rules for calculating the CO<sub>2</sub> reduction effect of products to improve calculation accuracy,

In fiscal 2018, energy-saving initiatives reduced Kawasaki's (non-consolidated) annual CO<sub>2</sub> emissions by approximately 16,000 tons, bringing total CO<sub>2</sub> emissions from business activities to approximately 3,010,000 tons. Below are two examples of energy-saving improvements.



**Electricity Consumption Reduced by Shortening** Manufacturing Times

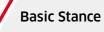


Simplified Cross-Section of a Melting and Holding Furnace

realizing more correct information disclosure.

Under the 10th Environmental Management Activities Plan (fiscal 2019-2021), we will consider the potential impacts on our businesses of risks and opportunities as we work to further reduce CO<sub>2</sub> emissions by expanding the provision of products with low CO<sub>2</sub> emissions and promoting further energy-saving improvements and energy reuse in our business activities. By doing so, we will ambitiously work to achieve major reductions in CO<sub>2</sub> emissions.

# Human Resource Strategies and Transforming the Company Organization and Culture/K-Win Activities



The Kawasaki Group considers its employees to be its most valuable resource to fulfill the Group Mission and achieve its business targets. Under MTBP 2019, launched in fiscal 2019, we are implementing new human resource strategies to address tasks remaining from the previous business plan by making effective use of human resources with an eye to total business portfolio optimization, maximizing results by improving productivity, and realizing value creation by bringing together diverse insights.

Vision for Our People and Organization under MTBP 2019

- Respond to changes in the environment by proactively changing and continuously taking on new challenges
- Implement effective ways of working to maximize results
- Realize self-directed, strong individuals and dynamic, cohesive organizations

Furthermore, to better ensure the achievement of the goals of MTBP 2019, we will work to create a corporate culture that will boldly face change through wide-ranging efforts, including human resource strategies. Specifically, under the banner of "Changing Forward," we will implement the following initiatives to transform the Company organization and culture as well as K-Win Activities (short for Kawasaki Workstyle Innovation Activities) and the Win Project, while promoting diversity.

# Key Tasks under MTBP 2019

# Transforming the Company Organization and Culture/K-Win Activities-Kawasaki Win Project

Organizational Transformation	<ul> <li>Reconstruct cross-organizational functions and management systems for total optimization</li> <li>Develop governance and internal company systems suited to Kawasaki</li> <li>Strengthen Company-wide strategy formulation and business management functions</li> <li>Develop succession plans for the next generation of management leaders</li> </ul>
Mindset Transformation	<ul> <li>Establish a culture to face evolving challenges</li> <li>Promote diversity to foster open communication incorporating diverse insights and human resources from in and outside the Company</li> <li>Establish personnel systems to emphasize speed and positive, ambitious change</li> </ul>
Operational Transformation	<ul> <li>Make structures leaner through effective, efficient business operations</li> <li>Advance process visualization, seamlessness, and quality assurance throughout management by promoting digital innovation across the value chain (currently advancing initiatives in the robot business)</li> <li>Standardize and concentrate operations to increase quality and speed (currently advancing initiatives in human resources and accounting)</li> </ul>

# **Organizational Transformation**

As the evolution of technologies accelerates and startups achieve rapid growth, the pace of change in the external environment is faster than ever. In response, we are reinforcing Company-wide management strategies and implementing succession planning for top management. By carefully deciding where to locate businesses and strategically allocating management resources, we will realize total optimization in management. At the same time, we will systematically develop new leaders to take the helm of management and reinforce project risk management.

# Mindset Transformation

Nimbly responding to unpredictable changes in society and increasing customer value requires organizations that are speedier, flexible and innovative. As such, we are working to change mindsets within the Company and develop a workplace culture that enables employees to exercise their creativity to the fullest.

To enhance employee job satisfaction and promote mindsets conducive to ambitiously taking on transformation, we are promoting open communication in the workplace while improving underlying personnel systems.

# Example Initiatives

- Enabling greater Company-wide mobility of human resources and the mingling of insight from in and outside the Company
- Promoting more active internal communication, mainly connecting top management with employees
- Insight exchange using co-working spaces aimed at fostering innovative mindsets

# Operational Transformation

The working population in Japan is expected to rapidly decline in the coming decades. In preparation for this, we are working to implement more effective and efficient ways of working and workstyle reforms to maximize results and increase earnings power.

To further increase the added value our businesses create, we are advancing digital innovation across the value chain,

# Example Initiatives

- Workstyle reforms and initiatives to analyze and improve work processes
- Digitize and streamline administrative work, such as accounting and personnel functions

# **Promoting Diversity and Inclusion**

We believe that fostering recognition among employees that all employees are unique individuals with their own values as well as mutual respect based on this understanding is essential to becoming a more innovative organization and will increase job satisfaction, motivation and enterprise value.

Kawasaki has implemented measures focused on employees whose workstyle or values place them in a minority within the Company, seeking to support such employees and change the mindsets, as needed, of those in the majority. Specific examples include measures related to promoting the professional success of women, supporting employees taking childcare or nursing care leave, and promoting the hiring of persons with disabilities.

Recently, to support LGBT employees, we have held internal seminars and created the Kawasaki LGBT Ally Mark as a means for users to indicate that they support their LGBT colleagues. Through such efforts, we are working to educate and increase awareness among all employees.

- Checking organizational soundness using surveys and promoting intra-workplace communication using organizational development methods
- Building relationships of trust between managers and subordinates through one-on-one meetings and promoting appropriate career formation
- Developing a corporate culture that promotes taking on challenges and learning from failure

streamlining design processes for system integration products, mainly transportation equipment, and improving processes in all types of non-manual work. Furthermore, with regard to the internal systems that support our businesses, we will advance streamlining using IT and standardization via concentration, thereby reinforcing the management of global business information.

- Improving workplace environments by introducing remote work systems
- Improving efficiency of email and meetings
- Make non-manual work performance easier to see and measure as a cornerstone for process improvement

Through these and other activities, we will empower all employees to express themselves and work with greater motivation, thereby providing new value to more stakeholders.



Powering your potential Kawasaki LGBT Ally mark



Internal seminar on basic LGBT knowledge

# **Eleven-year Summary**

		2000		2000		2010		2044		2012		2012		2014		2015		2010		2017		2010	
Operating results	(FY)	2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	.,,	2018	
operating resolts	Net sales	¥1,338.5	¥	1,173.4		¥1,226.9		¥1,303.7	¥	1,288.8	¥	1,385.4	¥	1,486.1	¥	,541.0	¥	1,518.8	¥	1,574.2	¥	1,594.7	
	Aerospace Systems <sup>1</sup>	-		-		_		-		-		_		_		-		_		469.5		463.9	
	Energy System & Plant Engineering <sup>1</sup>	200.4		188.8		196.8		206.5		239.1		280.7		325.0		351.8		329.9		251.6		253.0	
	Aerospace <sup>1</sup> Gas Turbine & Machinery <sup>1</sup>	200.4		191.3		202.6		194.6		207.0		189.2		218.7		236.4		241.9		_		-	
	Plant & Infrastructure <sup>1</sup>	105.1		107.5		89.0		122.8		115.8		103.8		121.1		135.6		160.8		-		-	
	Precision Machinery & Robot <sup>2</sup>	84.9		82.7		140.3		175.0		130.4		123.2		135.7		133.1		155.2		198.9		222.0	
	Ship & Offshore Structure	126.4		151.8		118.4		113.5		90.3		80.8		90.3		94.8		103.2		95.6		78.9	
	Rolling Stock <sup>3</sup>	186.4		150.0		131.1		132.6		129.9		147.9		121.5		146.6		137.1		141.7		124.6	
	Motorcycle & Engine <sup>2</sup>	336.4		203.0		234.4		235.2		251.8		322.2		329.2		333.5		313.0		331.6		356.8	
	Other <sup>3</sup>	103.5	[2,40/]	97.8	r 1	114.0	[2, 40/]	123.2	[4 40/]	124.2	[2 201]	137.2	[[ 00/]	144.2	[[ 0%]	108.8	[C 20/]	77.4	[2,00/]	85.0	[2 50/]	95.1	[4 0%]
	Operating income [operating income margin]		[2.1%]	(1.3)	[-]	42.6	[3.4%]	57.4	[4.4%]	42.0	[3.2%]		[5.2%]		[5.8%]	95.9	[6.2%]		[3.0%]		[3.5%]	64.0	
	Aerospace Systems <sup>1</sup>	-		-		_		_		-		-		_		-		-			[6.5%]		[7.0%]
	Energy System & Plant Engineering <sup>1</sup>	-	r 1	-	[1.00/]	-		- 7.0	[0 70/]	-	[C 40/]	-	[0, 20/]	-	[1 1 4 0/]	-	[10.00/]	-			[3.0%]	11.6	[4.5%]
	Aerospace <sup>1</sup>	(4.1)	[-]	3.7	[1.9%]		[1.5%]	7.8	[3.7%]	14.8	[6.1%]	26.2	[9.3%]		[11.1%]		[12.9%]		[7.5%]	-		-	
	Gas Turbine & Machinery <sup>1</sup>	11.0	[5.6%]	8.9	[4.6%]		[4.7%]	7.7	[3.9%]	7.0	[3.3%]	10.4	[5.5%]		[5.1%]	16.9	[7.1%]		[6.3%]	_		-	
	Plant & Infrastructure <sup>1</sup>		[8.5%]	7.9	[7.3%]		[9.3%]		[11.4%]	9.7	[8.4%]	6.3	[6.0%]		[5.4%]	8.5	[6.2%]		[1.6%]	-	4.0.001	-	Te. 60:1
	Precision Machinery & Robot <sup>2</sup>		[9.8%]	3.4	[4.1%]		[15.9%]		[15.2%]	8.4	[6.4%]	10.4	[8.4%]		[8.0%]	8.5	[6.4%]	13.1	[8.4%]	21.6 [			[9.6%]
	Ship & Offshore Structure	(1.0)	[-]	1.5	[1.0%]	(1.0)	[-]	3.9	[3.4%]	4.1	[4.6%]	(2.0)	[-]		[2.9%]	(7.9)	[-]	(21.4)	[-]	(3.8)	[-]		[1.3%]
	Rolling Stock <sup>3</sup>		[6.0%]	8.7	[5.8%]	8.1	[6.2%]	5.1	[3.8%]		[1.7%]		[5.1%]		[4.9%]	9.2	[6.3%]	3.4	[2.5%]	(12.4)	[-]	(13.7)	[-]
	Motorcycle & Engine <sup>2</sup>	(10.1)	[-]	(27.0)	[-]	(4.9)	[-]	(2.9)	[-]		[0.9%]		[4.9%]		[4.5%]	15.7	[4.7%]		[3.7%]		[4.5%]		[4.0%]
	Other <sup>3</sup>		[4.1%]	(1.0)	[-]	2.5	[2.2%]	3.8	[3.1%]		[1.0%]		[3.2%]		[2.7%]	2.8	[2.6%]		[4.0%]		[3.4%]		[2.6%]
	Recurring profit	38.7		14.2		49.1		63.6		39.3		60.6		84.2		93.2		36.6		43.2		37.8	
	EBIT <sup>4</sup>	30.2		1.5		43.2		52.9		50.3		65.3		88.0		78.4		41.7		35.7		41.2	
	Income before income taxes	23.6		(3.8)		38.5		48.7		46.1		61.3		84.2		74.8		38.8		32.9		37.8	
	Profit attributable to owners of the parent	11.7		(10.8)		25.9		23.3		30.8		38.6		51.6		46.0		26.2		28.9		27.4	
	Research and development expenses	38.2		38.0		37.0		39.9		41.7		40.3		41.6		43.6		43.6		45.4		48.7	
	Capital expenditures	82.4		59.2		55.3		63.9		78.6		87.7		80.0		76.3		82.7		82.1		66.9	
	Depreciation and amortization	44.3		51.4		50.2		48.9		48.3		37.8		44.5		49.0		51.5		56.1		59.0	
Financial position	Total assets	1,399.7		1,352.4		1,354.2		1,362.1		1,466.2		1,554.4		1,662.2	1	,620.4		1,687.3		1,785.0		1,838.8	
(at year-end)	Interest-bearing debt	389.2		428.9		429.1		407.1		484.6		444.6		414.3		398.4		400.6		446.6		439.4	
	Net assets	295.2		283.0		297.4		315.9		349.8		376.6		447.9		445.6		451.3		481.3		492.2	
	Invested capital <sup>5</sup>	679.7		705.9		718.2		713.2		822.8		807.6		846.3		829.7		837.9		912.7		915.8	
Cash flows	Cash flows from operating activities	(41.2)		30.1		81.9		84.7		28.1		151.7		127.6		86.0		93.5		56.0		109.7	
	Cash flows from investing activities	(72.2)		(63.2)		(52.9)		(65.9)		(81.1)		(77.5)		(67.3)		(74.1)		(64.8)		(80.5)		(85.3)	
	Free cash flows	(113.5)		(33.0)		28.9		18.7		(53.0)		74.1		60.2		11.8		28.6		(24.5)		24.4	
	Cash flows from financing activities	107.6		35.9		(18.8)		(26.8)		57.6		(62.5)		(57.1)		(23.4)		(15.8)		37.7		(19.7)	
Key performance indicators	Before-tax ROIC (Return on invested capital)6	4.5%		0.2%		6.0%		7.4%		6.1%		8.1%		10.4%		9.4%		5.0%		3.9%		4.5%	
	Return on equity (ROE)	3.8%		_		9.1%		7.8%		9.5%		11.0%		12.9%		10.6%		6.0%		6.4%		5.8%	
	Net D/E ratio	123.0%		142.2%		132.1%		121.8%		131.9%		109.3%		83.9%		82.5%		78.9%		80.6%		76.6%	
	Net income per share <sup>7</sup>	¥70.2		¥(65.1)		¥155.5		¥139.5		¥184.6		¥230.9		¥308.9		¥275.6		¥156.8		¥173.0		¥164.3	
	Net assets per share <sup>7</sup>	¥1,741.0	¥	1,661.3		¥1,730.3		¥1,830.6	¥	2,023.2	¥	2,171.6	¥	2,585.8	¥2	2,582.1	¥2	2,617.3	¥	2,789.9	¥	2,851.8	
	Dividends per share <sup>7</sup>	¥30.0		¥30.0		¥30.0		¥50.0		¥50.0		¥60.0		¥100.0		¥120.0		¥60.0		¥60.0		¥70.0	
	Dividend payout ratio	42.6%		_		19.3%		35.8%		27.0%		25.9%		32.3%		43.5%		38.2%		34.6%		42.5%	
	Number of employees (at year end)	32,266		32,297		32,706		33,267		34,010		34,620		35,471		34,605		35,127		35,805		35,691	

1. In fiscal 2018, the reportable segments were reorganized: the Aerospace segment and the jet engine business of the Gas Turbine & Machinery segment became the Aerospace Systems segment and the Plant & Infrastructure segment and the energy and marine-related businesses of the Gas Turbine & Machinery segment became the Energy System & Plant Engineering segment. Figures for fiscal 2017 onward are presented according to the reorganized segments.

 In fiscal 2008, the current Motorcycle & Engine segment was the Consumer Products & Machinery segment, and the current Precision Machinery segment was the Hydraulic Machinery segment. The robot-related business was included in the Consumer Products & Machinery segment in fiscal 2018, but from fiscal 2009 onward has been included in the Precision Machinery segment. In fiscal 2018, the Precision Machinery segment was renamed the Precision Machinery & Robot segment.

3. The construction machinery business was included in the Rolling Stock segment in fiscal 2008, and in the Other segment from fiscal 2009 onward. This business as sold in fiscal 2015.
EBIT = Income before income taxes + interest expense
Invested capital = Interest-bearing debt + shareholders' equity
Before-tax ROIC = EBIT / Invested capital at year-end

7. Effective October 1, 2017, a 1-for-10 share consolidation was implemented for ordinary shares. Figures for fiscal 2016 and before are calculated based on the assumption that the share consolidation had already been implemented.

# **Overview**

In the fiscal year ended March 31, 2019, the global economy was relatively lacking in vigor overall due to the economic slowdown in emerging countries and resource-rich countries, along with other factors, despite the ongoing modest growth centered on the U.S., where the real economy remains strong. In addition, there continues to be uncertainty about future prospects for the real economy as a downturn in corporate earnings stemming from U.S.-China trade friction is beginning to emerge and there is still a chance of a U.K. split from the EU without an agreement, even though the deadline for the split from the EU has been delayed. As a result, there is a continued need for these developments-with the potential to drag down the global economy-to be watched sufficiently closely.

The Japanese economy has been recovering modestly, due to a modest increase in capital investment, an improvement in corporate earnings and other factors. Although overall modest growth is expected to continue, it is necessary to continue to watch foreign exchange rates since the economic policies of the U.S. and other countries or other factors may trigger a yen appreciation.

Amid such an operating environment, the Group's orders received in the fiscal year ended March 31, 2019, decreased overall from the previous fiscal year due to a decrease in the Rolling Stock segment and the Aerospace Systems segment, despite an increase in the Ship & Offshore Structure segment and other segments. Net sales increased overall from with the previous fiscal year due to increases in the Motorcycle & Engine segment, the Precision Machinery & Robot and other segments, despite decreases in the Rolling Stock segment and other segments. Operating income increased overall due to the improvement in the Ship & Offshore Structure segment and increases in the Energy System & Plant Engineering segment and other factors. Recurring profit decreased due to the payments for the inservice issue of commercial jet aircraft engines and other factors despite the increase in operating income. Net income attributable to the owners of the parent decreased as a result of the decrease in recurring profit and other factors.

As a result, the Group's consolidated orders received decreased ¥22.0 billion from the previous fiscal year to ¥1,585.9 billion, consolidated net sales increased ¥20.5 billion year on year to ¥1,594.7 billion, consolidated operating income increased ¥8.0 billion to ¥64.0 billion, consolidated recurring profit fell ¥5.3 billion to ¥37.8 billion, and net income attributable to the owners of the parent decreased ¥1.4 billion to ¥27.4 billion. ROIC\* was 4.5%, while ROE was 5.8%.

Before-tax ROIC = EBIT (income before income taxes + interest expense) / invested capital (interest-bearing debt + shareholders' equity)

### **Business Segments**

The following sections supply additional details on the consolidated performance of each business segment\*. Please note that operating income or loss includes intersegment transactions.

\* The Company reviewed the method of business seament classification from the fiscal year ended March 31, 2019 and changed its reportable segments from the previous Ship & Offshore Structure, Rolling Stock, Aerospace, Gas Turbine & Machinery, Plant & Infrastructure, Motorcycle & Engine, Precision Machinery and Other Operations to Aerospace Systems, Energy System & Plant Engineering, Precision Machinery & Robot Shin & Offshore Structure Rolling Stock. Motorcycle & Engine and Other Operations. Consolidated segment information for the fiscal year ended March 31, 2018 has been prepared using the revised segment classification method.

### Aerospace Systems

Concerning the business environment surrounding the Aerospace Systems segment, there is a certain level of demand from the Ministry of Defense in Japan despite an otherwise tight defense budget, while demand for commercial aircraft airframes and jet engines is increasing in conjunction with the rise in the number of air passengers.

Although demand for the component parts for commercial aircraft jet engines increased, consolidated orders decreased ¥67.2 billion year on year to ¥431.6 billion due to a decrease in demand for component parts for the Ministry of Defense and commercial aircraft.

Consolidated net sales decreased ¥5.5 billion year on year to ¥463.9 billion due to a decrease in demand for component parts for the Ministry of Defense and commercial aircraft, despite an increase in demand for component parts for commercial aircraft jet engines. Nevertheless, consolidated

on year to ¥32.6 billion due to improvement in the profitability of component parts for commercial aircraft.

### Energy System & Plant Engineering

Regarding the business environment surrounding the Energy System & Plant Engineering segment, in addition to the recovery in resource development and oil and natural gas related investment overseas, there is still demand for energy infrastructure maintenance in Asia and demand for distributed power sources is increasing due to stronger interest in investment in the environment and energy conservation. among other factors. In Japan, there is ongo-sector as a whole, including in human-robot ing demand for replacing aging facilities for refuse incineration plants and industrial machinery. Meanwhile, in the energy and environmental field, although there is large potential demand for distributed power sources in Japan, investment plans are slightly delayed in light of the liberalization of electricity.

Year on year consolidated orders received increased ¥39.8 billion to ¥263.5 billion due to the orders received from a Combined Cycle Power Plant (CCPP) and a LNG tank for in industrial robots for semiconductors. the Japanese market among other factors. Consolidated net sales increased ¥1.4 billion year on year to ¥253.0 billion due to an increase in construction work volume in the Energy System segment and other factors, despite the decline in construction work volume on refuse incineration plants for the Japanese market and chemical plants for overseas markets. Consolidated operating income was ¥11.6 billion, a ¥3.9 billion increase from the previous year, due to the improvement in profitability in the Energy System segment and the other factors.

### Precision Machinery & Robot

With respect to the business environment surrounding the Precision Machinery & Robot segment, in the construction machinery market, excavator sales competition in the Chinese market is becoming increasingly intense, and there are growing concerns and a sense of uncertainty about the future prospects of the China market, particularly among foreign construction machinery manufacturers that are losing market share in the Chinese market (especially for smalland medium-sized excavators). However,

operating income increased ¥1.7 billion year demand still exceeds its production capacity, so the Company is working to increase production. The Company will continue to monitor the situation in the Chinese market. In the robot market, the current situation is deteriorating due to the postponement of capital investment and the putting off of investment by semiconductor manufacturers in the Chinese market due to the U.S.-China trade friction, creating the expectation that the overseas market will remain unstable for a while. Still, semiconductor investment is expected to resume in the second half of the fiscal year, and demand is expected to recover. In the domestic market, demand is expected to steadily expand in the industrial coexistence field

> Year on year in this segment, consolidated orders received increased ¥15.3 billion to ¥225.2 billion due to an increase in hydraulic components for construction machinery, despite a decrease in robots in the semiconductors field. Consolidated net sales was ¥222.0 billion, a ¥23.0 billion increase from the fiscal year ended March 31, 2018 due to an increase in hydraulic components for construction machinery, despite a decrease Consolidated operating income was ¥21.3 billion, roughly the same level as in the previous fiscal year, due to an increase in SG&A expenses, including expenses increasing production as well as R&D costs, along with other factors, despite the increase in net sales.

# Ship & Offshore Structure

With respect to the business environment surrounding the Ship & Offshore Structure segment, while new-build vessel prices are recovering after bottoming out and demand for gas-fueled vessels has been increasing in conjunction with the tightening of environmental regulations, competition remained intense due to factors including the pushing back of demand for LNG carriers because of the delay in LNG development projects and the continuation of policies by the South Korean government to support their domestic shipbuilding industries. In the year ended March 31, 2019, consolidated orders received were ¥81.1 billion, a ¥76.4 billion increase from the previous fiscal year when the Company terminated a ship building contract for an offshore service vessel after receiving an order for a submarine for the

Ministry of Defense. Consolidated net sales fell by ¥16.6 billion year on year to ¥78.9 billion, due to a change in the sales mix between LNG carriers and LPG carriers and other factors. Consolidated operating income of emerging countries and other factors. was ¥1.0 billion, a ¥4.9 billion improvement from the previous fiscal year due to improvement in shipbuilding cost and other factors, despite a decrease in sales.

# Rolling Stock

With respect to the business environment surrounding the Rolling Stock segment, there continues to be stable demand in Japan for the replacement of aging railcars. In North America, demand for new and replacement railcars has been increasing in the New York (1) Assets area, which is its core market, and the other areas. Meanwhile, in Asia, demand in emerging markets is increasing with the Japanese government's efforts to promote infrastructure related exports.

For the year, consolidated orders received were ¥136.0 billion, a ¥121.0 decline from the fiscal year ended March 31, 2018, when orders were received for new generation subway cars from the New York City Transit Authority, despite the fact that an order for commuter train cars was received from the Port Authority of New York and New Jersey along with other factors. Consolidated net sales decreased ¥17.0 billion year on year to ¥124.6 billion due to a decrease in sales for overseas markets in the U.S., Asia and other countries, and other factors. Consolidated operating income decreased ¥1.3 billion year on year to ¥13.7 billion of operating loss due to deterioration in profitability in orders for the U.S. since the previous year.

# Motorcycle & Engine

Regarding the business environment surrounding the Motorcycle & Engine segment. the modest growth in motorcycle markets mainly in Europe is continuing, and the decline in demand for motorcycles in emerging countries is signaling a bottoming out. With respect to utility vehicles, the market continues to grow stably mainly in North America, and the general-purpose engine market is also growing steadily. Overall, consolidated net sales increased in this segment ¥25.1 billion year on year to ¥356.8 billion due to an increase in sales of motorcycles and vehicles for developed countries. Consolidated operating income deteriorated

¥0.8 billion year on year to ¥14.3 billion despite the increase in sales because increasing prices of steel and other materials in the U.S., the impact of weakness in the currencies

# Other Operations

Consolidated net sales increased ¥10.0 billion year on year to ¥95.1 billion. However, consolidated net operating income decreased ¥0.4 billion year on year to ¥2.5 billion.

# Consolidated Financial Position

Total assets at March 31, 2019 were ¥1,838.8 billion, a ¥53.8 billion increase from March 31, 2018. Current assets increased ¥20.5 billion from March 31, 2018 to ¥1,136.3 billion due to an increase in inventory assets and other factors. Fixed assets increased ¥33.2 billion year on year to ¥702.5 billion due to an increase in holdings of property, plant and equipment because of capital investment and other factors.

# (2) Liabilities

Overall liabilities increased ¥42.9 billion from March 31, 2018 to ¥1,346.5 billion due to a rise in net defined benefit liabilities, the posting of the provision for the in-service issue of commercial jet aircraft engines and other factors. Interest bearing liabilities decreased ¥7.2 billion year on year to ¥439.4 billion.

# (3) Net assets

Consolidated net assets increased ¥10.8 billion year on year to ¥492.2 billion due to factors including the increase from the posting of net income attributable to the owners of the parent and despite the decline due to dividend payments and other factors.

### Cash Flows

# (1) Cash flows from operating activities

Operating activities provided net cash of ¥109.7 billion. a ¥53.7 billion increase from the previous fiscal year. It is due mainly to a decrease in trade receivable. Major sources of operating cash flow included income before income taxes of ¥37.8 billion.

depreciation and amortization of ¥59.0 billion, and trade receivable of ¥58.9 billion. Major uses of operating cash flow included expenditure of ¥65.3 billion due to an increase in inventory assets.

### (2) Cash flows from investing activities

Investing activities used net cash of ¥85.3 billion, which is ¥4.7 billion more than in the of the entire group. previous fiscal year, mainly due to the requisition of property, plant and equipment as well as intangible assets.

### (3) Cash flows from financing activities

Financing activities used ¥19.7 billion, which is ¥57.5 billion more than in the previous fiscal year when financing activities provided net cash of ¥37.7 billion. This was due mainly to the payment of dividends.

Given these changes in cash flows, cash and cash equivalents at end of year settled at ¥68.3 billion. up ¥3.9 billion from the beginning of the year.

# Management of Liquidity Risk

To manage liquidity risk comprehensively, the Finance Department formulates and renews financial plans in a timely fashion based on reports from each business segment. In addition, measures are taken to diversify sources of financing, adjust the balance of long- and short-term financing with consideration for financial conditions and secure commitment lines (credit limit of ¥54.0 billion, immediate activation possible) and commercial paper (issuance limit of ¥150.0 billion).

### Management Indicators

As target management indicators, the Company has adopted Earnings (Operating income, Recurring profit, Profit attributable to owners of parent) and Return on Invested Capital [ROIC = EBIT (Income before income taxes + Interest expense) / Invested Capital (Interest-bearing debt + Shareholders' equity)] as indicators for measuring capital efficiency.

The Company's Group-wide businesses are segmented and subdivided into Business Units (hereinafter referred to as "BUs"), and ROIC management is applied to each and every BU. Those BUs not clearing the ROIC

hurdle rate (minimum required level) are required to take practical actions for clearing the hurdle rate early. On the other hand, those BUs already clearing the ROIC hurdle rate are encouraged to achieve the ROIC level for the top market leader and, while taking initiatives to enhance Economic Value Added (EVA), improve the enterprise value With the improvement of these management indicators, the Company also seeks to improve its Return on Equity (ROE = Profit attributable to owners of parent / Shareholders' equity).

# Dividends

As a basic management policy, the Company aims to increase corporate value by consistently generating profit exceeding the cost of invested capital. In line with this policy, the Company believes that one priority for management is to engage in cutting-edge research and development as well as innovative capital investment required to achieve future growth and thereby return profits to shareholders by enhancing shareholder value over the long term.

In order to maintain a good balance between enhancing shareholder value and returning profits to shareholders through dividends, the Company has set a mediumto long-term consolidated payout ratio standard of 30% corresponding to the consolidated profit attributable to the owners of the parent and in light of both the outlook for future earnings and a comprehensive examination of its financial condition, including its free cash flow, D/E ratio (debt-to-equity ratio) and other factors. The Company has a basic policy of distributing surplus retained earnings as dividends twice a year, once after the fiscal second guarter and once after the fiscal year-end. Interim dividends are authorized by the Board of Directors, while year-end dividends are authorized at the general meetings of shareholders.

# **Consolidated Balance Sheets**

Assets

KAWASAKI HEAVY INDUSTRIES, LTD. AND CONSOLIDATED SUBSIDIARIES At March 31, 2019 and 2018

	Mi	lions	of yen		U.S. dollars (Note 1)
	2019		2018	_	2019
Current assets					
Cash and deposits (Note 23)	¥ 74,3	11	¥ 70,632	\$	669,408
Notes and accounts receivable-trade	427,6	65	470,110		3,852,491
Merchandise and finished goods	68,1	76	62,385		614,143
Work in process (Notes 4 and 9)	405,0	87	326,459		3,649,104
Raw materials and supplies	119,5	58	115,893		1,077,002
Other	45,3	33	72,542		408,369
Allowance for doubtful accounts	(3,7	92)	(2,247)		(34,159)
Total current assets	1,136,3	40	1,115,776	:	10,236,375
Non-current assets					
Property, plant and equipment (Note 8)					
Buildings and structures, net	194,9	39	186,623		1,756,049
Machinery, equipment and vehicles, net	148,6	20	144,399		1,338,798
Land	62,7	05	62,694		564,859
Leased assets, net	2,1	48	2,199		19,350
Construction in progress	18,2	27	25,724		164,192
Other, net	59,0	28	58,155		531,736
Total property, plant and equipment	485,6	69	479,797	_	4,375,002
Intangible assets	16,7	97	16,178		151,311
Investments and other assets					
Investment securities (Notes 5, 6 and 8)	14,5	01	14,798		130,628
Retirement benefit asset (Note 10)		93	88		838
Deferred tax assets (Note 22)	70,1	79	69,632		632,186
Other (Notes 7 and 8)	116,6	96	92,441		1,051,221
Allowance for doubtful accounts	(1,4	22)	(3,685)	_	(12,810)
Total investments and other assets	200,0	48	173,276	_	1,802,072
Total non-current assets	702,5	14	669,252	_	6,328,385
otal assets	¥1 & 3 & 9	55	¥1,785,028	¢	16,564,769
			. 1,703,020	<del>ب</del>	10,004,705

Liabilities and Cur Net Assets

	Million	s of yen	Thousands of U.S. dollars (Note 1)
	2019	2018	2019
Current liabilities			
Notes and accounts payable—trade (Note 8)	¥ 247,191	¥ 245,398	\$ 2,226,74
Electronically recorded obligations-operating	123,083	117,772	1,108,756
Short-term loans payable (Note 8)	100,023	108,978	901,027
Current portion of bonds (Note 8)	10,000	20,000	90,082
Lease obligations (Note 8)	319	283	2,874
Income taxes payable (Note 22)	10,390	6,042	93,595
Provision for bonuses	21,168	19,903	190,686
Provision for construction warranties	13,096	13,000	117,97
Provision for loss on construction contracts (Note 9)	27,609	18,258	248,70
Advances received	181,419	194,306	1,634,25
Other	129,978	125,454	1,170,86
Total current liabilities	864,280	869,398	7,785,60
Non-current liabilities			
Bonds payable (Note 8)	140,000	130,000	1,261,14
Long-term loans payable (Note 8)	187,568	185,685	1,689,65
Lease obligations (Note 8)	1,513	1,697	13,62
Deferred tax liabilities (Note 22)	593	9,187	5,34
Retirement benefit liability (Note 10)	97,602	86,836	879,21
Provision for the in-service issues of commercial aircraft jet engines (Note 11)	11,468	_	103,30
Other	43,566	20,837	392,45
Total non-current liabilities	482,313	434,244	4,344,77
Total liabilities	1,346,593	1,303,642	12,130,37
Net assets (Note 13):			
Shareholders' equity:			
Common stock:			
Authorized-336,000,000 shares			
Issued-167,080,532 shares in 2019			
-167,080,532 shares in 2018	104,484	104,484	941,21
Capital surplus	54,542	54,573	491,32
Retained earnings	324,606	308,010	2,924,11
Treasury stock-33,049 shares in 2019			
-25,910 shares in 2018	(130)	(124)	(1,17
Total shareholders' equity	483,502	466,944	4,355,48
Accumulated other comprehensive income	100,002	100,511	1,000,10
Valuation difference on available-for-sale			
securities	2,682	3,526	24,16
Deferred gains or losses on hedges	(227)	403	(2,04
Foreign currency translation adjustment	(4,556)	719	(41,04
Remeasurements of defined benefit plans	(5,014)		(45,16
Total accumulated other comprehensive income	(7,115)		(64,09
Non-controlling interests	15,874	15,324	142,99
Total net assets	492,261	481,386	4,434,38
Total liabilities and net assets	¥1,838,855		\$16,564,76

The accompanying notes to the consolidated financial statements are an integral part of these statements.

# **Consolidated Statements of Income**

KAWASAKI HEAVY INDUSTRIES, LTD. AND CONSOLIDATED SUBSIDIARIES For the years ended March 31, 2019 and 2018

# **Consolidated Statements of Comprehensive Income**

KAWASAKI HEAVY INDUSTRIES, LTD. AND CONSOLIDATED SUBSIDIARIES For the years ended March 31, 2019 and 2018

	Millions	of yen	Thousands U.S. dolla (Note 1)	irs
	2019	2018	2019	
Net sales	¥1,594,743	¥1,574,242	\$14,365,7	760
Cost of sales (Note 14)	(1,326,668)	(1,319,715)	(11,950,8	387
Gross profit	268,075	254,527	2,414,8	373
Selling, general and administrative expenses				
Salaries and allowances	(54,952)	(52,502)	(495,0	)18
Research and development expenses (Note 15)	(48,734)	(45,434)	(439,0	)05
Other	(100,364)	(100,665)	(904,0	)99
Total selling, general and administrative expenses	(204,052)		(1,838,1	
Operating profit	64,023	55,925	576,7	
Non-operating income				
Interest income	909	720	8,1	88
Dividend income	294	291		548
Gain on sales of securities	862	46		765
Share of profit of entities accounted for using equity method	1,574	4.492	14,1	179
Other	3,056	3,580	27,5	
Total non-operating income	6,696	9,131	60,3	
Non-operating expenses				
Interest expenses	(3,427)	(2,794)	(30,8	371
Foreign exchange losses	(4,721)	(7,017)	(42,5	
Payments for the in-service issues of commercial aircraft jet engines (Note 16)	(14,851)		(133,7	
Payments for contract adjustments for commercial aircraft jet engines (Note 17)		(2,505)	(100,)	_
Other	(9,857)	(9,513)	(88,7	70/
Total non-operating expenses	(32,858)	(21,830)	(295,9	
Ordinary profit	37,861	43,225	341,0	
	57,801	43,223		
Extraordinary income		2.525		
Gain on sales of non-current assets (Note 18)		2,606		_
Total extraordinary income		2,606		
Extraordinary losses				
Loss from termination of a shipbuilding contract for an offshore service vessel (Note 19)		(12,833)		_
Total extraordinary losses		(12,833)		-
Profit before income taxes (Note 22)	37,861	32,999	341,0	)59
Income taxes-current	(16,704)	(11,634)	(150,4	173
Income taxes-deferred	8,681	9,982	78,2	200
Total income taxes	(8,022)	(1,652)	(72,2	264
Profit	29,838	31,347	268,7	/87
Profit attributable to non-controlling interests	2,385	2,431	21,4	185
Profit attributable to owners of parent	¥ 27,453	¥ 28,915	\$ 247,3	302

The accompanying notes to the consolidated financial statements are an integral part of these statements.

	Millions c	of yen	U.S. (	ands of dollars ote 1)
	2019	2018		2019
Profit	¥29,838	¥31,347	\$26	58,787
Other comprehensive income (loss):				
Net unrealized gains (losses) on securities	(864)	338		(7,783)
Deferred gains (losses) on hedges	(675)	1,616		(6,081)
Foreign currency translation adjustments	(796)	(1,085)		(7,171)
Remeasurements of defined benefit plans	549	5,170		4,946
Share of other comprehensive income of entities accounted for using equity method	(4,867)	2,296	(4	43,843)
Total other comprehensive income (loss) (Note 20)	(6,654)	8,336	(!	59,941)
Comprehensive income	23,183	39,683	20	08,837
Comprehensive income attributable to:				
Owners of the parent company	21,220	37,015	19	91,154
Non-controlling interests	¥ 1,962	¥ 2,668	\$ 1	17,674
	Yen			dollars ote 1)
	2019	2018	20	019
Per share amounts (Notes 21 and 24)				
Net income per share-basic	¥ 164.3	¥ 173.1	\$	1.48
Cash dividends	65.0	5.0		0.59

The accompanying notes to the consolidated financial statements are an integral part of these statements.

# **Consolidated Statements of Changes in Net Assets**

KAWASAKI HEAVY INDUSTRIES, LTD. AND CONSOLIDATED SUBSIDIARIES For the years ended March 31, 2019 and 2018

							I	Millions of ye	n				
			Shareholde	ers' equity			A	ccumulated c	ther compret	nensive income	2		
	Number of shares of common stock (Thousands)	Common stock	Capital surplus	Retained earnings	Treasury stock	Total shareholders' equity	Net unrealized gains (losses) on securities, net of tax	gains (losses)	Foreign currency translation adjustments	for	Total accumulated other comprehensive income	•	Total net assets
Balance at March 31, 2017	167,080	¥104,484	¥54,393	¥287,448	¥ (96)	¥446,230	¥3,232	¥(1,182)	¥ (341)	¥(10,692)	¥(8,983)	¥14,080	¥451,327
Net income for the year		_	_	28,915	_	28,915	_	_	_	_	_	_	28,915
Treasury stock purchased, net	_	_	_	_	(28)	(28)	_	_	_	_	_	_	(28
Cash dividends	_	_	_	(8,352)	_	(8,352)	_	_	_	_	_	_	(8,352)
Loss on sales of treasury stock		_	(0)	_	0	0	_	_	_	_	_	_	0
Capital increase of consolidated subsidiaries	_	_	179	_	_	179	_	_	_	_	_	_	179
Other	_	-	_	_	-	_	293	1,585	1,060	5,160	8,099	1,244	9,344
Balance at March 31, 2018	167,080	¥104,484	¥54,573	¥308,010	¥(124)	¥466,944	¥3,526	¥ 403	¥ 719	¥ (5,532)	¥ (883)	¥15,324	¥481,386
Net income for the year		_	_	27,453	-	27,453	_	-	-	_	-	-	27,453
Treasury stock purchased, net	_	-	_	-	(7)	(7)	_	_	_	_	_	_	(7
Cash dividends	-	-	_	(10,858)	_	(10,858)	_	_	_	_	_	_	(10,858
Loss on sales of treasury stock	-	-	(0)	_	1	1	_	_	_	_	_	_	1
Transfer of loss on sales of treasury stock	-	-	0	(0)	-	_	_	_	_	_	_	_	_
Capital increase of consolidated subsidiaries	-	-	(30)	-	_	(30)	_	_	_	_	_	_	(30)
Other		_	_	-	_	_	(843)	(630)	(5,275)	517	(6,232)	549	(5,683)
Balance at March 31, 2019	167,080	¥104,484	¥54,542	¥324,606	¥(130)	¥483,502	¥2,682	¥ (227)	¥(4,556)	¥ (5,014)	¥(7,115)	¥15,874	¥492,261

		Thousands of U.S. dollars										
		Shareholders' equity					Accumulated other comprehensive income					
	Common stock	Capital surplus	Retained earnings	Treasury stock	Total shareholders' equity	Net unrealized gains (losses) on securities, net of tax	Deferred gains (losses) on hedges	Foreign currency translation adjustments	Accumulated adjustments for retirement benefits	Total accumulated other comprehensive income	Non-controlling interests	Total net assets
Balance at March 31, 2018	\$941,213	\$491,604	\$2,774,615	\$(1,117)	\$4,206,324	\$31,763	\$ 3,630	\$ 6,477	\$(49,833)	\$ (7,954)	\$138,042 \$	54,336,420
Net income for the year		-	247,302	-	247,302	-	-	-	_	-	_	247,302
Treasury stock purchased, net		-	_	(63)	(63)	-	-	-	-	_	-	(63)
Cash dividends	_	-	(97,811)	) –	(97,811)	_	-	_	_	_	-	(97,811)
Loss on sales of treasury stock	_	(0)	-	9	9	-	-	-	-	-	-	9
Transfer of loss on sales of treasury stock	_	0	(0)	) –	-	-	-	-	-	-	-	-
Capital increase of consolidated subsidiaries	_	(270)	-	-	(270)	-	_	-	-	-	-	(270)
Other		-	-	-	_	(7,594)	(5,675)	) (47,518)	) 4,657	(56,139)	4,946	(51,194)
Balance at March 31, 2019	\$941,213	\$491,325	\$2,924,115	\$(1,171)	\$4,355,481	\$24,160	\$(2,045)	) \$(41,041)	) \$(45,167)	\$(64,093)	\$142,996 \$	54,434,384

The accompanying notes to the consolidated financial statements are an integral part of these statements.

# **Consolidated Statements of Cash Flows**

KAWASAKI HEAVY INDUSTRIES, LTD. AND CONSOLIDATED SUBSIDIARIES For the years ended March 31, 2019 and 2018

	Millions	of yen	U.S. dollars (Note 1)
	2019	2018	2019
Cash flows from operating activities:			
Profit before income taxes	¥ 37,861	¥ 32,999	\$ 341,059
Depreciation	59,022	56,137	531,682
Increase (decrease) in allowance for doubtful accounts	(667)	1,093	(6,008
Increase (decrease) in provision for bonuses	1,245	(387)	11,215
Increase (decrease) in provision for construction warranties	100	814	901
Increase (decrease) in provision for loss on construction contracts	9,336	11,029	84,101
Increase (decrease) in retirement benefit liability	11,982	13,324	107,936
Increase (decrease) in provision for the in-service issues of commercial aircraft jet engines	11,468	_	103,306
Interest and dividend income	(1,203)	(1,011)	(10,837
Interest expenses	3,427	2,794	30,871
Share of loss (profit) of entities accounted for using equity method	(1,574)	(4,492)	(14,179
Loss (gain) on sales of non-current assets	_	(2,606)	-
Losses from the termination of a shipbuilding contract for an offshore service vessel	_	12,833	-
Decrease (increase) in notes and accounts receivable—trade	58,985	(35,516)	531,349
Decrease (increase) in inventories	(65,383)	(26,443)	(588,983
Increase (decrease) in notes and accounts payable—trade	6,829	21,569	61,517
Decrease (increase) in advance payments	1,202	6,103	10,828
Increase (decrease) in advances received	(14,013)	(10,092)	(126,232
Decrease (increase) in other current assets	(1,557)	(22,937)	(14,026
Increase (decrease) in other current liabilities	2,299	8,644	20,710
Other, net	1,192	(789)	10,738
Subtotal	120,553	63,066	1,085,965
Interest and dividend income received	3,859	4,166	34,763
Interest expenses paid	(3,439)	(2,795)	(30,979
Income taxes paid	(11,211)	(8,386)	(100,991

	Millions of yen		Thousan U.S. dol (Note
	2019	2018	2019
Cash flows from investing activities:			
Purchase of property, plant and equipment and intangible assets	¥ (82,836)	¥ (82,238)	\$ (746,
Proceeds from sales of property, plant and equipment and intangible assets	605	6,452	5,
Purchase of investment securities	(1,025)	(512)	(9,
Proceeds from sales of investment securities	989	342	8,
Purchase of shares of subsidiaries and associates	(3,818)	(3,408)	(34,
Other, net	741	(1,226)	6,
Net cash provided by (used in) investing activities	¥ (85,344)	¥ (80,590)	\$ (768,
Cash flows from financing activities:			
Net increase (decrease) in short-term loans payable	¥ (10,866)	¥ 16,363	\$ (97,
Proceeds from long-term loans payable	34,772	64,363	313,
Repayments of long-term loans payable	(30,709)	(42,694)	(276,
Proceeds from issuance of bonds	20,000	20,000	180,
Redemption of bonds	(20,000)	(10,000)	(180,
Cash dividends paid	(10,868)	(8,375)	(97,
Dividends paid to non-controlling interests	(1,950)	(1,433)	(17,
Other, net	(149)	(454)	(1,
Net cash provided by (used in) financing activities	¥ (19,771)	¥ 37,770	\$ (178,
Effect of exchange rate change on cash and cash equivalents	(696)	410	(6,
Net increase (decrease) in cash and cash equivalents	3,949	13,640	35,
Cash and cash equivalents at beginning of period	64,362	50,722	579,
Cash and cash equivalents at end of period	¥ 68,311	¥ 64,362	\$ 615,
Supplemental information on cash flows:			
Cash and cash equivalents:			
Cash and deposits in the balance sheets	¥ 74,311	¥ 70,632	\$ 669,
Time deposits with maturities over three months	(6,000)	(6,269)	(54,
Total (Note 23)	¥ 68,311	¥ 64,362	\$ 615,

# Notes to the Consolidated Financial Statements

KAWASAKI HEAVY INDUSTRIES, LTD, AND CONSOLIDATED SUBSIDIARIES

#### 1.

#### Basis of presenting consolidated financial statements

The accompanying consolidated financial statements of Kawasaki Heavy Industries, Ltd. (the "Company") and its consolidated subsidiaries (together the "Companies") have been prepared from the financial statements filed with the Prime Minister as required by the Financial Instruments and Exchange Act in Japan and in accordance with accounting principles generally accepted in Japan ("Japanese GAAP"), which are different in certain respects as to the application and disclosure requirements from International Financial Reporting Standards. Certain reclassifications have been made in the accompanying consolidated financial statements to facilitate understanding by readers outside Japan.

The translations of the Japanese yen amounts into U.S. dollar amounts are included solely for the convenience of readers outside Japan, using the prevailing exchange rate at March 31, 2019, which was ¥111.01 to U.S.\$1.00. The translations should not be construed as representations that the Japanese yen amounts have been, could have been or could in the future be converted into U.S. dollars at this or any other rate of exchange. As permitted, fractional amounts have not been adjusted.

### 2.

Significant accounting policies

### (a) Principles of consolidation

The accompanying consolidated financial statements include the accounts of the Company and significant companies over which the Company has power of control through majority voting rights or the existence of certain other conditions evidencing control. The consolidated financial statements include the accounts of the Company and 94 subsidiaries (93 in the year ended March 31, 2018). The aggregate amount of total assets, net sales, profit and retained earnings of the excluded subsidiaries would not have had a material effect on the consolidated financial statements if they had been included in the consolidation.

### (b) Application of the equity method of accounting

Investments in nonconsolidated subsidiaries and affiliates over which the Company has the ability to exercise significant influence over operating and financial policies are accounted for by the equity method. For the year ended March 31, 2019, 17 affiliates (17 in 2018) were accounted for by the equity method. For the year ended March 31, 2019, investments in 10 affiliates (13 in 2018) were stated at cost without applying the equity method of accounting. If the equity method had been applied for these investments, the profit and retained earnings of these excluded subsidiaries and affiliates would not have had a material effect on the consolidated financial statements.

### (c) Consolidated subsidiaries' fiscal year-end

For the year ended March 31, 2019, the fiscal year-end of 30 consolidated subsidiaries (29 in 2018) was December 31. These subsidiaries were consolidated as of December 31, and significant transactions for the period between December 31 and March 31, the Company's fiscal year-end, were adjusted for on consolidation.

### (d) Foreign currency translations

Receivables and payables denominated in foreign currencies are translated into Japanese yen at year-end rates. The balance sheets of the consolidated overseas subsidiaries are translated into Japanese yen at year-end rates, except for shareholders' equity accounts, which are translated at historical rates. The income statements of the consolidated overseas subsidiaries are translated at average rates. The Company and its domestic subsidiaries report foreign currency translation adjustments in net assets.

# (e) Revenue recognition

<Sales of products and construction contracts> The percentage-of-completion method is applied to construction contracts if the outcome of the construction activity is deemed certain during the period of the activity. Otherwise, the completed contract method is applied.

#### (f) Cash and cash equivalents

Cash on hand, readily available deposits and short-term highly liquid and low risk investments with maturities not exceeding three months at the time of purchase are considered to be cash and cash equivalents in preparing the consolidated statements of cash flows.

# (g) Allowance for doubtful receivables

An allowance for possible losses from notes and accounts receivable, loans and other receivables is provided based on past experience and the Companies' estimates of losses on collection.

# (h) Assets and liabilities arising from derivative transactions

Assets and liabilities arising from derivative transactions are stated at fair value.

## (i) Inventories

Inventories are stated mainly at historical cost computed using the specific identification cost method, the moving average cost method or the first-in, first-out method. The ending balance of inventories is measured at the lower of cost or market.

#### (j) Investment securities

The Company and its consolidated subsidiaries classify securities as (a) debt securities intended to be held to maturity (hereafter, "held-to-maturity debt securities"), (b) equity securities issued by subsidiaries and affiliated companies and (c) all other securities (hereafter, "available-for-sale securities"). There were no trading securities at March 31, 2019 or 2018. Held-to-maturity debt securities are stated mainly at amortized cost. Equity securities issued by subsidiaries and affiliated companies which are not consolidated or accounted for using the equity method are stated at moving average cost. Available-for-sale securities with available fair market values are stated at fair market value. Unrealized gains and unrealized losses on these securities are reported, net of applicable income taxes, as a separate component of net assets. Realized gains and losses on the sale of such securities are computed using moving average cost. Other securities with no available market value are stated at moving average cost.

If the market value of held-to-maturity debt securities, equity securities issued by nonconsolidated subsidiaries or affiliated companies or available-for-sale securities declines significantly, such securities are stated at market value, and the difference between the market value and the carrying amount is recognized as loss in the period of the decline. If the market value of equity securities issued by a nonconsolidated subsidiary or affiliated company not subject to the equity method is not readily available, the securities should be written down to net asset value with a corresponding charge in the statements of income in the event the net asset value declines significantly. In these cases, the market value or the net asset value will be the carrying amount of the securities at the beginning of the next year.

### (k) Property, plant and equipment

Property, plant and equipment are stated at cost. Depreciation is computed mainly by the straight-line method over the estimated useful life of the asset.

## (I) Intangible assets

Amortization of intangible assets, including software for the Company's own use, is computed by the straight-line method over the estimated useful life of the asset.

An equivalent amount of goodwill is amortized by the straight-line method over the period the Company benefits from its use. If the amount is not significant, it is expensed when incurred.

## (m) Provision for bonuses

Accrued bonuses for employees are provided for based on the estimated amount of payment.

# (n) Provision for construction warranties

The provision for construction warranties is based on past experience or provided separately when it can be reasonably estimated.

# (o) Provision for losses on construction contracts

A provision for losses on construction contracts at the fiscal year-end is made when substantial losses are anticipated for the next fiscal year and beyond and such losses can be reasonably estimated.

#### (p) Provision for the in-service issues of commercial aircraft jet engines

Of the costs related to the significant in-service issues of commercial aircraft jet engines that arose in the Rolls-Royce Trent 1000 engine program, in which the Company participates as a risk and revenue sharing partner, the Company has made a provision for the abnormal costs related to the in-service issues which the Company would cover as a member of this program.

## (g) Retirement benefit liability

Employees who terminate their services with the Company or some consolidated domestic subsidiaries are generally entitled to lump-sum payments, the amounts of which are determined by reference to basic rates of pay at the time of termination and length of service.

The liabilities and expenses for retirement and severance benefits are determined based on amounts actuarially calculated using certain assumptions. The Company and its consolidated domestic subsidiaries provide the allowance for employees' retirement and severance benefits based on the estimated amounts of projected benefit obligation and the fair value of plan assets, including assets in the retirement benefit trust.

Actuarial gains and losses and prior service costs are charged to income on a straight-line basis primarily over 10 years commencing with the following period and the current period, respectively. With regard to previously unrecognized actuarial gains and losses and unrecognized prior services costs, after adjusting for tax effects, the Company records any accumulated adjustment for retirement benefits as part of accumulated other comprehensive income within net assets.

In calculating retirement benefit obligations, the Company uses a benefit formula basis to attribute expected benefits to periods of service.

Employees of the Company's overseas consolidated subsidiaries are generally covered by various pension plans accounted for in accordance with generally accepted accounting principles in the respective country of domicile.

#### (r) Hedge accounting

The Company and its consolidated subsidiaries employ deferred hedge accounting. If derivative financial instruments are used as hedges and meet certain hedging criteria, the Company and its consolidated subsidiaries defer recognition of gain or loss resulting from a change in the fair value of the derivative financial instrument until the related loss or gain on the hedged item is recognized.

### (s) Finance leases

Lease assets under finance leases that transfer ownership of the lease assets to the lessee are amortized by the same method as that used for property, plant and equipment and intangible assets. Lease assets under finance leases that do not transfer ownership of the lease assets to the lessee are amortized by the straight-line-method over the lease term with zero residual value.

# (t) Accounting for consumption taxes

National and local consumption taxes are accounted for based on the net amount.

## (u) Application of consolidated tax reporting

tax return.

3.

Accounting standards issued but not yet adopted

# The following guidance was issued but not yet adopted.

# 1. The Company and its affiliated companies

Guidance No. 30. March 30. 2018)

# (a) Overview

The International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) initiated a joint project to develop a comprehensive accounting standard for revenue recognition. In May 2014, the Boards published "Revenue from Contracts with Customers" (IFRS 15 for the IASB; Topic 606 for the FASB). IFRS 15 is effective from January 1, 2018, and Topic 606 is applied from fiscal years beginning after December 15, 2017. In response to these developments, the ASBJ developed a comprehensive accounting standard related to revenue recognition and published this standard together with its implementation guidance.

# (b) Effective date

Effective from the beginning of the fiscal year ending March 31, 2022.

# (c) Effects of application of the standards

The Company and its consolidated domestic subsidiaries are currently in the process of determining the effect Topic 606, "Revenue from Contracts with Customers", will have on the consolidated financial statements.

# 2. Affiliated companies in the United States

• Topic 606 "Revenue from Contracts with Customers"

### (a) Overview

The Financial Accounting Standards Board (FASB) has developed a comprehensive accounting standard for revenue recognition. In May 2014, Topic 606 "Revenue from Contracts with Customers" was announced. Topic 606 is applied from fiscal years beginning after December 15, 2017.

### (b) Effective date

Scheduled to be applied from the start of the fiscal year ending March 31, 2020.

The Company and its wholly owned consolidated domestic subsidiaries file a consolidated

• "Accounting Standard for Revenue Recognition" (ASBJ Statement No. 29, March 30, 2018) • "Implementation Guidance on Accounting Standard for Revenue Recognition" (ASBJ

# (c) Effects of application of the standards

The application of this accounting standard is expected to result in a decrease in retained earnings of approximately ¥4,900 million (\$44,140 thousand) on the date that the application begins.

Topic 842 "Leases"

# (a) Overview

These accounting standards require a lessee to recognize assets or liabilities generally for all leases on the balance sheet, whereas no significant changes were made in the accounting for a lessor.

# (b) Effective date

Scheduled to be applied from the start of the fiscal year ending March 31, 2021.

## (c) Effects of application of the standards

The Company is currently in the process of determining the effects of the application of Topic 842 "Leases" on the consolidated financial statements.

### 4.

Work in process

A trust was established for the Company's accounts receivable - trade generated in selling certain work in process using a self-settled trust. The Company has a beneficiary interest in the accounts receivable - trade as trust assets. The work in process related to the trust assets as of March 31, 2019 and 2018 amounted to ¥4,926 million (\$44,374 thousand) and ¥2,468 million, respectively.

#### 5.

Securities

(a) Acquisition costs and book values (market values) of available-for-sale securities with available market values as of March 31, 2019 and 2018 were as follows:

			2019		
		Millions of yen			
	Book value	Acquisition L cost	Inrealized gains (losses)	Unrealized gains (losses)	
Securities with book values exceeding acquisition costs:					
Equity securities	¥8,008	¥3,488	¥4,519	\$40,708	
Other securities:					
Equity securities	131	141	(9)	(81)	
Total	¥8,140	¥3,629	¥4,510	\$40,627	
		2018			
		Millions of y	ren		
	Book value	Acquisition L cost	Inrealized gains (losses)		
Securities with book values exceeding acquisition costs:					
Equity securities	¥8,996	¥3,208	¥5,788		
Other securities:					
Equity securities	390	407	(16)		
Total	¥9,387	¥3,615	¥5,771		

# years ended March 31, 2019 and 2018 were as follows:

			2019		
M	illions of yer	1	Thous	ands of U.S. do	ollars
Sales amounts	Gains	Losses	Sales amounts	Gains	Losses
¥965	¥862	¥–	\$8,693	\$7,765	\$-
	2018				
M	illions of yer	1	_		
Sales amounts	Gains	Losses			
¥324	¥ 48	¥(1)			
	Sales amounts ¥965 M Sales amounts	Sales amounts Gains ¥965 ¥862 2018 Millions of yer Sales amounts Gains	Millions of yen         Sales amounts       Gains       Losses         ¥965       ¥862       ¥-         2018       Millions of yen       Sales amounts       Gains       Losses	Millions of yen     Thousa       Sales amounts     Gains     Losses     Sales amounts       ¥965     ¥862     ¥–     \$8,693       2018     Millions of yen     Millions of yen       Sales amounts     Gains     Losses	Sales amounts     Gains     Losses     Sales amounts     Gains       ¥965     ¥862     ¥–     \$8,693     \$7,765       2018

(c) Investment securities subject to impairment

Impairment loss on investment securities is recognized when there has been a significant decline in the market value. Investment securities for which the market value as of the end of the fiscal year has fallen to below 50% of the acquisition costs are deemed to have no recovery potential and to be impaired. Investment securities for which the market value has fallen to between 30% and 50% of the acquisition costs are deemed to be partially impaired by an amount that takes into consideration the likelihood of recovery and other factors.

## 6.

solidated subsidiaries and affiliates

**Investments in noncon-** Investments in nonconsolidated subsidiaries and affiliates as of March 31, 2019 and 2018 were ¥76,214 million (\$686,551 thousand) and ¥78,314 million, respectively.

#### 7.

Claim for damages in overseas LNG tank construction work

In connection with a certain liquefied natural gas (LNG) tank construction project carried out by the Company overseas, the Company filed a petition for arbitration with The International Chamber of Commerce (ICC) during the fiscal year under review concerning losses sustained by the Company due to breach of contract by an overseas construction subcontractor. The Company plans to recover the amount of loss (approximately ¥51,000 million (\$459,418 thousand)) in connection with this matter through future arbitration and has recorded a portion of the expected amount in "Others" under "Investments and other assets."

(b) Sales amounts of available-for-sale securities and related realized gains and losses for the

2040

Although impairment loss on other securities was recorded for the years ended March 31, 2019 and 2018, disclosure was omitted as the amounts were immaterial.

8.

Short-term debt and

long-term debt

	Millions of yen		Thousands o U.S. dollars	
	2019	2018		2019
Short-term debt:				
Short-term loans payable, principally bank loans, bearing average interest rates of 1.58% and 1.01% as of March 31, 2019 and 2018, respectively	¥ 71,698	¥ 82,798	\$	645,870
Current portion of long-term loans payable, bearing average interest rates of 0.50% and 0.39% as of March 31, 2019 and 2018, respectively	28,324	26,179		255,148
Current portion of bonds, bearing average interest rates of 0.68% and 0.34-0.57% as of March 31, 2019 and 2018, respectively.	10,000	20,000		90,082
Lease obligations, current	319	283		2,874
Total short-term debt	¥110,342	¥129,261	\$	993,983
Long-term debt:				
Loans from banks and other financial institutions, partly secured by mortgage or other collateral, due from 2019 to 2029, bearing average interest rates of 0.48% and 0.49% as of March 31, 2019 and 2018, respectively.	¥215,892	¥211,864	\$1	,944,798
Notes and bonds issued by the Company:				
0.34-0.57% notes due in 2018	-	20,000		_
0.68% notes due in 2019	10,000	10,000		90,082
0.32-0.99% notes due in 2020	20,000	20,000		180,164
0.10-1.42% notes due in 2021	30,000	30,000		270,246
0.15-1.10% notes due in 2022	20,000	20,000		180,164
0.18-0.99% notes due in 2023	20,000	10,000		180,164
0.79% notes due in 2024	10,000	10,000		90,082
0.85% notes due in 2025	10,000	10,000		90,082
0.40% notes due in 2028	10,000	-		90,082
0.82% notes due in 2036	10,000	10,000		90,082
0.90% notes due in 2037	10,000	10,000		90,082
Long-term lease obligations	1,832	1,980		16,503
	367,724	363,844	3	,312,530
Less portion due within one year	(38,643)	(46,462)		(348,104
Total long-term debt	¥329,081	¥317,382	\$2	,964,427

As of March 31, 2019 and 2018, the following assets were pledged as collateral for shortterm debt and long-term debt:

	Millions	Millions of yen	
	2019	2018	2019
Buildings and structures	¥ 61	¥ 65	\$ 550
Investments in securities	17	17	153
Other	80	80	721
Total	¥158	¥162	\$1,423

As of March 31, 2019 and 2018, debt secured by the above pledged assets was as follows: Thousands of

Millions	U.S. dollars		
2019	2018	2019	
¥ 3	¥ 2	\$ 27	
18	53	162	
¥21	¥56	\$189	
	2019 ¥ 3 18	¥ 3         ¥ 2           18         53	

IVIIIIOIIS OF YEIT	Thousands of U.S. dollars	
¥ 38,643	\$ 348,104	
43,710	393,748	
47,399	426,980	
40,102	361,247	
197,870	1,782,452	
¥367,724	\$3,312,530	
	43,710 47,399 40,102 197,870	

9.

### Provision for losses on construction contracts

Inventories for construction contracts with substantial anticipated losses and the provision for losses on construction contracts were not offset. As of March 31, 2019 and 2018, the inventories for the construction contracts for which the provision for losses on construction contracts were provided were ¥20,881 million (\$188,100 thousand) and ¥15,590 million, respectively. These amounts were all included in work in process.

As of March 31, 2018, in a certain liquefied natural gas (LNG) tank construction project carried out by the Company overseas, the total cost has increased to a level higher than the original estimate. The causes of this cost increase include the nonfulfillment of a contract by an overseas construction subcontractor. The Company has calculated a provision for losses on construction contracts after deducting a part of the future damages claim amount in relation to losses sustained by the Company owing to the breach of contract by the aforementioned subcontractor from the total cost estimate for the project.

10.

# and severance benefits

**Employees' retirement** 1. The Company and its domestic consolidated subsidiaries have a system of retirement and severance lump-sum payments for employees. The Company and certain consolidated subsidiaries also have a defined contribution pension plan and a cash balance plan (pension plan linked to market interest rates). A portion of the existing retirement and severance benefits are funded. Certain consolidated subsidiaries have a retirement pension plan. The Company has an employees' retirement benefit trust. The Company and certain consolidated subsidiaries made changes to their system of retirement and severance lump-sum payments for employees. As a result, the Company incurred prior service cost (increase in obligation). The gain on contribution of securities to the employees' retirement benefit trust was attributable to the contribution of holdings of investments in securities to the employees.

(1) Reconciliation of beginning-of-period and end-of-period balances of retirement benefit

obligation

	Millions of yen		Thousands of U.S. dollars
	2019	2018	2019
Balance of retirement benefit obligations at beginning of period	¥194,948	¥191,472	\$1,756,130
Service cost	11,526	10,773	103,828
Interest cost	1,848	1,943	16,647
Actuarial gains and losses	3,168	1,391	28,538
Retirement benefits paid	(9,564)	(9,399)	(86,154)
Prior service cost	81	55	730
Other (foreign currency translation difference, etc.)	(524)	(1,288)	(4,720)
Balance of retirement benefit obligations at end of period	¥201,484	¥194,948	\$1,815,008

The aggregate annual maturities of long-term debt as of March 31, 2019 were as follows:

2. Defined benefit plans (including plans that apply a simplified method)

(2) Reconciliation of beginning-of-period and end-of-period balances of plan assets

	Millions	Thousands of U.S. dollars	
	2019	2018	2019
Balance of plan assets at beginning of period	¥108,200	¥109,995	\$974,687
Expected return on plan assets	1,252	1,167	11,278
Actuarial gains and losses	(1,589)	2,539	(14,314)
Contributions paid by the employer	3,918	3,797	35,294
Retirement benefits paid	(6,869)	(7,541)	(61,877)
Other (foreign currency translation difference, etc.)	(937)	(1,756)	(8,441)
Balance of plan assets at end of period	¥103,976	¥108,200	\$936,636

(3) Reconciliation between end-of-period balance of retirement benefit obligations and plan assets to liabilities and retirement benefit liability and retirement benefit asset presented on the consolidated balance sheets

	Millions of yen		Thousands of U.S. dollars	
	2019	2018		2019
Retirement benefit obligations on funded plan	¥174,251	¥169,362	\$1	,569,687
Plan assets	(103,976)	(108,200)		(936,636)
	70,275	61,162		633,051
Retirement benefit obligations on unfunded plan	27,232	25,585		245,311
Net amount of liabilities and assets presented on the consolidated balance sheets	97,508	86,747		878,371
Liability for retirement benefits	97,602	86,836		879,218
Asset for retirement benefits	(93)	(88)		(838)
Net amount of liabilities and assets presented on the consolidated balance sheets	¥ 97,508	¥ 86,747	\$	878,371

#### (4) Breakdown of retirement benefit expense

	Millions of yen		Thousands of U.S. dollars	
	2019	2018	2019	
Service cost	¥11,526	¥10,773	\$103,828	
Interest cost	1,848	1,943	16,647	
Expected return on plan assets	(1,252)	(1,167)	(11,278)	
Amortization of actuarial gains and losses	4,624	6,791	41,654	
Amortization of prior service costs	464	353	4,180	
Retirement benefit expense related to defined benefit plan	¥17,210	¥18,694	\$155,031	

(5) Adjustments for retirement benefits

Adjustments for retirement benefits (before tax effects) comprised the following:

	Millions of yen		Thousands of U.S. dollars	
	2019	2018	2019	
Prior service cost	¥382	¥ 298	\$3,441	
Actuarial gains and losses	(133)	7,939	(1,198)	
Total	¥249	¥8,237	\$2,243	

# (6) Accumulated adjustments for retirement benefits the following:

	Millions	Millions of yen	
	2019	2018	2019
Unrecognized prior service cost	¥(1,482)	¥(1,864)	\$(13,350)
Unrecognized actuarial gains and losses	(5,979)	(5,846)	(53,860)
Total	¥(7,462)	¥(7,711)	\$(67,219)

### (7) Plan assets

(i) Main breakdown of plan assets

	2019	2018
Bonds	20%	18%
Equities	66%	70%
Cash and deposits	1%	1%
Others	13%	11%
Total	100%	100%

Note: As of March 31, 2019 and 2018, the employees' retirement benefit trust established as part of the retirement benefit plan is included in the plan assets and represented a 56% and 60% portion of the plan assets, respectively.

- (ii) Method for setting long-term expected rate of return plan assets.
- (8) Underlying actuarial assumptions were as follows: (presented as the compound average)

	2019	2018
Discount rate	0.33-3.76%	0.40-3.87%
Long-term expected rate of return on plan assets	0.00-5.75%	0.00-6.00%
Rate of compensation increase	6.50-7.20%	6.50-7.20%

3. Defined contribution plan thousand) and ¥2,212 million, respectively.

### 11.

The provision for the in-service issues of commercial aircraft jet engines

The Company participates as a risk and revenue sharing partner on the Rolls-Royce Trent 1000 engine program, which has been impacted by the challenge of managing significant in-service issues. Rolls-Royce continues to work hard to remedy this situation and has made further substantial progress on the implementation of long-term solutions and mitigation of the near-term impact on customers. In the FY2018 financial results, the Company has made a provision of the abnormal cost related to in-service issues which the Company would cover as a member of this program.

Accumulated adjustments for retirement benefits (before tax effects) comprised

The breakdown of main asset categories as a percentage of total plan assets is as follows:

To determine the expected rate of return on plan assets, the Company takes into account the current and expected allocation of plan assets and the expected present and future long-term rate of return on the diverse range of assets that makes up the

The main underlying actuarial assumptions as of March 31, 2019 and 2018, respectively,

As of March 31, 2019 and 2018, the required contribution by the Company and its consolidated subsidiaries to the defined contribution plan was ¥2,372 million (\$21,367

12.			
Contingent liabilities	Contingent liabilities as of March 31, 2019 and 2018 w	ere as follows:	
		Millions	of yen
		2019	2018
	As guarantor of indebtedness of employees, nonconsolidated subsidiaries, affiliates and others	¥24,384	¥21,786

# 13.

Net assets

Under the Japanese Corporate Law ("the Law"), the entire amount paid for new shares is required to be designated as common stock. However, a company may, by a resolution of the Board of Directors, designate an amount not exceeding one half of the price of the new shares as capital reserve, which is included in capital surplus. Under the Law, if a dividend distribution of surplus is made, the smaller of an amount equal to 10% of the dividend or the excess, if any, of 25% of common stock over the total of capital reserve and legal earnings reserve must be set aside as capital reserve or legal earnings reserve. Legal earnings reserve is included in retained earnings in the accompanying consolidated balance sheets. Under the Law, legal earnings reserve and capital reserve can be used to eliminate or reduce a deficit or capitalized by a resolution of the shareholders' meeting.

Capital reserve and legal earnings reserve may not be distributed as dividends. Under the Law, all capital reserve and all legal earnings reserve may be transferred to other capital surplus and retained earnings, respectively, which are potentially available for dividends. The maximum amount that the Company can distribute as dividends is calculated based on

the nonconsolidated financial statements of the Company in accordance with the Law.

### 14.

Cost of sales

The ending balance of inventories was measured at the lower of cost or market. Gain on the valuation of inventories included in the cost of sales for the year ended March 31, 2019 was ¥1,645 million (\$14,818 thousand). Gain on the valuation of inventories included in the cost of sales for the years ended March 31, 2018 was ¥3,434 million.

Provision for losses on construction contracts included in the cost of sales for the years ended March 31, 2019 and 2018 was ¥14,451 million (\$130,177 thousand) and ¥23,718 million, respectively.

# 15.

Research and Research and development expenses included in selling, general and administrative expensdevelopment expenses es and product costs were as follows:

	Millions	of yen	Thousands of U.S. dollars
	2019	2018	2019
Research and development expenses	¥48,734	¥45,434	\$439,005

# The payments for the in-service issues of commercial aircraft jet engines in the non-operating expenses. 17. Payments for contract adjustment for commercial aircraft jet engines program expenses as non-operating expenses. 18. Gain on sales of property, plant and equipment 19. Losses from the termination of a shipbuilding

contract for an offshore service vessel

16.

Thousands of U.S. dollars

2019

\$219,656

These are losses in conjunction with the termination of a shipbuilding contract for an offshore service vessel (losses recognized on valuation of inventories and accounts receivable-trade, etc.).

In November 2013, with the intention of entering the offshore development industry, which is a promising market over the medium to long term, the Company entered into a shipbuilding agreement for an offshore service vessel with a subsidiary\* of Island Offshore Shipholding LP (hereinafter, "Island Offshore"). This was the first vessel of its type to be constructed by the Company, and certain problems during the engineering stage arose along with an increase in the cost of materials and other issues.

From the time the order for this vessel was received, the stagnation in crude oil prices led to a very difficult business environment for offshore service providers in general, and Island Offshore began negotiating financial restructuring with its banking partners from November 2016.

Given the above circumstances, the Company proceeded cautiously, including temporarily suspending the construction of the vessel, while paying close attention to the progress of the financial restructuring of Island Offshore. During this time, the Company was holding discussions with Island Offshore regarding the handling of the vessel. Based on the shared understanding that the environment surrounding the offshore service business remained challenging and that uncertainty about the future could not be eliminated, the Company and Island Offshore agreed to terminate the shipbuilding agreement, and the Company therefore carried out the necessary accounting treatment.

\*Island Navigator I KS (100% subsidiary company of Island Offshore Shipholding LP)

# 12

The Company participates as a risk and revenue sharing partner on the Rolls-Royce Trent 1000 engine program, which has been impacted by the challenge of managing significant in-service issues. Rolls-Royce continues to work hard to remedy this situation and has made further substantial progress on the implementation of long-term solutions and mitigation of the near-term impact on customers. In the FY2018 financial results, the Company has made a provision of the abnormal cost related to in-service issues which the Company would cover as a member of this program. The provision was included with-

The Company faced one-time expenses in connection with contracts with customers related to engine programs in which the Company was participating. These expenses arose from the new requirement to allocate a portion of the engines planned to be delivered to customers for use as spare engines for operational supports. Accordingly, the Company recorded these

Gain on sales of property, plant and equipment for the fiscal year ended March 31, 2018 was due to the sale of the land and building of company dormitories, houses, etc.

# Year ended March 31, 2018

# Kind of Resolution shares June 28, 2017 Common stock General Meeting of Shareholders September 20, 2017 Common stock Board of Directors Meeting (\*) October 1, 2017 and date of record of September 30, 2017. date in the succeeding consolidated fiscal year Year ended March 31, 2019 Kind of Sc Resolution shares di June 26, 2019 Re Common General Meeting of stock ea Shareholders Year ended March 31, 2018 Kind of Sc Resolution shares d June 27, 2018 Common Re General Meeting stock ea of Shareholders for the years ended March 31, 2019 and 2018, respectively. ended March 31, 2019 and 2018 were as follows: Statutory tax rate Valuation reserve Equity in income of nonconsolidated sub Changing tax rate Tax credit for research and development Elimination of unrealized profits Other Effective tax rate

22.

June 28,

2018

2018

Income taxes

# Consolidated statement of

Amounts reclassified to profit (loss) in the current period that were recognized in other comprehensive income in the current or previous periods and the tax effects for each compocomprehensive income nent of other comprehensive income were as follows:

	Millions of yen		Thousands of U.S. dollars
	2019	2018	2019
Unrealized gains (losses) on securities			
Increase (decrease) during the year	¥ (448)	¥ 450	\$ (4,036)
Reclassification adjustments	(768)	110	(6,918)
Subtotal, before tax	(1,217)	560	(10,963)
Tax (expense) or benefit	352	(222)	3,171
Subtotal, net of tax	(864)	338	(7,783)
Deferred gains (losses) on hedges			
Increase (decrease) during the year	(3,240)	114	(29,187)
Reclassification adjustments	2,258	2,120	20,341
Subtotal, before tax	(982)	2,235	(8,846)
Tax (expense) or benefit	306	(618)	2,757
Subtotal, net of tax	(675)	1,616	(6,081)
Foreign currency translation adjustments			
Increase (decrease) during the year	(796)	(1,085)	(7,171)
Reclassification adjustments	-	-	-
Subtotal, before tax	(796)	(1,085)	(7,171)
Tax (expense) or benefit	_	_	_
Subtotal, net of tax	(796)	(1,085)	(7,171)
Remeasurements of defined benefit plan			
Increase (decrease) during the year	(4,839)	1,092	(43,591)
Reclassification adjustments	5,088	7,145	45,834
Subtotal, before tax	249	8,237	2,243
Tax (expense) or benefit	299	(3,066)	2,693
Subtotal, net of tax	549	5,170	4,946
Share of other comprehensive income of associates accounted for using equity method			
Increase (decrease) during the year	(4,867)	2,296	(43,843)
Total other comprehensive income	¥(6,654)	¥8,336	\$(59,941)

# 21.

#### Dividends (a) Dividends paid Year ended March 31, 2019 Kind of Total amount of Dividends Resolution Date of record Effective date shares dividends paid per share June 27, 2018 ¥30.0 Common stock ¥5,011 million March 31, General Meeting of (\$45,140 (\$0.27) 2018 Shareholders thousand) ¥5,846 million October 30, 2018 Common stock ¥35.0 September 30, December 3, Board of Directors (\$52,662 (\$0.32) 2018 Meeting thousand)

	Total amount of dividends paid	Dividends per share	Date of record	Effective date
k	¥3,341 million	¥2.0	March 31, 2017	June 29, 2017
k	¥5,011 million	¥3.0	September 30, 2017	December 1, 2017

(\*) Dividends per share indicate the amount before a 10:1 share consolidation of common shares with an effective date of

(b) Dividend payments for which the record date is in the subject fiscal year but the effective

ource of ividends	Total amount of dividends paid	Dividends per share	Date of record	Effective date
etained arnings	¥5,846 million (\$52,662 thousand)	¥35.0 (\$0.32)	March 31, 2019	June 27, 2019
ource of ividends	Total amount of dividends paid	Dividends per share	Date of record	Effective date
etained arnings	¥5,011 million	¥30.0	March 31, 2018	June 28, 2018

Income taxes in Japan applicable to the Company and its consolidated domestic subsidiaries consist of corporate tax (national tax) and enterprise and inhabitants' taxes (local taxes), which, in the aggregate, resulted in a statutory tax rate of approximately 30.5% and 30.7%

(a) The significant differences between the statutory and effective tax rates for the years

	2019	2018
	30.5%	30.7%
	(0.9)	(25.7)
bsidiaries and affiliates	(1.7)	(3.7)
	-	3.5
nt expenses	(4.7)	(1.8)
	(1.1)	(1.2)
	(0.9)	3.2
	21.2%	5.0%

# (b) Significant components of deferred tax assets and liabilities as of March 31, 2019 and 2018 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2019	2018	2019
Deferred tax assets:			
Provision for bonuses	¥ 7,337	¥ 6,887	\$ 66,093
Retirement benefit liability	38,905	36,944	350,464
Loss from inventory revaluation	2,980	3,071	26,844
Unrealized loss on marketable securities, investment securities and other	1,483	1,550	13,359
Loss on valuation of land	829	758	7,468
Allowance for doubtful receivables	1,167	1,437	10,513
Depreciation	8,210	7,994	73,957
Inventories-elimination of intercompany profits	1,791	1,848	16,134
Fixed assets-elimination of intercompany profits	563	559	5,072
Provision for construction warranties	3,379	3,336	30,439
Provision for losses on construction contracts	8,549	5,650	77,011
Provision for the in-service issues of commercial aircraft jet engines	3,501	_	31,538
Net operating loss carryforwards	763	1,443	6,873
Other	15,631	14,014	140,807
Gross deferred tax assets	95,095	85,497	856,635
Less valuation reserve	(6,845)	(7,179)	(61,661)
Total deferred tax assets	88,250	78,317	794,973
Deferred tax liabilities:			
Reserve for advanced depreciation of non-current assets	4,286	4,341	38,609
Reserve for special depreciation	1,465	1,374	13,197
Net unrealized gain on securities	1,150	1,509	10,359
Retained earnings for foreign subsidiaries	7,426	7,038	66,895
Other	4,334	3,609	39,042
Total deferred tax liabilities	18,664	17,872	168,129
Net deferred tax assets	¥69,585	¥60,445	\$626,835

Profit per share Per share amounts for the years ended March 31, 2019, and 2018 are set forth in the table below. Basic profit per share: Profit Profit allocated to common stock Weighted average number of shares common stock 167 167 Note: As the Company had no dilutive securities at March 31, 2019 or 2018, the Company has not disclosed diluted profit per share for the years ended March 31, 2019 and 2018. 25. **Derivative transactions** (a) Outstanding positions and recognized gains and losses at March 31, 2019 were as follows: (Derivative transactions to which the Company did not apply hedge accounting) 2019

	2019				
		Millions of yen			
	Contract amount	Contract amoun over 1 year	t Fair value	Gain (loss)	Gain (loss)
Currency-related contracts:					
Foreign exchange contracts:					
To sell					
USD	¥46,271	¥ -	¥(1,143)	¥(1,143)	\$(10,296)
EUR	1,137	-	19	19	171
Others	10,917	-	(194)	(194)	(1,748)
To purchase					
USD	14,860	-	11	11	99
EUR	68	_	(1)	(1)	(9)
Others	1,544	28	5	5	45
Total	¥74,799	¥28	¥(1,303)	¥(1,303)	\$(11,738)

Fair value is based on prices provided by financial institutions, etc.

24.

# 23.

Cash and cash equivalents

Cash and cash equivalents reconciled to the accounts reported in the consolidated balance sheets in the years ended March 31, 2019 and 2018 were as follows:

	Millions	of yen	Thousands of U.S. dollars
	2019	2018	2019
Cash and deposits:	¥74,311	¥70,632	\$669,408
Time deposits with maturities over three months:	(6,000)	(6,269)	(54,049)
Total	¥68,311	¥64,362	\$615,359

	Millions	of yen	Thousands of U.S. dollars
	2019	2018	2019
	¥27,453	¥28,915	\$247,302
	¥27,453	¥28,915	\$247,302
	Number of shar	es in millions	
	2019	2018	
s of			
		4.67	

# (Derivative transactions to which the Company applied hedge accounting)

	2019				
	Subject of hedge	Contract amount	Contract amount over 1 year	Fair value	
Currency-related contracts:					
Foreign exchange contracts:					
To sell	Accounts receivable-trade				
USD		¥22,694	¥3,354	¥(333)	
EUR		10,761	_	133	
Others		906	102	(33)	
To purchase	Accounts payable-trade				
USD		8,231	3,027	221	
EUR		2,841	220	(133)	
Others		3,364	589	16	
Total		¥48,799	¥7,294	¥(129)	

Fair value is based on prices provided by financial institutions, etc.

		2019	)	
		Tho	ousands of U.S. dolla	ars
	Subject of hedge	Contract amount	Contract amount over 1 year	Fair value
Currency-related contracts:				
Foreign exchange contracts:				
To sell	Accounts receivable-trade			
USD		\$204,432	\$30,213	\$(3,000)
EUR		96,937	_	1,198
Others		8,161	919	(297)
To purchase	Accounts payable-trade			
USD		74,146	27,268	1,991
EUR		25,592	1,982	(1,198)
Others		30,304	5,306	144
Total		\$439,591	\$65,706	\$(1,162)

Fair value is based on prices provided by financial institutions, etc.

	2019				
	Millions of ye			n	
Interest related contracts:	Subject of hedge	Contract amount	Contract amount over 1 year	Fair value	
Fixed-rate payment/ floating-rate receipt	Long-term loans				
Fixed-rate payment/ noating-rate receipt	payable	¥7,500	¥7,500	¥(79)	
		¥7,500	¥7,500	¥(79)	

Fair value is based on prices provided by financial institutions, etc.

# (b) Outstanding positions and recognized gains and losses at March 31, 2018 were as follows:

	2018					
	Millions of yen					
	Contract amount	Contract amount over 1 year	Fair value	Gain (loss)		
Currency-related contracts:						
Foreign exchange contracts:						
To sell						
USD	¥49,033	¥ –	¥1,188	¥1,188		
EUR	7,754	-	145	145		
Others	13,615	3,942	(58)	(58)		
To purchase						
USD	473	_	(8)	(8)		
EUR	386	_	9	9		
Others	1,152	_	(16)	(16)		
Total	¥72,415	¥3,942	¥1,259	¥1,259		

Fair value is based on prices provided by financial institutions, etc.

		2018	3	
	Subject of hedge	Contract amount	Contract amount over 1 year	Fair value
Currency-related contracts:				
Foreign exchange contracts:				
To sell	Accounts payable-trade			
USD		¥36,716	¥ –	¥1,017
EUR		1,743	403	27
Others		4,199	2,084	(3)
To purchase	Accounts payable-trade			
USD		9,878	153	(312)
EUR		3,518	387	(19)
Others		5,496	316	(48)
Total		¥61,553	¥3,346	¥ 661
Fair value is based on prices provided by financial inst	titutions, etc.			

26.

Financial Instruments

# (1) Matters related to the status of financial instruments

(a) Policies on the use of financial instruments The Company meets its long-term operating capital and capital expenditure requirements through bank loans and the issuance of bonds and meets its short-term operating capital requirements through bank loans and the issuance of short-term bonds (electronic commercial paper). Temporary surplus funds are managed in the form of financial assets that have a high level of safety. The Company utilizes derivative financial instruments to hedge the risks described below and does not engage in speculative transactions as a matter of policy.

# (Derivative transactions to which the Company did not apply hedge accounting)

# (Derivative transactions to which the Company applied hedge accounting)

Information related to financial instruments as of March 31, 2019 and 2018 was as follows.

(b) Details of financial instruments and risks associated with those instruments Notes and accounts receivable - trade are exposed to the credit risk of customers. The Company operates internationally and has significant exposure to the risk of fluctuation in foreign exchange rates. However, this risk is hedged using exchange contracts, etc., against the net position of foreign currency exposure. Investments in securities comprise mainly equity securities of companies with which the Company conducts business and are held to maintain relationships with these business partners. With such securities, listed stocks are exposed to market fluctuation risk.

Almost all notes and accounts payable - trade and electronically recorded obligations are due within one year. A portion of accounts payable - trade are denominated in foreign currency-specifically those related to payment for imported materials, etc., and are exposed to the risk of foreign currency fluctuation. However, this risk is mitigated principally by the position of accounts payable - trade denominated in foreign currency being less than the position of receivables in the same currency. Loans payable and bonds payable are used mainly to raise operating capital and carry out capital expenditure and are due in a maximum of eighteen years from March 31, 2019 (twenty years in 2018). A portion of these instruments is exposed to the risk of interest rate fluctuation. However, such risk is hedged using derivatives (interest rate and currency swaps) as necessary.

In sum, derivatives comprise exchange and currency option contracts used to hedge foreign currency fluctuation risk on receivables and payables in foreign currencies and interest rate swap contracts to hedge interest rate fluctuation risk on debt. With regard to hedge accounting, see Note 2(r), "Hedge accounting."

# (c) Risk management system for financial instruments

(i) Management of credit risk, including customer default risk

The Company's sales management functions and those of its consolidated subsidiaries regularly evaluate the financial circumstances of customers and monitor the due dates and balances by customer to identify and limit doubtful accounts.

With regard to derivative transactions, the Company enters into contracts with highly rated financial institutions to reduce counterparty risk. The amount presented in the balance sheet is the maximum credit risk at the fiscal year-end of the financial instruments that are exposed to credit risk.

(ii) Management of market risk (related to foreign currency exchange rates, interest rates, etc.) The Company and certain of its consolidated subsidiaries hedge foreign currency fluctuation risk on receivables and payables in foreign currencies using exchange contracts, which are categorized by the type of currency and the monthly due date. In principle, the net position of receivables less payables in a foreign currency is hedged with forward exchange contracts. The Company and certain of its consolidated subsidiaries hedge interest rate risk on debt using interest rate swap contracts.

With regard to investments in securities, the Company reviews its holding policies through periodic analysis of market prices and the financial condition of the issuers, taking into consideration the relationships with its business partners.

With regard to derivatives, in accordance with rules for the provision of transaction authorization, the Company's finance functions and those of its consolidated subsidiaries manage transactions in accordance with an established set of fundamental policies, such as those covering limitations on transaction amounts, under the authority of the director in charge of finance. Transactions are reported to the director in charge of finance on a monthly basis. Consolidated subsidiaries manage derivatives in accordance with the same rules as those of the Company.

(iii) Management of liquidity risk (risk of the Company being unable to meet its payment obli*gations by their due dates*)

The Company manages liquidity risk through its finance department, maintaining and updating its finance plans based on reports from each business division. Liquidity risk is managed through the diversification of financing methods, taking into consideration the financing environment and balancing long- and short-term financing requirements, securing commitment lines, etc.

(d) Supplemental information on the fair value of financial instruments The fair value of financial instruments includes values based on market price and reasonably estimated values when market price is not available. However, as variables are inherent in these value calculations, the resulting values may differ if different assumptions are used. With regard to the contract amounts, etc., of the derivatives described in Note 25, "Derivative transactions," these amounts do not represent the market risk associated with the corresponding derivative transactions themselves.

# (2) Fair values of financial instruments

The book values, the fair values and the differences between these values as of March 31, 2019 were as follows (Financial instruments for which the fair value was extremely difficult to determine were not included, as described in remark (ii)):

	2019					
		Millions of	yen		Thousa U.S. d	
	Book value	Fair value	Unrealized (losse		Unrealiz (los	
Cash and deposits	¥ 74,311	¥ 74,311	¥	-	\$	-
Notes and accounts receivable - trade	427,665	427,641		(23)		(207)
Investment securities	8,140	8,140		_		_
Total assets	¥510,117	¥510,094	¥	(23)	\$	(207)
Notes and accounts payable - trade	247,191	247,191		_		_
Electronically recorded obligations - operating	123,083	123,083		_		_
Short-term debt and current portion of long-term debt (excluding lease obligations)	110,023	110,023		_		_
Long-term debt, less current portion (excluding lease obligations)	327,568	329,337	1	1,768		15,926
Total liabilities	¥807,867	¥809,636	¥1	1,768	\$:	15,926
Derivative transactions (*)	¥ (1,511)	¥ (1,511	) ¥	-	\$	_

	2018			
	Millions of yen			
	Book value	Fair value	Unrealized gains (losses	
Cash and deposits	¥ 70,632	¥ 70,632	¥ –	
Notes and accounts receivable - trade	470,110	470,049	(60)	
Investment securities	9,387	9,387	_	
Total assets	¥550,130	¥550,069	¥(60)	
Notes and accounts payable - trade	245,398	245,398	_	
Electronically recorded obligations - operating	117,772	117,772	-	
Short-term debt and current portion of long-term debt (excluding lease obligations)	128,978	128,978	_	
Long-term debt, less current portion (excluding lease obligations)	315,685	315,686	1	
Total liabilities	¥807,835	¥807,836	¥ 1	
Derivative transactions (*)	¥ 1,920	¥ 1,920	¥ –	

The book values, fair values and the differences between these values as of March 31. 2018 were as follows (Financial instruments for which the fair value was extremely difficult to determine were not included, as described in remark (ii)):

eses ( ) indicate

(i) Methods used to calculate the fair value of financial instruments and details of securities and derivative instruments

# <Assets>

- Cash and deposits

The fair value of cash on hand and in banks is stated at the relevant book value since the settlement periods are short and the fair values are substantially the same as the book values.

- Notes and accounts receivable - trade

The fair value of notes and accounts payable – trade is stated at present value computed by applying a discount rate reflecting the settlement period and the credit risk.

- Investment securities

Equity securities are stated at the fair value, and bonds are stated at market price or the asking price of financial institutions. See Note 2(j), "Investment securities," for the detailed information by classification.

<Liabilities>

- Notes and accounts payable - trade, Electronically recorded obligations - operating, short-term loans payable and current portion of long-term loans payable

Since the settlement periods of these items are short and their fair values are substantially the same as their book values, the relevant book values are used.

- Long-term debt, less current portion

The fair value of bonds payable is calculated based on trading reference data. The fair value of long-term loans payable is calculated by applying a discount rate to the total principal and interest. That discount rate is based on the interest rates of similar new loans.

<Derivatives>

See Note 25, "Derivative transactions."

(ii) Financial instruments for which the fair value is extremely difficult to determine.

	Millions of yen		Thousands of U.S. dollars
	2019	2018	2019
Unlisted equity securities and investments in partnerships	¥ 6,361	¥ 5,411	\$ 57,301
Stocks of nonconsolidated subsidiaries and affiliates	10,639	10,224	95,838
Investments in affiliates	65,574	68,090	590,704
Total	¥82,575	¥83,725	\$743,852

Since no market values are available for these items and since it is extremely difficult to determine their fair values, the items listed in the table above are not included in investment securities.

(iii) Planned redemption amounts after the balance sheet date for monetary receivables and investment securities with maturity dates as of March 31, 2019 and 2018 were as follows:

	2019					
	Millions of yen					
	Within 1 year		Over 5 years but within 10 years	Over 10 years		
Cash and deposits	¥ 74,311	¥ –	¥–	¥–		
Notes and accounts receivable - trade	408,527	19,137	_	-		
Total	¥482,839	¥19,137	¥–	¥–		

Cash and deposits	
Notes and accounts receivable - t	rad
Total	

Cash and depos	sits
Notes and acco	unts receivable - trac
Total	

D) Plannea repayment amounts after the balance sneet loans payable. See Note 8, "Short-term debt and long-term debt."

27.

Finance leases

Finance leases commenced prior to April 1, 2008 which do not transfer ownership of the leased assets to the lessee are accounted for as operating leases. Information regarding such leases, as required to be disclosed in Japan, is as follows:

<Lessee>

The original costs of leased assets under non-capitalized finance leases and the related accumulated depreciation and amortization, assuming it was calculated by the straight-line method over the term of the respective lease, as of March 31, 2019 and 2018 were as follows:

Property, plant and equipment Accumulated depreciation

Intangible assets Accumulated amortization

The present values of future minimum lease payments under non-capitalized finance leases as of March 31, 2019 and 2018 were as follows:

	Millions	of yen	Thousands of U.S. dollars
	2019	2018	2019
Current portion	¥162	¥355	\$1,459
Noncurrent portion	383	546	3,450
Total	¥546	¥902	\$4,918

Lease payments, "as if capitalized" depreciation and amortization and interest expense for non-capitalized finance leases for the years ended March 31, 2019, and 2018 were as follows:

	Millions	Millions of yen 2019 2018 ¥361 ¥905	
	2019	2018	2019
Lease payments	¥361	¥905	\$3,252
Depreciation and amortization	311	794	2,802
Interest	19	35	171

		20	)19	
		Thousands o	of U.S. dollars	
	Within 1 year	Over 1 year but within 5 years	Over 5 years but within 10 years	Over 10 years
	\$ 669,408	\$ -	\$-	\$-
de	3,680,092	172,390	_	-
	\$4,349,509	\$172,390	\$-	\$-
		20	)18	
		Million	s of yen	
	Within 1 year	Over 1 year but within 5 years	Over 5 years but within 10 years	Over 10 years
	¥ 70,632	¥ –	¥-	¥-
de	453,461	16,648	_	_
	¥524,093	¥16,648	¥-	¥-

(iv) Planned repayment amounts after the balance sheet date for bonds payable and long-term

Millions	Thousands of U.S. dollars		
2019	2018	2019	
¥2,340	¥5,224	\$21,079	
(1,853)	(4,413)	(16,692)	
 ¥ 487	¥ 809	\$ 4,387	
_	22		
_	(21)	_	
¥ –	¥ 1	\$ -	

## (c) Sales, profit (loss), assets, liabilities and other items by reportable segment

**Operating leases** The schedule of future minimum lease payments under non-cancellable operating leases as of March 31, 2019 and 2018 were as follows:

	Millions	of yen	Thousands of U.S. dollars
	2019	2018	2019
Within one year	¥ 3,609	¥ 2,796	\$ 32,511
Over one year	14,817	12,022	133,474
Total	¥18,426	¥14,819	\$165,985

29.

#### Segment information (a) Overview of reportable segments

The Company's reportable segments are components of the Company about which separate financial information is available. These segments are subject to periodic review by the Company's Board of Directors to decide how to allocate resources and assess performance. The Company's operations are divided into internal companies based on product categories. Certain authority is delegated to each of the internal companies based on whether they conduct businesses in Japan or overseas. The Company's operations are, therefore, segmented based on each internal company's product categories. The Company's seven reportable segments are the Aerospace Systems segment, the Energy System & Plant Engineering segment, the Precision Machinery & Robot segment, the Ship & Offshore Structure segment, the Rolling Stock segment, the Motorcycle & Engine segment, and the Other segment.

From the fiscal year under review, the Company reorganization was carried out in order to further enhance Kawasaki-ROIC management in response to changes in the business environment. As part of this, the Company reviewed the method of business segment classification from the fiscal year ended March 31, 2019 and changed its reportable segments from the previous Ship & Offshore Structure, Rolling Stock, Aerospace, Gas Turbine & Machinery, Plant & Infrastructure, Motorcycle & Engine, Precision Machinery and Other Operations to Aerospace Systems, Energy System & Plant Engineering, Precision Machinery & Robot, Ship & Offshore Structure, Rolling Stock, Motorcycle & Engine, and Other Operations. Consolidated segment information for the fiscal year ended March 31, 2018 has been prepared using the revised segment classification.

The main businesses in the Company's reportable segments are set forth in the table below.

Business segment	Major products
Aerospace Systems	Production and sale of aircraft, jet engines, etc.
Energy System & Plant Engineering	Production and sale of general-purpose gas turbine generators, prime movers, industrial equipment, boilers, environmental equipment, steel structures, crushers, etc.
Precision Machinery & Robot	Production and sale of industrial hydraulic products, industrial robots, etc.
Ship & Offshore Structure	Construction and sale of ships and other vessels, etc.
Rolling Stock	Production and sale of rolling stock, etc.
Motorcycle & Engine	Production and sale of motorcycles, all-terrain vehicles (ATV), utility vehicles, personal watercraft ("JET SKI"), general-purpose gasoline engines, etc.
Other	Commercial activities, sales/order agency and intermediary activities, administration of welfare facilities, etc.

# (b) Calculation methods for sales, profit (loss), assets, liabilities and other items by reportable segment

Accounting methods applied for the calculation of sales, profit (loss), assets, liabilities and other items by business segment largely correspond to the information presented under Note 2, "Significant accounting policies." Segment profit is based on operating profit. Intersegment sales and transfers are based on market prices.

External sales	Sales Intersegment sales and transfers			Millions	of	yen	(	Other items	Increase in property,
sales	Intersegment sales and			-			(	Other items	
sales	sales and								
	u austel s		Total	Segment profit (loss)	0	Segment assets	Depreciation/ amortization	Investment in equity method affiliates	plant and
463,958	¥12,089	¥	476,048	¥32,611	¥	649,260	¥21,299	¥ –	¥24,022
253,041	19,899		272,940	11,634		301,798	3,412	18,552	2,237
222,095	17,151		239,247	21,352		205,199	8,220	634	11,636
78,974	4,549		83,523	1,090		121,918	1,559	45,955	2,360
124,689	27		124,716	(13,797)		211,102	2,615	133	3,358
356,847	718		357,566	14,366		283,770	15,317	1,549	18,505
95,136	41,136		136,273	2,501		93,601	1,527	3,509	861
1,594,743	¥95,572	¥	1,690,316	¥69,760	¥1	,866,652	¥53,953	¥70,334	¥62,982
-	(95,572)		(95,572)	(5,737)		(27,797)	5,069	-	3,918
1,594,743	¥ –	¥	1,594,743	¥64,023	¥1	,838,855	¥59,022	¥70,334	¥66,900
	222,095 78,974 124,689 356,847 95,136 ,594,743	222,095 17,151 78,974 4,549 124,689 27 356,847 718 95,136 41,136 ,594,743 ¥95,572 – (95,572)	222,095       17,151         78,974       4,549         124,689       27         356,847       718         95,136       41,136         ,594,743       ¥95,572       ¥         -       (95,572)       ¥	222,095         17,151         239,247           78,974         4,549         83,523           124,689         27         124,716           356,847         718         357,566           95,136         41,136         136,273           ,594,743         ¥95,572         ¥1,690,316           -         (95,572)         (95,572)           ,594,743         ¥         -         ¥1,594,743	222,095         17,151         239,247         21,352           78,974         4,549         83,523         1,090           124,689         27         124,716         (13,797)           356,847         718         357,566         14,366           95,136         41,136         136,273         2,501           ,594,743         ¥95,572         ¥1,690,316         ¥69,760           -         (95,572)         (5,737)           ,594,743         ¥         -         ¥1,594,743         ¥64,023	222,095         17,151         239,247         21,352           78,974         4,549         83,523         1,090           124,689         27         124,716         (13,797)           356,847         718         357,566         14,366           95,136         41,136         136,273         2,501           ,594,743         ¥95,572         ¥1,690,316         ¥69,760 ¥1           -         (95,572)         (95,572)         (5,737)           ,594,743         ¥         -         ¥1,594,743         ¥64,023 ¥1	222,095         17,151         239,247         21,352         205,199           78,974         4,549         83,523         1,090         121,918           124,689         27         124,716         (13,797)         211,102           356,847         718         357,566         14,366         283,770           95,136         41,136         136,273         2,501         93,601           ,594,743         ¥95,572         ¥1,690,316         ¥69,760         ¥1,866,652           -         (95,572)         (95,572)         (5,737)         (27,797)	222,095         17,151         239,247         21,352         205,199         8,220           78,974         4,549         83,523         1,090         121,918         1,559           124,689         27         124,716         (13,797)         211,102         2,615           356,847         718         357,566         14,366         283,770         15,317           95,136         41,136         136,273         2,501         93,601         1,527           ,594,743         ¥95,572         ¥1,690,316         ¥69,760         ¥1,866,652         ¥53,953           -         (95,572)         (95,572)         (5,737)         (27,797)         5,069           ,594,743         ¥         -         ¥1,594,743         ¥64,023         ¥1,838,855         ¥59,022	222,095       17,151       239,247       21,352       205,199       8,220       634         78,974       4,549       83,523       1,090       121,918       1,559       45,955         124,689       27       124,716       (13,797)       211,102       2,615       133         356,847       718       357,566       14,366       283,770       15,317       1,549         95,136       41,136       136,273       2,501       93,601       1,527       3,509         ,594,743       ¥95,572       ¥1,690,316       ¥69,760 ¥1,866,652       ¥53,953       ¥70,334         -       (95,572)       (95,572)       (5,737)       (27,797)       5,069       -         ,594,743       ¥       -       ¥1,594,743       ¥64,023 ¥1,838,855       ¥59,022       ¥70,334

		Sales				(	Other items	
	External sales	Intersegment sales and transfers	Total	Segment profit (loss)	Segment assets	Depreciation/ amortization	Investment in equity method affiliates	Increase in property, plant and equipment and intangible assets
Aerospace Systems	¥ 469,507	¥ 5,030	¥ 474,538	¥30,876	¥ 644,719	¥20,674	¥ –	¥34,613
Energy System & Plant Engineering	251,640	19,695	271,336	7,686	288,895	3,337	19,118	3,738
Precision Machinery & Robot	198,996	15,890	214,887	21,648	188,155	7,165	411	10,974
Ship & Offshore Structure	95,610	3,786	99,397	(3,820)	147,963	1,444	49,749	4,774
Rolling Stock	141,760	105	141,866	(12,438)	180,792	2,567	138	2,505
Motorcycle & Engine	331,659	669	332,329	15,255	266,550	14,163	1,474	20,542
Other	85,066	41,507	126,573	2,925	85,061	1,579	3,336	696
Total	¥1,574,242	¥86,686	¥1,660,929	¥62,133	¥1,802,139	¥50,932	¥74,228	¥77,844
Adjustments	_	(86,686)	(86,686)	(6,207)	(17,110)	5,205	-	4,319
Consolidated total	¥1,574,242	¥ –	¥1,574,242	¥55,925	¥1,785,028	¥56,137	¥74,228	¥82,163

Millions of yen

			Ye	ar ended M	arch 31, 2019			
			T	f U.S. dollars				
		Sales		_		(	Other items	
	External sales	Intersegment sales and transfers	Total	Segment profit (loss)	Segment assets	Depreciation/ amortization	Investment in equity method affiliates	Increase in property, plant and equipment and intangible assets
Aerospace Systems	\$4,179,425	\$108,900	\$ 4,288,334	\$293,766	\$ 5,848,662	\$191,866	\$ -	\$216,395
Energy System & Plant Engineering	2,279,443	179,254	2,458,697	104,801	2,718,656	30,736	167,120	20,151
Precision Machinery & Robot	2,000,676	154,500	2,155,184	192,343	1,848,473	74,047	5,711	104,819
Ship & Offshore Structure	711,413	40,978	752,392	9,819	1,098,261	14,044	413,972	21,259
Rolling Stock	1,123,223	243	1,123,466	(124,286)	1,901,649	23,556	1,198	30,250
Motorcycle & Engine	3,214,548	6,468	3,221,025	129,412	2,556,256	137,979	13,954	166,697
Other	857,004	370,561	1,227,574	22,530	843,176	13,756	31,610	7,756
Total	\$14,365,760	\$860,931	\$15,226,700	\$628,412	\$16,815,170	\$486,019	\$633,583	\$567,354
Adjustments	-	(860,931)	(860,931)	(51,680)	(250,401)	45,663	-	35,294
Consolidated total	\$14,365,760	\$ -	\$14,365,760	\$576,732	\$16,564,769	\$531,682	\$633,583	\$602,648

(d) Reconciliation and the main components of differences between the total for reportable segments and amounts on the consolidated financial statement for the years ended March 31, 2019 and 2018

	Millions	of yen	Thousands of U.S. dollars
	2019	2018	2019
Net sales			
Total for reportable segments	¥1,690,316	¥1,660,929	\$15,226,700
Intersegment transactions	(95,572)	(86,686)	(860,931)
Net sales reported on the consolidated financial statements	¥1,594,743	¥1,574,242	\$14,365,760
	Millions	of yen	Thousands of U.S. dollars
	2019	2018	2019
Profit			
Total for reportable segments	¥69,760	¥62,133	\$628,412
Intersegment transactions	(181)	(95)	(1,630)
Corporate expenses (*)	(5,555)	(6,112)	(50,041)
Operating profit (loss) on the consolidated financial statements	¥64,023	¥55,925	\$576,732

(\*) Corporate expenses comprise mainly general and administrative expenses not attributed to reportable segments.

	Millions	s of yen	Thousands of U.S. dollars
	2019	2018	2019
Assets			
Total for reportable segments	¥1,866,652	¥1,802,139	\$16,815,170
Intersegment transactions	(102,520)	(81,949)	(923,520)
Corporate assets shared by all segments (*)	74,723	64,838	673,120
Total assets on the consolidated financial statements	¥1,838,855	¥1,785,028	\$16,564,769

(\*) Corporate assets shared by all segments comprise mainly fixed assets not attributed to reportable segments.

			Millions	of yen		
	2019	2018	2019	2018	2019	2018
Other items	Total for r segm		Adjustm	ents (*)	Amounts rep consolidate stater	d financial
Depreciation/amortization	¥53,953	¥50,932	¥5,069	¥5,205	¥59,022	¥56,137
Increase in property, plant and equipment and intangible assets	62,982	77,844	3,918	4,319	66,900	82,163

(\*) Adjustment is due mainly tofixed assets not attributed to reportable segments.

	Т	housands of U.S. dolla	ars
		2019	
Other items	Total for reportable segments	Adjustments	Amounts reported on the consolidated financial statements
Depreciation/amortization	\$486,019	\$45,663	\$531,682
Increase in property, plant and equipment and intangible assets	567,354	35,294	602,648

# (e) Related information

(i) Sales by geographic region

2019	2018	2019
× === = = =		2010
¥ 673,963	¥ 668,369	\$ 6,071,192
393,066	381,156	3,540,816
187,764	172,203	1,691,415
260,230	237,298	2,344,203
79,718	115,215	718,115
¥1,594,743	¥1,574,242	\$14,365,760
	393,066 187,764 260,230 79,718	393,066         381,156           187,764         172,203           260,230         237,298           79,718         115,215

geographical region.

# Property, plant and equipment

	Millions of yen		Thousands of U.S. dollars	
	2019	2018	2019	
Japan	¥422,286	¥420,299	\$3,804,036	
North America	30,806	28,030	277,507	
Europe	3,219	3,239	28,997	
Asia	28,775	27,424	259,211	
Other areas	582	804	5,243	
Total	¥485,669	¥479,797	\$4,375,002	

(ii) Information by major clients

Clients	Net sales	Related segments
Ministry of Defense	¥216,989 million (\$1,954,680 thousand)	Aerospace Systems, Energy System & Plant Engineering, Ship & Offshore Structure, etc.

Clients

Ministry of Defense ¥23

Net sales for the years ended March 31, 2019 and 2018 were as follows:

Net sales are based on the clients' location and classified according to country or

Year	ended	March	31,	2019	

Year ended Mar	rch 31, 2018
Net sales	Related segments
37,737 million	Aerospace Systems, Energy System & Plant Engineering, Ship & Offshore Structure, etc.

### 30.

**Related party** transactions

# (a) Related party transactions for the years ended March 31, 2019 and 2018 were as follows: Vear ended March 31 2019

	Year ended March 31, 2019	
	Nonconsolidated subsidiaries and affiliates of the Company	
Туре	Affiliate of the Company	
Name	Commercial Airplane Co., Ltd.	
Location	Chiyoda-ku, Tokyo	
Capital or investment	¥10 million (\$90 thousand)	
Business or position	Sales of transportation machinery	
Rate of ownership (%)	Directly 40%	
Description of relationship	Sales of Company products and board members	
Details of transactions	Sales of Company products	
Amount of transactions	¥115,035 million (\$1,036,258 thousand)	
Account	Accounts receivable - trade	
Ending balance	¥15,003 million (\$135,150 thousand)	
Account	Advances received	
Ending balance	¥61,246 million (\$551,716 thousand)	

Year ended March 31, 2018

	Nonconsolidated subsidiaries and affiliates of the Company
Туре	Affiliate of the Company
Name	Commercial Airplane Co., Ltd.
Location	Chiyoda-ku, Tokyo
Capital or investment	¥10 million
Business or position	Sales of transportation machinery
Rate of ownership (%)	Directly 40%
Description of relationship	Sales of Company products and board members
Details of transactions	Sales of Company products
Amount of transactions	¥116,936 million
Account	Accounts receivable - trade
Ending balance	¥43,820 million
Account	Advances received
Ending balance	¥72,515 million

(b) A summary of the total financial information of affiliates, which was the basis for calculating the equity in income of the nonconsolidated affiliates, including that of Nantong COSCO KHI Ship Engineering Co., Ltd., which is a significant affiliate, for the years ended March 31, 2019 and 2018 was as follows:

Current assets	2019	2018	
Current assets		2018	2019
	¥167,183	¥158,821	\$1,506,017
Fixed assets	149,961	156,573	1,350,878
Current liabilities	122,176	116,751	1,100,586
Long-term liabilities	37,275	33,738	335,781
Net assets	157,693	164,904	1,420,530
Net sales	197,268	171,376	1,777,029
Profit before income taxes and non-controlling interests	7,616	10,675	68,606
Total profit	5,293	8,446	47,680

# Subsequent events On June 26, 2019, the following app approved at the ordinary meeting o Cash dividends (¥35.0 per share) 32. Other matters (a) Quarterly financial information Year ended March 31, 2019 Net sales Profit before income taxes Profit (loss) attributable to owners of part Profit (loss) per share - basic Year ended March 31, 2019 Net sales Profit before income taxes Profit (loss) attributable to owners of part Profit (loss) per share - basic

31.

# (b) Material lawsuits, etc.

<Snow disaster at NIPPI Corporation> Due to the heavy snowfall on February 15, 2014, an aircraft hangar's roof at a consolidated subsidiary's NIPPI Corporation's Atsugi Plant collapsed, causing damage to aircraft of the Japan Maritime Self-Defense Force under regular maintenance in the hangar. The Company and NIPPI Corporation entered into discussions with the Japan Ministry of Defense regarding how this matter should be handled. However, in July 2017, the Ministry of Defense, based on the contention that it had suffered losses totaling ¥1,900 million (\$17,116 thousand), executed an offset for the same amount in relation to a payment claim held by the Company vis-à-vis the Ministry of Defense (central government). The Company did not accept the Ministry of Defense's contention or its execution of the offset and, consequently, demanded payment from the Ministry of Defense of the ¥1,900 million that had been subject to the offset. However, the Ministry of Defense did not comply with the Company's demand, leading the Company to institute legal proceedings in October 2017 at the Tokyo District Court seeking payment of the amount in question and the trial is continuing now. The future outcome of this legal action may affect the operating performance of the KHI Group.

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propriation of nonconsolidated retained earnings was	
of shareholders of the Company:	

¥5,846	\$52,662
Millions of yen	Thousands of U.S. dollars

		s of yen			
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	
	¥343,785	¥688,107	¥1,094,583	¥1,594,743	
	8,550	207	19,865	37,861	
arent	2,561	(3,592)	11,385	27,453	
	Yen				
	¥15.33	¥(21.50)	¥68.15	¥164.34	

	\$0.14	\$(0.19)	\$0.61	\$1.48		
	U.S. dollars					
arent	23,070	(32,357)	102,558	247,302		
	77,020	1,865	178,948	341,059		
	\$3,096,883	\$6,198,604	\$9,860,220	\$14,365,760		
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter		
		Thousands of U.S. dollars				

<Regarding receipt of customs duty reassessment notification in the Kingdom of Thailand> KAWASAKI MOTORS ENTERPRISE (THAILAND) CO., LTD. (hereinafter, "KMT"), a consolidated subsidiary of the Company in the Kingdom of Thailand, received a reassessment notification of customs duties for 4,029 million baht (equivalent to approximately ¥14,000 million (\$126,115 thousand) when converted at a rate of 0.29 yen to 1 baht) from the Revenue Department of Thailand. KMT had until that time filed its customs duties in accordance with guidance from the Revenue Department. Since the content of the notification of reassessment lacked a legitimate basis and was extremely unreasonable, KMT could not accept it and submitted an appeal of the reassessment to the Commission of Appeal, the appeals body for tax assessments received from the Revenue Department of Thailand. Based on the opinion of attorneys consulted regarding this matter, the Company maintains that there is a strong possibility KMT's assertion will be upheld.

#### <Claim for damages in overseas LNG tank construction work>

In connection with a certain liquefied natural gas (LNG) tank construction project carried out by the Company overseas, the Company filed a petition for arbitration with The International Chamber of Commerce (ICC) during the fiscal year under review concerning losses sustained by the Company due to the breach of contract by an overseas construction subcontractor. During the arbitration proceedings, the counterparty claimed damages from the Company, but the Company believes that these claims lack legitimate grounds, and are thus unjustified. The Company will continue to assert the legitimacy of its claims through the arbitration process.



# **Independent Auditor's Report**

To the Board of Directors of Kawasaki Heavy Industries, Ltd .:

We have audited the accompanying consolidated financial statements of Kawasaki Heavy Industries, Ltd. (the "Company") and its consolidated subsidiaries, which comprise the consolidated balance sheets as at March 31, 2019 and 2018, and the consolidated statements of income, statements of comprehensive income, statements of changes in net assets and statements of cash flows for each of the two years in the period ended March 31, 2019, and a summary of significant accounting policies and other explanatory information.

### Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatements, whether due to fraud or error.

#### Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in Japan. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgement, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, while the objective of the financial statement audit is not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company and its consolidated subsidiaries as at March 31, 2019 and 2018, and their financial performance and cash flows for each of the two years in the period ended March 31, 2019, in accordance with accounting principles generally accepted in Japan.

#### **Convenience Translation**

The U.S. dollar amounts in the accompanying consolidated financial statements with respect to the year ended March 31, 2019 are presented solely for convenience. Our audit also included the translation of yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made on the basis described in Note 1 to the consolidated financial statements.

KPMG AZSA LIC

26 June, 2019 Kobe, Japan

KPMG AZSA LLC, a limited liability audit corporation incorporated under the Japanese Certified Public Ac Law and a member firm of the KPMG network of independent member firms affiliated with KPMG Interr Cooperative ("KPMG Interrutional"), a Swiss entity.

# Corporate Profile/Stock Information (As of March 31, 2019)

#### **Corporate Profile**

Kawasaki Heavy Industries, Ltd.		
15, Japan		
chome,		
Yoshinori Kanehana		
¥104,484 million		

#### Stock Information

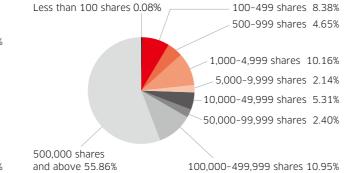
Securities Code	7012
Stock Listings	Tokyo and Nagoya Stock Exchanges
Share Unit Number	100 shares
Total Number of Shares Authorized	336,000,000 shares
Total Number of Shares Issued	167,080,532 shares
Number of Shareholders	113,819 persons
Fiscal Year	From April 1 to March 31
Year-end Dividend Record Date	March 31
Interim Dividend Record Date	September 30
Annual General Meeting of Shareholders	June

#### **Major Shareholders**

Shareholder	Number of Shares Owned	Percentage
The Master Trust Bank of Japan, Ltd. (Trust Account)	10,911,600	6.53%
Japan Trustee Services Bank, Ltd. (Trust Account)	8,256,300	4.94%
Nippon Life Insurance Company	5,751,661	3.44%
Mizuho Bank, Ltd.	4,176,412	2.49%
Kawasaki Heavy Industries, Ltd. Kyoueikai	3,768,519	2.25%
JFE Steel Corporation	3,539,040	2.11%
Kawasaki Heavy Industries Employee Stock Ownership Association	3,286,221	1.96%
Sompo Japan Nipponkoa Insurance Inc.	3,057,799	1.83%
Japan Trustee Services Bank, Ltd. (Trust Account 5)	3,051,200	1.82%
Japan Trustee Services Bank, Ltd. (Trust Account 9)	3,012,700	1.80%



#### Shareholders by Shareholding Volume



# Major Subsidiaries and Associates (As of March 31, 2019)

#### **Aerospace Systems**

NIPPI Corporation Nippi Skill Corporation Kawaju Gifu Engineering Co., Ltd. Kawaju Gifu Service Co., Ltd. KGM Co., Ltd. Kawaju Akashi Engineering Co., Ltd.

#### **Energy System & Plant Engineering**

Kawasaki Thermal Engineering Co., Ltd. Kawasaki Machine Systems, Ltd. Kawasaki Prime Mover Engineering Co., Ltd. Kawasaki Naval Engine Service, Ltd. EarthTechnica Co., Ltd. Kawasaki Engineering Co., Ltd. KEE Environmental Construction Co. Ltd Kawasaki Environmental Plant Engineering Co., Ltd. Kawaju Facilitech Co., Ltd. EarthTechnica M&S Co., Ltd. Kawasaki Gas Turbine Europe GmbH Kawasaki Gas Turbine Asia Sdn. Bhd. Kawasaki Gas Turbine Service RUS LLC Kawasaki Machinery do Brasil Máguinas e Equipamentos Ltda. Kawasaki Heavy Industries (Europe) B.V. Kawasaki Heavy Industries (H.K.) Ltd. Wuhan Kawasaki Marine Machinery Co., Ltd. KHI Design & Technical Service, Inc. Kawasaki Heavy Industries Machinery Trading (Shanghai) Co., Ltd.

- \* JP Steel Plantech Co.
- \* Anhui Conch Kawasaki Equipment Manufacturing Co., Ltd.
- \* Anhui Conch Kawasaki Energy Conservation Equipment Manufacturing Co., Ltd.
- \* Anhui Conch Kawasaki Engineering Co., Ltd.
- \* Shanghai Conch Kawasaki Engineering Co., Ltd. \* Shanghai COSCO Kawasaki Heavy Industries
- Steel Structure Co., Ltd.

#### **Precision Machinery & Robot**

Kawasaki Robot Service, Ltd. Kawasaki Hydromechanics Corporation Kawasaki Precision Machinery (U.S.A.), Inc. Kawasaki Precision Machinery (UK) Ltd. Wipro Kawasaki Precision Machinery Private Limited Flutek I.td Kawasaki Precision Machinery (Suzhou) Ltd. Kawasaki Precision Machinery Trading (Shanghai) Co., Ltd. Kawasaki Chunhui Precision Machinery (Zhejiang) Ltd. Kawasaki Robotics (U.S.A.) Inc. Kawasaki Robotics (UK) Ltd. Kawasaki Robotics GmbH Kawasaki Robotics Korea, Ltd. Kawasaki Robotics (Tianjin) Co., Ltd. Kawasaki Robotics (Kunshan) Co., Ltd. Kawasaki (Chongqing) Robotics Engineering Co., Ltd.

\* Medicaroid Corporation

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# duAro Solass Ninja Z Mule Jetski

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# Ship & Offshore Structure

KHI JPS Co., Ltd.

**Rolling Stock** 

Co., Ltd.

Kawasaki Rail Car, Inc.

Technology Co., Ltd.

K-Tec Corporation

Technica Corp.

Autopolis

Co., Ltd.

Kawaju Support Co., Ltd. Kawasaki Marine Engineering Co., Ltd.

- Kawasaki Subsea (UK) Limited \* MES-KHI YURA DOCK CO., LTD. \* Nantong COSCO KHI Ship Engineering Co., Ltd. \* Dalian COSCO KHI Ship Engineering Co., Ltd.
- Alna Yusoki-Yohin Co., Ltd. Kawasaki Rolling Stock Component Co., Ltd. Kawasaki Rolling Stock Technology Co., Ltd. Kansai Engineering Co., Ltd. Sapporo Kawasaki Rolling Stock Engineering

#### NICHIJO CORPORATION

\* Qingdao Sifang Kawasaki Rolling Stock

Motorcycle & Engine Kawasaki Motors Corporation Japan

- Union Precision Die Co., Ltd. ○ Kawasaki Motors Manufacturing Corp., U.S.A. Kawasaki Motors Corp., U.S.A. Canadian Kawasaki Motors Inc. Kawasaki Motores do Brasil I tda Kawasaki Motors Europe N.V. Kawasaki Motors Pty. Ltd. India Kawasaki Motors Pvt. Ltd. PT. Kawasaki Motor Indonesia Kawasaki Motors (Phils.) Corporation Kawasaki Motors Enterprise (Thailand) Co., Ltd. Kawasaki Motors (Shanghai), Ltd. Kawasaki Motors Vietnam Co., Ltd. \* Changzhou Kawasaki and Kwang Yang Engine
- Others Kawasaki Trading Co., Ltd. Kawaju Service Co., Ltd. Kawasaki Technology Co., Ltd. Kawasaki Heartfelt Service Co., Ltd. K Career Partners Corp. Benic Solution Corporation Kawasaki Life Corporation Nippi Kosan Co., Ltd Kawasaki Heavy Industries (U.S.A.) Inc. Kawasaki do Brasil Industria e Comercio Ltda. Kawasaki Trading do Brasil Ltda. Kawasaki Heavy Industries (U.K.) Ltd. ♦ Kawasaki Heavy Industries Middle East FZE ★ Kawasaki Heavy Industries (India) Private Limited Kawasaki Heavy Industries (Singapore) Pte. Ltd. Kawasaki Heavy Industries Management (Shanghai) Ltd. Kawasaki Trading (Shanghai) Co., Ltd. KHI (Dalian) Computer Technology Co., Ltd. Hydrogen Engineering Australia Pty Ltd.

Kawasaki Heavy Industries Russia LLC

Kawasaki Trading (Thailand) Co., Ltd.

\* Equity-method associates

- Includes operations belonging to the Rolling Stock and Aerospace Systems segments
- $\star$  Includes operations belonging to the Precision Machinery & Robot segment
- ◆ Includes operations belonging to the Motorcycle & Engine segment

# Kawasaki Heavy Industries, Ltd.



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