

# MHI REPORT 2017

**MITSUBISHI HEAVY INDUSTRIES GROUP  
INTEGRATED REPORT**

For the Year Ended March 31, 2017



**MOVE THE WORLD FORWARD**  **MITSUBISHI  
HEAVY  
INDUSTRIES  
GROUP**

ON LAND

AT SEA

IN THE SKY

IN SPACE

WE TRANSFORM THE PRESENT INTO A SUSTAINABLE

FUTURE

**Our Principles**

- > We deliver reliable and innovative solutions that make a lasting difference to customers and communities worldwide.
- > We act with integrity and fairness, always respecting others.
- > We constantly strive for excellence in our operations and technology, building on a wide global outlook and deep local insights.

**Corporate Identity Statement**



This corporate identity statement represents our intention to "continuously provide an assured future where people can live safe, secure, and enriched lives through technologies that can excite people and passion as a manufacturer for the sustainability of the earth and humankind."

**MHI Group CSR Action Guidelines**

MHI strives to move the world toward a more secure future. Through our technology, our business practices and our people, we:

**Care for the planet**

We are eco-conscious, and engineer environmentally-friendly technologies that improve sustainability and protect the Earth

**Create a more harmonious society**

We embrace integrity and proactive participation to solve societal challenges

**Inspire the future**

We cultivate global talent who share a vision and desire to move the world forward for generations to come

**Corporate Aspiration**

A global group with the vision to mold an innovative and agile organization that leverages our dedication to technological advancement and engineering excellence in order to deliver solid growth amid constant changes and make a lasting difference in the communities we serve.

**Tagline**

**MOVE THE WORLD FORWARD**

The tagline advocates that we to "Move the world forward" together with our global customers and local communities toward a more sustainable future.

**Reason for Publishing This Report**

MHI Group conducts management based on its firm will to realize its corporate identity statement, "Our Technologies, Your Tomorrow."

To enhance the understanding of our philosophy among shareholders, investors, and a host of other stakeholders, from fiscal 2013 (the fiscal year ended March 31, 2014) we have integrated financial information, including management strategy and operating performance, with non-financial information related to the Group's environmental and social activities into this *MHI Report*.

**Contents**

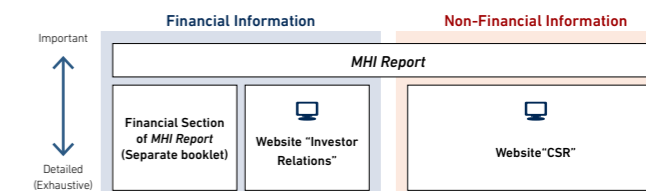
- 2 Introduction**
  - 2 To Our Readers
  - 4 Snapshot of MHI Group
- 6 Management Strategies**
  - 6 President's Message
  - 13 Board of Directors
  - 14 CFO's Message
  - 18 CTO's Message
  - 22 Creating a Management Foundation That Responds to Global Society: ESG Initiatives
- 26 Value Creation through Our Business**
  - 26 Financial and Non-Financial Highlights
  - 28 Eleven-Year Financial and Non-Financial Data
  - 30 Business Segment Highlights
    - 32 Power Systems Domain
    - 36 Industry & Infrastructure Domain
    - 40 Aircraft, Defense & Space Domain
- 44 Corporate Governance**
  - 44 Message from the Outside Directors
  - 46 Basic Approach
  - 48 Corporate Governance Structure and Roles (Including Internal Control Systems)
  - 50 Officers' Remuneration Structure / Risk Management
  - 52 Corporate Data
  - 53 Overseas Head Offices and Networks / Overseas Offices

**Reference Guidelines**

- International Integrated Reporting Council (IIRC)
- > International Integrated Reporting Framework
- Global Reporting Initiative
- > Sustainability Reporting Guidelines (Fourth Edition, or G4)
- Ministry of the Environment of Japan
- > Environmental Reporting Guidelines (2012 version)

**Structure of Information Disclosure**

MHI Report contains information that is important to understanding MHI. More detailed information is available on our website.  
> <http://www.mhi.com/>



**Forward-Looking Statements**

Forecasts regarding future performance in these materials are based on judgments made in accordance with information available at the time this presentation was prepared. As such, these projections involve risks and insecurity. For this reason, investors are recommended not to depend solely on these projections for making investment decisions. It is possible that actual results may change significantly from these projections for a number of factors. Such factors include, but are not limited to, economic trends affecting the Company's operating environment, currency movement of the yen value to the U.S. dollar and other foreign currencies, and trends of stock markets in Japan. Also, the results projected here should not be construed in any way as being guaranteed by the Company.

## TO OUR READERS

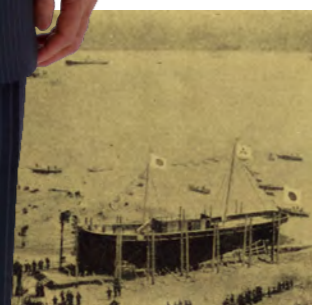


Through our ongoing reform efforts, we aim to become a truly global company that continues to provide value to a changing society.

Hideaki Omiya  
Chairman of the Board

Since the time of its founding, MHI Group has moved in step with society, creating a variety of technologies and products that it has passed on to the next generation. In this manner, we have responded to the world's diverse needs. At the same time, the global business environment in which the Group operates has grown increasingly complex, and the speed of social change is accelerating. Operating in this changing environment, in recent years we have promoted a number of management reforms, revamping our organizational structure and transforming our corporate governance. We are now undergoing a strategic reconfiguration that will transform the diverse businesses, products, and human resources MHI Group has historically cultivated. At the same time, we are leveraging our diversity in a way that is better suited to current needs.

MHI Group will continue working to provide value to society. To this end, all members of the Group are pulling together to promote reforms, with a clear vision of becoming a unique and truly global company.



## 1880s

The Company's history dates back to 1884, when we entered the ship-building business by taking a lease on the government-owned Nagasaki Shipyard. We built up a track record in shipbuilding, constructing Japan's first steel steamship and large cruise ship.



## 1910s

At the Kobe Shipyard & Machinery Works, we built the very first Mitsubishi Model A, Japan's first mass-produced passenger car. We also embarked on the development of transportation equipment, such as steam locomotives and aircraft, as well as internal combustion engines.



## 1930s

As Japan entered World War II, our leading-edge technologies were applied toward the production of military equipment, startling the world with the "Zero" fighter aircraft and the *Musashi* battleship.



## 1950s

After the war, in 1950 the General Headquarters of the Allied Powers broke up MHI into three entities in line with its policy of dissolving the *zaibatsu*. We turned our energies to competing in the development of diverse products, including tankers, scooters, tractors, and air conditioners, thereby contributing to Japan's reconstruction.



## 1970s

We reintegrated our original three companies in 1964. We then developed power plants, monorails, oil-drilling rigs, and other large-scale infrastructure products, supporting Japan's rapid economic growth.



## 1980s

As Japan's period of rapid economic growth came to an end, our own growth stagnated for approximately 30 years. During that time, however, we built the world's first large-scale ultra-energy-saving ships and the world's largest combined cycle power plants, honing the leading-edge technologies that we retain to this day.



## 1990s

In 1999, we delivered a CO<sub>2</sub> recovery plant to Malaysia, channeling our technological capabilities toward the resolution of environmental issues, and we began to proactively roll out our products overseas.



## 2000s

Leveraging our integrated capabilities, we pushed our businesses toward addressing global-scale issues such as infrastructure development and environmental preservation, including the Taiwan High-Speed Rail, the Dubai Metro, and other transportation systems.

# SNAPSHOT OF MHI GROUP

In principle, MHI and its consolidated subsidiaries  
For the year ended March 31, 2017 and as of March 31, 2017

## Net Sales

¥ **3,914.0** billion



## Reduction in CO<sub>2</sub> from Using MHI's Products (Compared with Fiscal 1990 Levels)

**62,592.6** kilotons

## Profit Attributable to Owners of Parent

¥ **87.7** billion



## Number of Employees

**82,728**

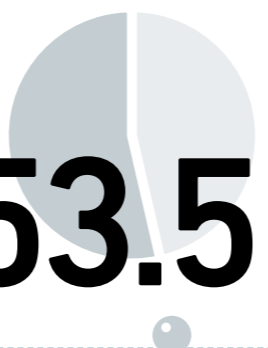


## Free Cash Flows

¥ **104.6** billion

## Overseas Sales Ratio

**53.5%**



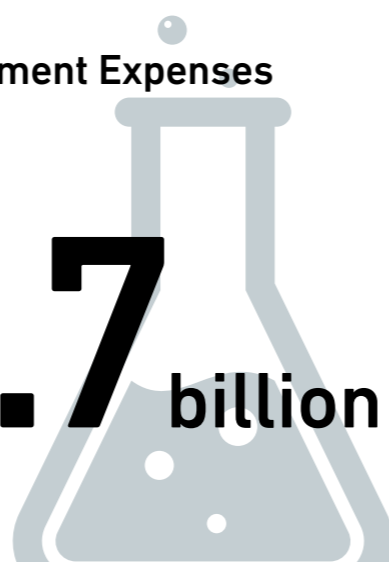
## Ratio of Outside Directors

**45.5%**



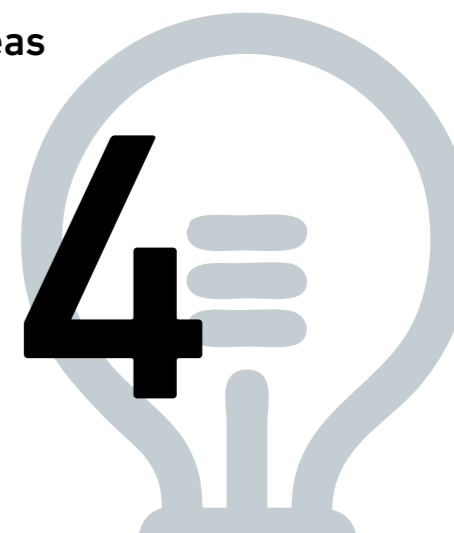
## Research and Development Expenses

¥ **160.7** billion



## Number of Patents Held in Japan and Overseas

**14,004**



## PRESIDENT'S MESSAGE



## Sustained Growth Through Structural Reforms and Global Diversity

### Shunichi Miyanaga

President and CEO

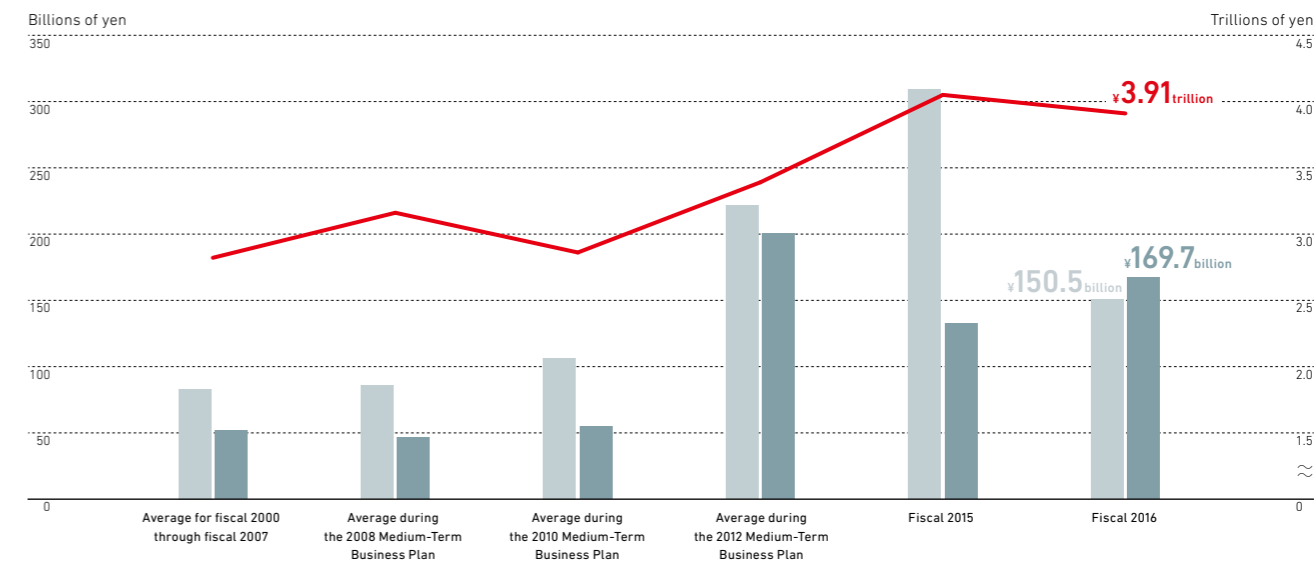
#### What We Have Achieved in Structural Reforms So Far

Since launching our 2012 Medium-Term Business Plan<sup>\*1</sup>, we have carried out a large-scale program of structural reforms and reform initiatives which continue today. To give some background as to why such reforms were needed, we must look back to the 1990s. Until then, MHI Group had continued to grow thanks to domestic demand, driven by the growth of the Japanese economy. However, with the collapse of the "bubble economy," Japan's economy slipped into a prolonged phase of slow growth, and as a consequence our own growth dropped off. In response, we attempted to find breakthrough solutions, but through the first decade of the new millennium we were unable to implement radical measures to turn around businesses with worsening earnings and languishing domestic investment.

As the domestic market for our products reached maturity and demand dropped off, MHI Group had to shift its sights to overseas markets in an unprecedented way to return to a positive growth trajectory. As expected, we faced a completely different level of competition in overseas markets compared to the Japanese market. The risks were greater as well, and for that reason it became imperative that we undertake reforms in our management policies, business execution practices, and business administration processes. We also needed to rethink our corporate culture itself. Clearly, companies that have a strong presence in the face of global competition are those that benefit from scale merits as they skillfully manage their risks.

<sup>\*1</sup>. The plan spanned the three-year period from fiscal 2012 to fiscal 2014.

#### Operating Performance in the 2000s



## PRESIDENT'S MESSAGE

With that in mind, we put in place structures that would enable us to compete against overseas competitors, starting with our 2012 Medium-Term Business Plan (which I helped to formulate as Senior Executive Vice President and then Head of the Presidential Administration Office). We set two overriding targets: scale expansion and profitability enhancement. Specifically, we consolidated what had been separate business headquarters and regional offices to a structure consisting only of business headquarters. Furthermore, we reorganized the business headquarters into larger "business domains." This restructuring move gave us greater freedom in using our management resources and enabled us to make timely investments of resources into areas offering high growth potential and profitability. The outcome was business growth and expansion. We also launched a business evaluation system under which we: a) classified business positions according to business maturity (nascent, prime, or mature) and profitability/financial soundness; and b) set return requirements and optimized our allocation of invested capital commensurate with those positions. In this way, we retooled our business portfolio and improved our profitability.

As a result of these various initiatives, in fiscal 2016 our orders received and net sales both achieved 30%–40% growth compared to fiscal 2011, each increasing by approximately ¥1 trillion. Additionally, our profit levels also improved significantly. Throughout this period we continued to make major investments and for seven consecutive years (fiscal 2010–2016) we successfully secured positive free cash flow, a major achievement symbolizing our corporate transformation.

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 > For details on medium-term operating performance, please see the **Eleven-Year Financial and Non-Financial Data** on page 28.  
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### Actualized Risk and Impending Challenges

These achievements notwithstanding, today we face risks of a different nature and larger scale than ever before as a result of globalization and our entry into new business areas. It is clear that gaps have emerged between the targets we set when formulating the 2015 Medium-Term Business Plan<sup>\*2</sup> and our current situation. A prime example is our large-scale cruise ship construction project. We initially accepted orders in the belief that, based on our track record, we were fully up to the task. Ultimately, however, we lacked sufficient knowledge and expertise to match the facilities and specifications required for large-scale cruise ships in Western markets. As a result we struggled with the construction and incurred significant losses. Another example is the MRJ project<sup>\*3</sup>, our bold initiative to develop Japan's first domestically built passenger jet in half a century, which was spurred by expectations that MRJ-related business will become one of our core strengths in the future. However, in January 2017, as a result of having to modify the aircraft's design in order to meet the latest safety standards, we were forced to push back the delivery schedule of the first production unit from mid-2018 to mid-2020.

#### Performance Forecast for Fiscal 2017

FY	Billions of yen		
	2016 (actual)	2017 (previous plan)	2017 (revised forecast)
Orders received (Overseas sales ratio)	4,275.6 (48%)	5,500.0 (64%)	4,500.0 (55%)
Net sales	3,914.0	5,000.0	4,150.0
Operating income (Operating income ratio)	150.5 (3.8%)	450.0 (9.0%)	230.0 (5.5%)
Profit attributable to owners of parent	87.7	200.0	100.0
ROE	5.1%	10.2%	5.5%

#### Reasons for revision

Mitsubishi Hitachi Power Systems (Thermal power business)	-350.0
Land transportation systems	-220.0
Commercial aircraft	-200.0
Primetals Technologies (Metals machinery)	-120.0
Compressors	-110.0
<b>Total orders</b>	<b>-1,000.0</b>



Another issue is the growing uncertainty that has surrounded the global economy in recent years. Factors include substantial declines in oil prices, subsequent economic downturns in oil-producing nations, reluctance to make large-scale investments in energy-related infrastructure and, in the case of Japan, the strengthening of the yen. Meanwhile, an imbalance has come to the fore between our business scale and fixed costs, attributable to factors such as slower than expected progress with post merger integration (PMI) at Mitsubishi Hitachi Power Systems, Ltd. (MHPS) and other joint ventures, as well as decreased production demand for commercial aircraft. Concurrently, LNG carrier costs have fallen. As a result of these combined factors, our operating income in fiscal 2016 dropped roughly 50% from the previous year, to ¥150.5 billion. For this reason, we have inevitably shelved achieving the targets we had set for fiscal 2017, the last year in our 2015 Medium-Term Business Plan: namely, net sales of ¥5 trillion, operating income of ¥450 billion, and profit attributable to owners of parent of ¥200 billion.

<sup>\*2</sup>. The plan spans from fiscal 2015 through the current fiscal 2017.

<sup>\*3</sup>. MRJ: Mitsubishi Regional Jet

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 > For details about factors behind changes in operating profit in fiscal 2016, please see the **CEO's Message** on page 16.  
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### Current Status of Large-Scale Risks and Their Countermeasures

Despite these disappointments, the outlook is now improving, with the most risk-laden projects drawing to a close and the remaining issues affecting the MRJ business becoming clearer.

The second and final cruise ship in the beleaguered project referenced above was delivered in April 2017, bringing that project to an end. Going forward, based on the findings of our internal evaluation committee, we will limit cruise ship operations and projects to those that can be handled by our own personnel and supply chain. In addition, we will take the knowledge of highly complex ship engineering acquired through this project and apply it to our other businesses to help us achieve technological differentiation.

Furthermore, regarding the arbitration case relating to the San Onofre Nuclear Generating Station in California, in March 2017 an award was passed down that in large part accepted our claims, bringing that issue to a close.

As to the MRJ project, the development phase, which encompasses numerous flight tests, is gradually coming to an end. We are now progressing toward the final hurdle of acquiring type certification (safety approval), while initiatives are underway to improve future business viability. In November 2016 we launched a new MRJ Business Promotion Committee under the direct oversight of the CEO. Through the efforts of this committee, decision making pertaining to important matters and Groupwide support are being carried out with appropriate speed. In striving to enter the full-scale commercial aircraft business, we continue to face the anticipated difficulties;

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 > For details about future directions in the commercial ship business, please see **Business Segment Overview, Industry & Infrastructure Domain**, on page 37.  
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## PRESIDENT'S MESSAGE

but looked at from a different angle, because of the high entry hurdles for this field, it is unquestionably a business which is expected to continue to grow in the future. We intend to do everything possible to make up for the delays experienced until now, and to grow the MRJ business into a major pillar of our operations.

In order to respond to the expanding risks that accompany increasingly large-scale and complex projects, we launched a new Business Risk Management Division in April 2016 and also established a "Business Risk Management Charter" which provides the core risk guidelines for the Group. We also created the Business Risk Management Committee headed by the CEO. In my role I will be deeply involved in the committee's operations, taking the lead in developing a risk management culture and strengthening risk entry point management. Active exchanges are now underway between highly experienced experts in risk management and the business segments, and as the number of personnel with experience in risk management increases, we expect a further buildup of relevant expertise within the Group.

### Fiscal 2017, The Year We Complete Our Structural Reform Agenda

In 2013 we shifted to a domain-based structure, and subsequently made a thorough review of our organizational structure to foster growth as a global enterprise. In April 2017 we then reconfigured our domain structure to incorporate improvements that the review process had deemed necessary. This reorganization was aimed at further Group synergies to strengthen our global competitiveness and engineering operations, and drive radical reforms in our commercial aircraft and commercial ship businesses.

Specifically, from our original four domains—Energy & Environment, Commercial Aviation & Transportation Systems, Integrated Defense & Space Systems, and Machinery, Equipment & Infrastructure—we reorganized into three new domains: Power Systems, Industry & Infrastructure, and Aircraft, Defense & Space. This was achieved by reallocating our strategic business units (SBUs) that handle business for individual products.

> For details about future directions in the MRJ business, please see **Business Segment Overview, Aircraft, Defense & Space Domain, on page 41.**

> For details related to risk management, please see **Risk Management on page 51.**

### Domain Restructuring

	Billions of yen			Billions of yen	
	Net sales	Operating income		Net sales	Operating income
Energy & Environment	1,470.4	110.5	➔	Power Systems	1,448.4 / 108.1
Commercial Aviation & Transportation Systems	515.3	-51.9		Industry & Infrastructure	1,747.0 / 50.0
Integrated Defense & Space Systems	470.6	27.9		Aircraft, Defense & Space	703.4 / 0.9
Machinery, Equipment & Infrastructure	1,438.0	72.5			

Note: Operating performance figures are actual for fiscal 2016.

> For details on domain restructuring, please see the **Business Segment Highlights on page 30.**

Operations in the Power Systems domain center on the thermal power generation business of Mitsubishi Hitachi Power Systems, Ltd. (MHPS) and the technologically affiliated businesses of aero engines and compressors. Through these business alignments we are seeking synergies within the turbo machinery business as a whole and reinforcement of our after-sale servicing operations. We are also striving to improve MHPS's earning capacity via consolidation and reorganization of the company's bases and through greater use of IoT and AI.

The Industry & Infrastructure domain essentially carries on the business previously conducted within the Machinery, Equipment & Infrastructure segment, with new emphasis on expanding earnings through improved portfolio management of its various machinery and equipment businesses and the creation of global niche products. In addition, by consolidating into this domain those businesses heavily oriented toward EPC (engineering, procurement, construction)—businesses in commercial ships, chemical plants, transportation systems, etc.—we will be able to integrate and strengthen our engineering operations going forward. In our commercial ship business, by forming alliances with dedicated shipbuilders, we will pursue synergies between MHI's engineering strengths—primarily our energy efficiency and environmental protection technologies—and the construction capabilities of our alliance partners.

The new Aircraft, Defense & Space domain oversees business handled by the earlier Integrated Defense & Space Systems segment, as well as operations in commercial aircraft and the MRJ that were subsumed within the Commercial Aviation & Transportation Systems segment. By transferring the latter businesses, we now strive for synergies within aircraft operations and more effective use of management resources. At the same time, to carry out reforms in our commercial aircraft business's supply chain, we will strengthen use of the shared technology framework launched in April 2016 to integrate Companywide technologies, marketing, procurement, etc. Specifically, we have shifted our commercial aircraft procurement functions to the Value Chain Headquarters, and we are now seeking new suppliers while implementing reforms in our procurement processes. Additionally, it should be pointed out that upon its launch, the Aircraft, Defense & Space domain was not placed under the charge of an appointed head officer; rather, this domain is directly managed by the CEO, a result of the MRJ business being placed under the CEO's oversight. Because businesses in this domain are all developed over long periods of time, under the new structure we will target the early formation of strong foundations for such development as well as the stabilization of segment earnings.

Fiscal 2017 is the third and final year of our 2015 Medium-Term Business Plan, and will be a year in which the overall structural reform agenda will be brought to fruition. Although some follow-up measures relating to the MRJ will carry over into fiscal 2018, we intend to complete our Groupwide structural reforms and remedial measures for dealing with problematic businesses all within fiscal 2017. Then, starting in fiscal 2018, we hope to achieve a dynamic shift to a new phase of sustained growth.

> Please see **Business Segment Overview, Power Systems Domain, on page 32.**

> Please see **Business Segment Overview, Industry & Infrastructure Domain, on page 36.**

> Please see **Business Segment Overview, Aircraft, Defense & Space Domain, on page 40.**



## PRESIDENT'S MESSAGE

### Becoming an Organization Capable of Sustained Growth by Adapting to Change and More Diversity

MHI has a history stretching back more than 130 years. Managing a complex conglomerate is perhaps more complicated than managing a dedicated manufacturing business, but there are aspects in which being a conglomerate offers distinct advantages: our ability to respond to social changes or diversity needs, for example.

Today, I believe we must seek new ways to thrive as a global conglomerate for machinery and engineering while integrating our recent experiences and measures to respond to the significant and dramatic changes we expect in our industry and, more broadly, in the world going forward.

As mentioned previously, MHI has traditionally achieved growth in the domestic market in tandem with Japan's economic growth. Today, there are still areas within the Japanese market where our products and technologies can thrive, and going forward we will continue to strengthen those areas. However, at the same time we need to allocate more of our management resources into products and businesses that have growth potential in overseas markets. As innovations take place in many different fields, particularly ICT, it will be crucial for us to flexibly incorporate the most up-to-date technologies and expert knowledge into our engineering business—our area of foremost strength—and into the technologies that form the core of our products. In other words, we need to be an organization capable of two things: maintaining technologies cultivated over a long period of time, while being highly flexible and in step with changes in the world around us.

To grow our business overseas, beyond the "global" perspective, it is also essential to take a local perspective attuned to each specific region. In fiscal 2018 we are due to relocate our global headquarters functions to Tokyo's Marunouchi district. With this relocation we will focus on strengthening our global management structure while delegating authority to and clarifying the responsibilities of each local base. In this way we aim to seamlessly combine global management with local management and regional characteristics.

For MHI to continue to create value while meeting society's needs, in addition to developing the organizational structure outlined above, we will also need the right people. As it becomes increasingly difficult to prolong the lifespan of—i.e., demand for—a product over long periods, it is also becoming more important to have human resources who can swiftly understand and adapt to society's evolving needs. To develop human resources that can take the lead in moving the organization forward and overcoming new challenges, it is necessary to create an environment conducive to continuous human resource development. This means communicating and sharing with employees what goals the Company is pursuing, identifying ways to achieve these goals, and encouraging employees to build experience in taking on and overcoming challenges in multiple fields.

Through our agenda of ongoing structural reforms, we have now laid the groundwork for taking our next big step. In our next medium-term management plan we will continue to give our best in making progress toward a phase of sustained growth, including the growth of our human resources and knowledge base.

Please watch the video on the website below.

> <http://www.mhi.com/finance/mr2017>

## BOARD OF DIRECTORS

As of July 1, 2017

1. Chairman of the Board <b>Hideaki Omiya</b>	2. President and CEO*1 <b>Shunichi Miyanaga</b>	3. Director, Executive Vice President (CFO*2, Head of Business Strategy Office) <b>Masanori Koguchi</b>	4. Director, Executive Vice President (CTO*3) <b>Michisuke Nayama</b>
5. Director, Full Time Audit and Supervisory Committee Member <b>Seiji Izumisawa</b>	6. Director, Full Time Audit and Supervisory Committee Member <b>Toshifumi Goto</b>	7. Director <b>Naoyuki Shinohara</b> (Professor, The University of Tokyo, Policy Alternatives Research Institute)	8. Director <b>Ken Kobayashi</b> (Chairman of the Board, Mitsubishi Corporation)
9. Director, Audit and Supervisory Committee Member <b>Nobuo Kuroyanagi</b> (Senior Advisor, The Bank of Tokyo-Mitsubishi UFJ, Ltd.)	10. Director, Audit and Supervisory Committee Member <b>Christina Ahmadjian</b> (Professor, Hitotsubashi University Graduate School of Commerce and Management)	11. Director, Audit and Supervisory Committee Member <b>Shinichiro Ito</b> (Chairman of the Board, ANA Holdings Inc.)	*1. CEO: Chief Executive Officer *2. CFO: Chief Financial Officer *3. CTO: Chief Technology Officer



> For details on human resource development, please see **Creating a Management Foundation That Responds to Global Society: ESG Initiatives, Material Issue 2: The Use of Global Human Resources**, on page 22 and 24.





# CFO'S MESSAGE



## Focusing on Cash Flow Management and Optimal Financial Balance to Increase Corporate Value in the Medium-to-Long Term

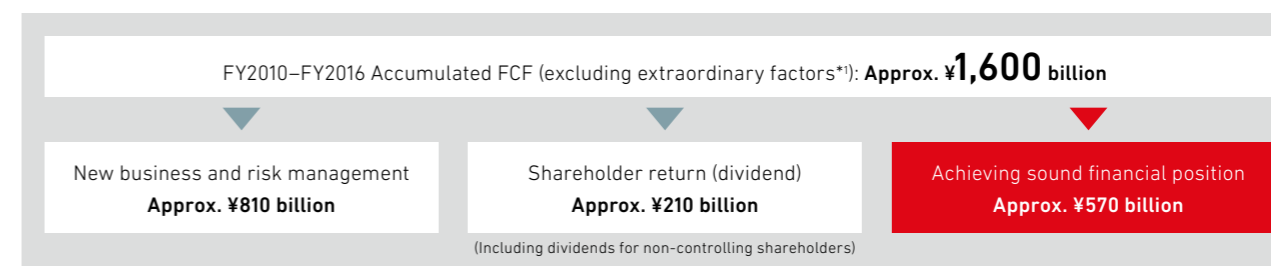
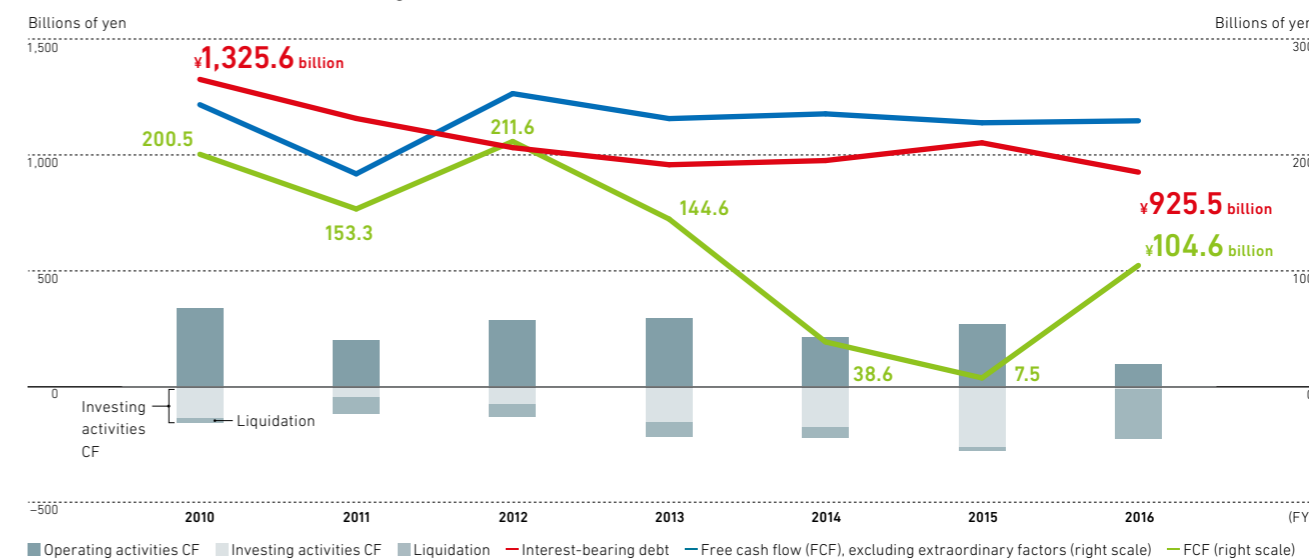
Masanori Koguchi  
Member of the Board,  
Executive Vice President and CFO

### Steady Progress Made in Strengthening Our Financial Foundations

From around 2010, MHI Group began a major shift in management focus toward portfolio optimization based on a strategic business evaluation system and a new emphasis on cash flow. The shift was carried out in order to strengthen our financial foundations in preparation for future growth-oriented investments, and to build up risk resilience amid intensifying global competition and the aftermath of the global financial crisis that began around 2007. Between fiscal 2010 and fiscal 2016, we successfully secured a cumulative free cash flow near ¥1.6 trillion (excluding extraordinary factors\*). This was achieved primarily through improvement of profitability, resulting from concentration into our core competencies, and enhancement of balance sheet efficiency. Of the total free cash flow, some ¥810 billion has been allocated to new businesses and risk resilience. A further ¥570 billion was committed to achieving financial soundness and approximately ¥210 billion went to shareholder dividends. Our debt/equity (D/E) ratio in

fiscal 2016 meanwhile was 44%, the lowest level in our history, and our interest-bearing debt was down 40% compared to fiscal 2009. These achievements were made despite undertaking large-scale future investments while setting aside funds to deal with our cruise ship construction business and other risk issues. Regarding development of the MRJ business—an undertaking that requires large investment outlays—our fundamental financial policy is to rely wholly on our own funds, i.e. without resorting to loans. This stance is taken in consideration of our determination to develop the MRJ into a core business. Taken together, these various accomplishments demonstrate that we are truly making steady progress in improving our financial soundness.

Cash Flow (CF) and Interest-Bearing Debt



\*1. Expenditures relating to the cruise ship construction business, development of the MRJ, and the power plant project in South Africa; also, earnings in fiscal 2016 accrued from asset management initiatives.

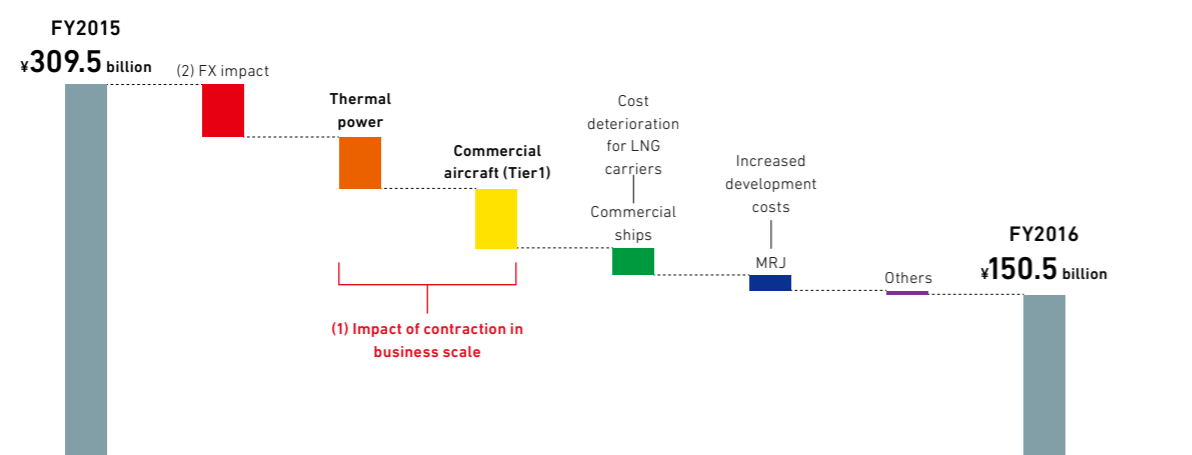
## CFO'S MESSAGE

## Imbalance between Business Scale and Balance Sheets / Fixed Costs

This progress aside, in fiscal 2016 a new issue came to the fore. In our quest for MHI Group to develop a strong presence in the global market, we have simultaneously pursued business scale expansion and higher profitability; and in the process, we have built up a corporate structure toward our targeted business scale of ¥5 trillion. This has resulted in the expansion of our balance sheets and fixed costs. Meanwhile, due to the sluggish global economy and longer time needed to complete domestic coal-fired power plant projects, the time span from order receipt to booking to sales, which

was originally about 2 years, has generally expanded to around 2.5 or even 3 years. This means that orders which would normally have been booked to sales in fiscal 2016 partially carried over to fiscal 2017 or later. As a result, sales in fiscal 2016 were sluggish, leading to imbalances between net sales on one hand, and balance sheets and fixed costs on the other. This was a key factor in the erosion of our earnings for the year. In response, for the time being we will strive first to squeeze our balance sheets and fixed costs, targeting higher earnings even at our current business scale.

## Operating Income



(1) Decline due to imbalance between business scale and balance sheets/fixed costs, following delayed post merger integration (PMI) at major joint venture (JV) businesses. Other factors included decreased activity in commercial aircraft (Tier1) business.

(2) Forex movements mainly affected the 'Commercial Aviation & Transportation Systems' and 'Machinery, Equipment & Infrastructure' segments.

## Creating Value from Balance Sheets Through Asset Management

In addition to reducing this "waste" from our balance sheets as described, we are further stepping up efforts to squeeze our balance sheets and make them more efficient from a perspective different from before. Principally, we aim to create value from our balance sheets through effective asset management. "Asset management" in this sense doesn't mean simply selling off properties and undertaking equivalent exchanges. It consists of finding new and unprecedented value from pre-existing assets in parallel with cash generation, through collaboration with other companies, asset shuffling, and other measures.

To give an example, in February 2017 we spun off the real estate operations of Ryoju Facility and Properties Co., Ltd., a wholly owned MHI subsidiary, and sold 70% of the new company's shares to West Japan Railway Company (JR West). We did so in the belief that through collaboration with JR West, which considers real estate one of its core businesses, higher value can be anticipated from

the transferred assets. Meanwhile, in March 2017 we sold our Head Office Building in Yokohama. Our plan is to rebuild our Dai Ichi Tamachi Building in Tokyo to serve as a strategic base consolidating our business promotion and support functions. By shuffling our assets this way, we aim to gain greater utility from our office assets in the Tokyo metropolitan area, and to garner higher added value and profitability through expansion of total floor space.

Through these approaches, in fiscal 2016 we generated approximately ¥197 billion in cash, comprising ¥79 billion from real estate assets and ¥118 billion from investment securities. In our 2015 Medium-Term Business Plan, we had set a target of creating cash flow—operations in real estate and investment securities combined—of ¥200 billion over the course of three years. Having achieved ¥197 billion through fiscal 2016, we will aim in fiscal 2017 to come up with further innovative approaches for generating greater value and cash flow.

## Reinforcing Our Regular Earning Capacity and Financial Foundation in the Short-to-Medium Term

In fiscal 2010 MHI launched a "strategic business evaluation system" under which the Company has been reviewing how it allocates management resources. From the perspective of profitability, I believe that considerable progress has been made in optimizing our business portfolio; however, going forward we must maintain keen awareness of where society's needs exist. Beyond simply growing businesses that offer robust revenues while reducing capital investments into businesses with low profitability, we have now reached a stage where we must consider how we can change our portfolio to respond to society's demands. In order to develop business on a global scale, there will surely be occasions when we will have to take up major new challenges: for example, entering into new businesses or pursuing M&A opportunities. As CFO, I would like to see the Company in a position to utilize about ¥1 trillion in preparation for such needs. To achieve such a position, I strongly believe that carrying out cash flow management and maintaining a sound financial structure are key objectives.

As mentioned before, in fiscal 2017 and beyond we will continue to further squeeze our balance sheets to enable us to move forward, on the strength of our own efforts, without being subject to external

factors. We will take effective measures for the short-to-medium term. First, as an issue requiring an immediate response, we will strive to curb unnecessary cash outflows. While pursuing enhanced efficiency, systemization, and outsourcing of routine work, we will maximize use of our Group resources and internalize work currently performed externally.

Second, as a short-term undertaking, we will strive to achieve greater efficiency throughout our production systems. In addition to consolidating and reorganizing our production bases and optimally reallocating our internal resources, we will improve our productivity by reviewing our business processes, as a way of improving our cash conversion cycle.

In parallel with this, in the medium-to-long term, we will also take steps to generate revenue and cash flow from our balance sheets by making broad use of our diverse assets, and not merely using them internally. This will involve not only tangible fixed assets but also technologies, intellectual property, and expertise.

By steadily carrying out measures such as these, I hope to make our balance sheets—a burden until now—a source of revenue as quickly as possible.

## Dividend Policy

From my vantage point as CFO, I believe the ideal situation any company should aim for is what I call a "1:1:1" proportion. This means an equal balance between the three constituent factors of business scale, scale of assets, and market value. At MHI, our scale of assets currently exceeds our business scale, and our market value is significantly smaller than both of these. As such, what we need to do first is reduce the scale of our assets, increase our earning capacity, and boost our operating and net income levels. Furthermore, for increasing our market value, I believe that shareholder returns should be one of the most important considerations. As I noted earlier, since fiscal 2010 we have accrued close to ¥1 trillion in free cash flow from business income, etc.; and of that amount we have allocated roughly ¥210 billion—around 20%—to shareholder returns. Although this is by no means a particularly high ratio, as a company in the process of undertaking robust management reforms, I hope to increase our shareholder

value over the medium-to-long term by strengthening our financial structure through use of retained earnings to expand our business scale, preparing for potential risks and creating new businesses for the future.

Our intention of course is to pursue a dividend policy that accords prime weight to shareholder returns by boldly implementing management reforms and raising our ROE. In the near term, however, in light of our investments into growth businesses and the like, we aim to distribute dividends at a payout ratio of 30%.

Based on that position, in fiscal 2016 we disbursed an annual dividend of ¥12 per share, unchanged from the previous year. Once our corporate makeup reaches the appropriate proportions, we will be able to achieve our vision as a leading company that is fully able to compete in the global arena. We appreciate the continued understanding and support of our shareholders and investors as we progress towards that goal.

## CTO'S MESSAGE

# Promoting Technology and Knowledge-Sharing among Business Areas and Making Product Diversity an MHI Strength

Michisuke Nayama  
Executive Vice President and CTO



### Working to Make Product Diversity a Major Strength

In April 2016, MHI launched a "Shared Technology Framework" consolidating the Company's technologies as well as marketing, procurement and other functions. The Shared Technology Framework, which is overseen by the Chief Technology Officer (CTO), encompasses the Technology Strategy Office, Marketing & Innovation Headquarters, Value Chain Headquarters, ICT Solution Headquarters, and Research & Innovation Center. The new framework seeks to strengthen MHI's technological and marketing infrastructures, optimize the value chain across the Company (including in procurement), and reinforce the competitive strength of MHI's businesses in the medium-to-long term.

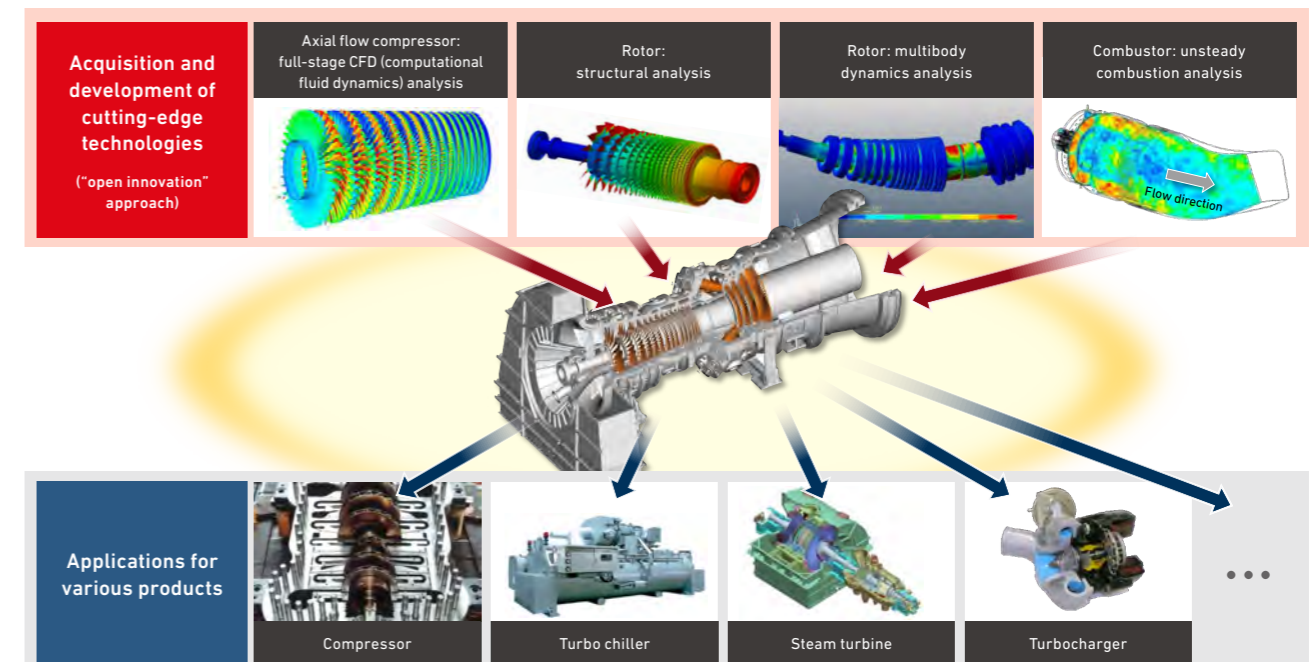
In fiscal 2016, we focused our efforts on bringing each of the components into alignment. We held discussions with all new framework members, debating how to improve the Companywide technology structure. From these discussions a number of common issues emerged which came to determine the overall mission, vision, and strategy for the new framework. We then addressed how these could be applied across all organizational units.

Already, synergies are beginning to emerge from this unification process. In the Marketing & Innovation Headquarters, for example, joint discussions between employees with backgrounds in marketing and R&D-focused engineers have led to a number of new solutions to meet society's needs. We have also been able to significantly improve and expedite the process of proposing new products and services to customers.

MHI is sometimes seen as a collection of small or medium-scale companies, with weak horizontal connections between businesses. In the days when the Japanese market was growing, this structure was acceptable. However, in the current environment, with a shrinking domestic market, there is a limit to how much can be achieved from a system of highly specialized knowledge of particular fields. It is therefore necessary to make active use of MHI's overall expertise and technologies in a holistic manner. In order to make this approach more effective, the cross-disciplinary business integration enabled by our Shared Technology Framework will be vital.

Producing such a wide array of products is sometimes seen as disadvantage. However, I believe the technology developed and experience gained from developing such products can be an inherent strength. This is particularly true for energy-related products such as gas turbines and defense and space related products, where the most advanced technologies are demanded. Such technological advances can frequently lead to the development of further new products and businesses in other fields. This also applies to procurement and marketing, where synergies can be achieved that would not be possible for manufacturers specializing in only one area. In this way, we intend to employ the cross-disciplinary developments of our Shared Technology Framework as the means to turn a "weakness" into a "strength."

### Applications of Cutting-Edge Technologies to Diverse Products (Example: Gas Turbine)



## CTO'S MESSAGE

## Dual Challenges: Being a Technology Leader While Applying Technological Base Groupwide

Under the Shared Technology Framework, we develop prototypes and also apply them across multiple businesses. We are not only accumulating knowledge of cutting-edge technologies like IoT and AI for individual businesses, but also working to leverage this expertise developing prototypes across the Group and in various markets.

One example is the project underway at the UK and Denmark factories of MHI Vestas Offshore Wind, a joint venture in offshore wind power systems with Vestas Wind Systems. Under this project, engineers from the Shared Technology Framework were dispatched to the JV's three plants. At each plant they diagnosed the manufacturing processes and then developed and introduced systems necessary for improving those processes. As a result, "takt time" (i.e. the production time required to meet ongoing customer demand) was reduced by more than 50% in some cases, thereby enabling a significant improvement in capacity without expanding facilities. This scheduling system was originally developed for production sites at MHI's factories in Japan. It evolved out of

small-scale production sites but has been successfully applied at various businesses, including in the production of wings for the Boeing 787. By building up a track record of this kind, we can improve the cohesive strength of MHI Group, and pursue further sharing of technical expertise and best practices.

In recent years, we have heard concerns about our technological strength, particularly in relation to various risk-bearing projects. While this does not apply to fields such as gas turbines, aircraft, space launch vehicles, and defense equipment, all of which require cutting-edge technologies, there is concern about areas where the domestic market is shrinking. In particular we are seeing a gradual decrease in personnel, including engineers, involved in these businesses. Responding to this across the entire Company is another important mission of the Shared Technology Framework. We intend to tackle this concern directly by significantly raising our technological capabilities.

## Innovation Center (Tentative Name) Incorporating Outside Knowledge and Expertise

MHI's product development process requires a clear time-scale and key performance indicators (KPIs) to measure progress and success. However, this approach may be difficult to marry with the development of new products or businesses over a long time period. Today various domestic-focused business environments have reached maturity, making it difficult to foresee significant growth in future. In response, we believe it is necessary to make investments for the long term, which will break down our standard business operations in a positive sense. We have therefore decided to establish a new Innovation Center (tentative name).

Since we launched the Shared Technology Framework, we have focused on open innovation, increasing investment outlays, and enhancing our workforce. We have also increased the number of business partners we work with, especially overseas. The center will further develop these approaches, and will pursue the acquisition

of new knowledge and expertise through tie-ups with domestic and global partners that will lead to significant breakthroughs.

In order to elevate our research activities and create more opportunities, we plan to make the center a wholly owned corporate entity specializing in R&D. By giving a free hand to project managers hired from outside the Company, the new facility will be able to absorb the latest knowledge and ideas, and accelerate research and development of a common technological base and new products. While we are not currently considering any immediate large-scale investments, we have selected a number of targets that, if realized, have the potential to bring about significant changes. We are taking a long-term view and expect that innovations will emerge that could be game-changers for the market in the future.

## Building a Technological Base to Respond to Society's Future Needs

At MHI, our culture has traditionally focused on understanding society's needs and then developing products in response, rather than the "top-down" approach of establishing a technological concept and pursuing development around it. The very foundation of MHI in shipbuilding came about from demand for ships to support the Company's other businesses. This then led to the development of engines, boilers, and power systems. However, if customers are to look to MHI to fulfill their emerging needs, we must continuously improve our technological capabilities to respond to their expectations.

One area in which society's needs are likely to increase in the years ahead is the oil and gas market. Today, the market is sluggish due to the fall in crude prices, but we are making proactive moves into areas where technologies and products we provide offer strong potential in the medium-to-long term. In the energy field, the use of renewable energy is expanding, and we believe it

has the potential to become a baseload power in the future. When that happens, the roles of thermal and nuclear energy will change substantially. Also, as demand for electricity strengthens, the proportionate share occupied by electricity as an energy source will further increase. In response to this, MHI will pursue research into systems for controlling the operability of thermal power plants, auxiliary services, and so on.

My role is to oversee the establishment of our technological base and the pursuit of new innovation. Even if outstanding product ideas are produced from within the various business segments, they cannot be fully realized without the necessary technological base and generation process for innovation. To enable new products, services, and businesses to flourish in the near future, we will contribute to the expansion and strengthening of our businesses with a long-term perspective.



# CREATING A MANAGEMENT FOUNDATION THAT RESPONDS TO GLOBAL SOCIETY: ESG INITIATIVES

To evolve as a truly global corporation, MHI Group is creating a management foundation that achieves harmony with global society, taking the environment, society, and governance (ESG) into account. We are also working to achieve sustainable growth by accommodating the dramatic environmental changes and broad-ranging diversity occurring around the world to generate high added value for society.

## Identifying the Three Material Issues

In fiscal 2014, MHI Group identified three material ESG issues that significantly affect both society and corporate value, taking into account the current external environment and the Group's own situation with regard to business execution and progress on globalization. From the viewpoint of society, this process incorporates various international standards, including ISO 26000 and the Global Reporting Initiative (GRI), as well as stakeholder opinions and mega trends. At the same time, from a business viewpoint we have conducted hearings of individual divisions, performed risk analysis from a business perspective, and obtained management approval as one aspect of the formulation of business strategies.

Through initiatives involving these three material issues, we are creating the management foundations to adapt to global society.

## Material Issue 1 An Optimal Governance Structure Based on Our Corporate Culture

- An optimized organization to continually contribute to society through business
- The assurance of fair operating practices and appropriate labor practices

### Objective

Ensure an organizational culture in which values are shared globally and universally

### Strategic KPIs

- Instill globally consistent policies that conform with the international code of conduct (establish universality)
- Enhance transparency (assure universality)
- Enhance disclosure and stakeholder engagement

### KPI: Number of whistleblowing cases

We have established the MHI Whistleblowing Hotline, which is available to all employees, including those of Group companies, and the MHI External Whistleblower Hotline. The Compliance Committee secretariat promptly investigates and responds appropriately to all reports made to these hotlines.

FY/cases			
Number of whistleblowing cases, by Type	2014	2015	2016
Labor and the work environment	48	39	42
Overall discipline and breaches of manners	49	24	28
Transaction-related laws	14	8	11
Consultations and opinions	26	11	3
Other	48	49	34
Total (number of corrections and improvements)	185 (110)	131 (85)	118 (64)

## Material Issue 2 The Use of Global Human Resources

- The attraction and development of human resources with the ability to respond to globalization
- Diversity and equal opportunity, including the empowerment of female employees

### Objective

Be an organization that embraces diversity (Ensure that barriers to diversity are removed)

### Strategic KPIs

Improvement in diversity-related indicators

### KPI: Number of female managers

In July 2014, MHI set a target to increase the number of the Company's female managers (in positions of section manager and higher) threefold from the current level by 2020, and is promoting the active participation of women in the workplace in conjunction with its pursuit of diversity management.

FY/people		
2014	2015	2016
85	102	126

\* In principle, these figures include Mitsubishi Heavy Industries, Ltd., and Mitsubishi Hitachi Power Systems, Ltd.

## Material Issue 3 Response to Mega Trends

- Innovation and quality control to meet global needs
- Enhanced safety and security, including improved information disclosure and transparency

### Objective

Enact strategic measures and business operations that meet the needs of global society

### Strategic KPIs

Improvement in stakeholder evaluations (SRI surveys, customer satisfaction surveys, etc.)

Please see our segment-specific strategies (pages 35, 39, and 43) for examples of initiatives to address these material issues in our three business domains. Please see our website for information on CSR initiatives and detailed data on the environment, society, and governance (ESG). This site contains information on our policies and strategies for CSR and ESG, various initiatives, and ESG data related to socially responsible investment.

CSR site > <http://www.mhi.com/company/csr/index.html>

## Material Issue 1 An Optimal Governance Structure Based on Our Corporate Culture

### Conforming with International Codes of Conduct in Japan and Overseas

In 2004, MHI joined the United Nations Global Compact. We are committed to the spread and practice of the Compact's 10 principles spanning four basic areas—human rights, labor, environment, and anti-corruption—and are pursuing business activities in conformance with international codes of conduct.

In terms of corporate governance, we aim to develop "Japanese-style global management," focusing on the improvement of management soundness and transparency, as well as on diversity and harmony. To this end, to date we have carried out a number of reforms; we have increased our number of outside directors, revised our executive compensation system, and transitioned to a company with an Audit and Supervisory Committee.

As part of our compliance efforts, in 2001, we established the "MHI Compliance Committee" and developed the "MHI Compliance Guidelines." In 2015, we established the "MHI Group Global Code of Conduct." As a global company, MHI Group employs approximately 83,000 individuals from different backgrounds, nationalities, and cultures.

We recognize MHI Group needs to make the most of diversity and operate with a single corporate culture that enables it to compete successfully in the global market.

The Code of Conduct describes how MHI Group employees should conduct themselves in such categories as fair competition, anti-corruption, and compliance with export-related laws and regulations.

In the second half of fiscal 2016, we developed the e-Learning course of the said Code of Conduct to facilitate deeper understanding.

Furthermore, in fiscal 2016, we placed compliance promotion specialists in our strategic regional headquarters in each area—China, Asia Pacific, Europe, and North America—to promote global compliance activities adapted to the characteristics of their respective countries and regions. In August 2016, we held our first introductory training in Shinagawa for specialists responsible for audits and compliance in each region. Each member made a presentation on efforts in their region. One participant stated, "This was a good opportunity to interact with members from other regions who we don't normally get a chance to communicate with, and it was very motivating to see what the situation is like in other regions. I think it was a very worthwhile experience." In short, we will continue to promote global compliance in cooperation with the members in each region.



Compliance introduction training for local staff in individual regions

### Dialogue with Stakeholders

MHI seeks to incorporate into its management activities input from a host of stakeholders, including customers, suppliers, business partners, Group employees, and members of local communities. Through our business activities, we communicate with a variety of stakeholders on a daily basis. In addition, through dialogue with outside experts on CSR and social issues, we actively seek to reflect society's perspective. In fiscal 2016, we engaged in dialogue with two outside experts with extensive knowledge in such areas as human rights, the environment, and governance.

During the dialogue, Mr. Nieuwenkamp introduced leading examples of other companies' due diligence efforts in the supply chain, particularly with regard to minerals involving a high risk of human rights abuses. As a first step, he advised identifying and recognizing areas of potential risk by risk-mapping the supply chain. Mr. Thomas noted the fact that MHI had not come head to head with serious human rights problems to date was a good sign. In order to respond appropriately to such issues if they occurred, however, he suggested it was necessary to constantly remain vigilant about human rights risks throughout MHI's extensive business activities. Going forward, we plan to continue incorporating such stakeholder opinions into our management.

**Date:** September 14, 2016

**Overseas experts:** Mr. Roel Nieuwenkamp (Chair, OECD Working Party on Responsible Business Conduct)  
Mr. Thomas Thomas (CEO, ASEAN CSR network)

**Dialogue contact:** CSR division

**Facilitator:** Mr. Saul Takahashi (Japan Representative, Business & Human Rights Resource Centre)



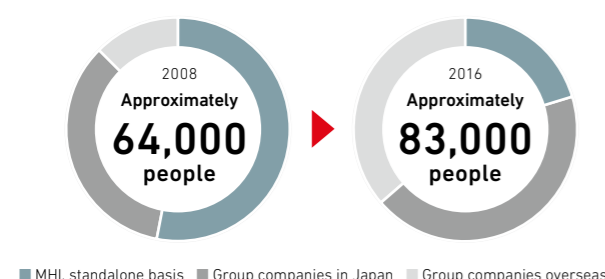
## CREATING A MANAGEMENT FOUNDATION THAT RESPONDS TO GLOBAL SOCIETY: ESG INITIATIVES

### Material Issue **2** The Use of Global Human Resources

#### Establishing a Global HR Department

The Group's composition of human resources has changed significantly, in line with the transition to business companies, the onward march of globalization, and an increase in mergers, acquisitions, and joint ventures.

#### Composition of Employees in 2008 and 2016



To date, MHI Group has sought to create a system for cultivating global human resources that takes business needs into account, with initiatives aimed at enhancing responsiveness on both the skill and mindset fronts. Our global developments in recent years have necessitated a number of additional measures. These include cooperating with people in charge of human resources at overseas Group companies from the planning stages to effectively utilize our resources, introducing and utilizing an effective recruiting platform that leverages the Company's brand, and liaising with overseas business schools to strengthen the local human resource development function. We are nearly finished with our creation of a global human resource database that contains HR information on some 83,000 employees at 180 companies on a consolidated basis, including those overseas. Through this database, we will be able to conduct statistical analyses from various angles, including by region and type of work.

#### Promoting the Active Participation of Women

MHI is promoting the active participation of women in the workplace in conjunction with the Company's pursuit of diversity management.

Our current phase of activity addresses the following themes: expanding the number of female employees, offering career support for employees raising children or providing nursing care by setting up a system that does not interrupt careers, and fostering a corporate culture that supports an active role for female employees. Moreover, we are considering flexible working styles that facilitate a quick return to work after childbirth or raising children, and creating a framework and an environment to further promote the careers of female employees.

In July 2014, MHI set a target to increase the number of the Company's female managers (in positions of section manager and higher) threefold from the current level by 2020. MHI systematically cultivated female employees for managerial positions, so



Rolling out measures that incorporate Group companies overseas (HR conference in Europe)

As well as expanding measures that we have already been implementing, in April 2017, we launched a new Global HR Department as a specialized organization to further strengthen and promote human resource management (eg. talent management) globally on a consolidated Group basis. Seeking to anticipate future changes in the business environment and personnel structure, the scope includes overseas acquisitions and joint ventures. In addition to further grassroots efforts to utilize human resources regardless of whether they are located in Japan or overseas, the new department aims to accelerate measures to maximize resources at the global level, particularly high-level executives.

As one example, we are introducing a platform system in the talent management field to make full use of the human resource data we are accumulating, as outlined above. For instance, the new system enables us to scour the Group in Japan and overseas for candidates to take over important management positions. At the same time, we are formulating common Group HR guidelines that will form the basis for these measures.

the number of female managers is rising steadily: 85 in fiscal 2014, 102 in fiscal 2015, 126 in fiscal 2016, and 149 in fiscal 2017.\*

\* In principle, these figures include Mitsubishi Heavy Industries, Ltd., and Mitsubishi Hitachi Power Systems, Ltd.



Project team to reinforce hiring of women in the sciences

### Material Issue **3** Response to Mega Trends

#### Domestic and Overseas Market Initiatives

To promote our further growth as a global company, we launched the Marketing & Innovation Headquarters in fiscal 2016. The Marketing & Innovation Headquarters conducts surveys to ascertain changes in the business environment and technology trends, as well as social trends and technological needs in specific regions around the world, and then analyzes market

opportunities and risks for MHI Group. In addition to creating diverse strategies and ideas for expanding and strengthening our businesses in Japan and overseas, the Marketing & Innovation Headquarters will propose business ventures, products, and services, and validate their viability in cooperation with customers and business partners.

#### Increasing Open Innovation

MHI's FY2015 Business Plan called for the Company's Research & Innovation Center to serve as an integrated laboratory with two pillars of activity: to enhance the ability to innovate proactively by making use of outside capabilities throughout the value chain, and to strengthen the technology platform by concentrating on comparative advantages in global markets.

Specifically, the R&I Center is concentrating on the development of elemental technologies that can be applied to multiple products in the areas of materials, fluids, and heat transfer, as well as manufacturing process technologies throughout the

value chain. This is achieved by collaborating with leading universities and research institutions in Japan and overseas. We are already applying large-scale numerical simulation technology, which is a key to product development and design in such areas of gas turbines. By collaborating with leading universities and research institutions around the world, we intend to reduce our development period for technologies and products.

To continue developing products that will win out in global competition, we aim to augment development efficiency by increasing our number of collaboration partners and fields.

#### Global Expansion of Manufacturing Technologies Transfer

In pursuing the global expansion of technologies, we recognize that simply transferring the technologies and expertise we have cultivated in Japan is unlikely to go smoothly. The Value Chain Headquarters supports the local adaptation of technologies and transfer of know-how, taking into account the capabilities of local

factories and suppliers. Such support includes revising manufacturing specifications, developing the supply chain with alternative parts and materials available locally, and providing training to workers and suppliers.

#### Innovation Center (Tentative Name)

In a global market changing at dizzying speeds, in considering MHI Group's long-term growth strategy, which involves multiple companies that are strong in the fields of machinery and engineering, we must go beyond efforts from within MHI Group. Additionally, we will draw upon cutting-edge knowledge from outside MHI Group. To realize such initiatives, we are planning to establish the Innovation Center (tentative name). This laboratory will have a higher degree of freedom than traditional R&D

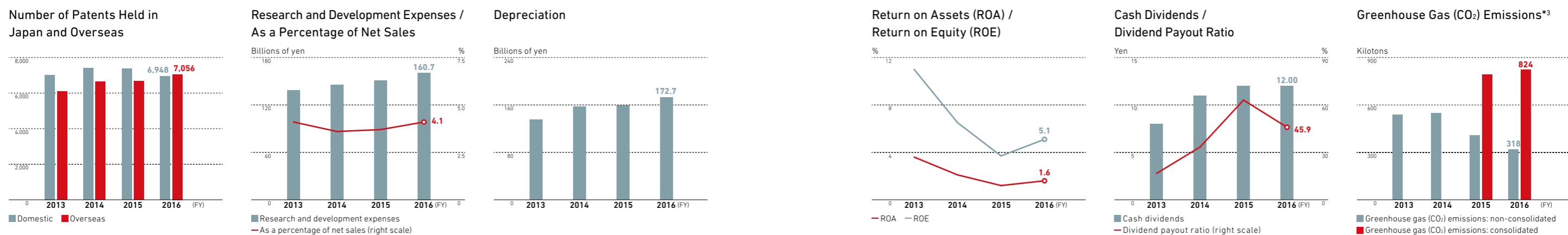
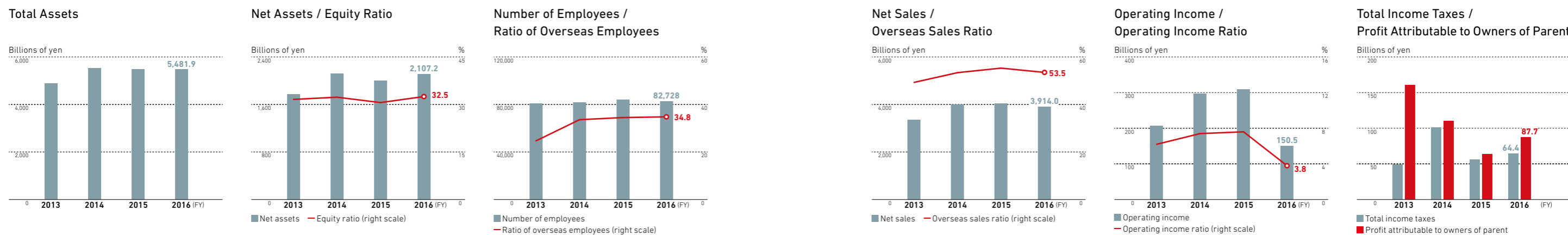
organizations to appoint researchers from outside MHI Group, who will have the ability to take an unprecedentedly creative approach to their research activities. We will apply their research outputs to develop fundamental technologies and new products for MHI Group.

For strategies on the technology front,

> Please refer to the CTO's Message on page 18.

# FINANCIAL AND NON-FINANCIAL HIGHLIGHTS

INPUT	ACTIVITIES	OUTPUT	OUTCOME
<p>As of March 31, 2016</p> <p>Total assets*1 <b>¥5,500.7 billion</b></p> <p>Net assets*1 <b>¥1,999.7 billion</b></p> <p>Interest-bearing debt <b>¥1,052.1 billion</b></p> <p>Number of employees <b>83,932 people</b></p> <p>Number of patents held <b>14,056</b></p>	<p>Year-on-year change</p> <p>Research and development expenses <b>¥160.7 billion</b> 6.7% UP ↑</p> <p>Capital investment <b>¥204.4 billion</b> 16.5% UP ↑</p> <p>Energy input*2 <b>5,995 TJ</b> 18.9% DOWN ↓</p> <p>Number of overseas employees <b>28,751 people</b> 0.7% DOWN ↓</p>	<p><b>Pursuit of the 2015 Medium-Term Business Plan</b></p> <p><b>Expand business scale: Enhance global competitiveness through accelerated expansion to achieve a scale exceeding ¥5 trillion as soon as possible</b></p> <p><b>Strengthen finances and profitability: Further bolster financial strength and pursue high profitability; increase both owners' equity and ROE</b></p> <ul style="list-style-type: none"> <li>Equity buffer greater than ¥250 billion</li> <li>Borrowing capacity above ¥600 billion</li> <li>Earning S&amp;P "A" rating</li> <li>ROE above 10%</li> <li>EBITDA margin above 12%</li> </ul> <p><b>Evolve global Group structure: Promote global-standard corporate governance and management processes</b></p> <ul style="list-style-type: none"> <li>Transition to a company with an Audit and Supervisory Committee</li> <li>Capital policy clarification</li> </ul>	<p>As of March 31, 2017 (Compared with fiscal 2015)</p> <p>Total assets <b>¥5,481.9 billion</b> 0.2% DOWN ↓</p> <p>Net assets <b>¥2,107.2 billion</b> 5.5% UP ↑</p> <p>Interest-bearing debt <b>¥925.5 billion</b> 12.0% DOWN ↓</p> <p>Number of employees <b>82,728 people</b> 1.4% DOWN ↓</p> <p>Number of patents held <b>14,004</b> 0.4% DOWN ↓</p>
		<p>Orders received <b>¥4,275.6 billion</b> 4.7% DOWN ↓</p> <p>Net sales <b>¥3,914.0 billion</b> 3.3% DOWN ↓</p> <p>Operating income <b>¥150.5 billion</b> 51.4% DOWN ↓</p> <p>Greenhouse gas (CO<sub>2</sub>) emissions*2 <b>318 kilotons</b> 21.7% DOWN ↓</p> <p>EBITDA margin <b>8.7%</b> 3.2 POINTS DOWN ↓</p>	<p>Profit attributable to owners of parent <b>¥87.7 billion</b> 37.4% UP ↑</p> <p>Dividend payments (for FY2016) <b>¥40.2 billion</b> NO CHANGE →</p> <p>EBITDA <b>¥339.8 billion</b> 29.1% DOWN ↓</p> <p>Reduction in CO<sub>2</sub> from using MHI's products (Compared with fiscal 1990 levels) <b>62,592 kilotons</b> 35.9% UP ↑</p> <p>ROE <b>5.1%</b> 1.4 POINTS UP ↑</p>



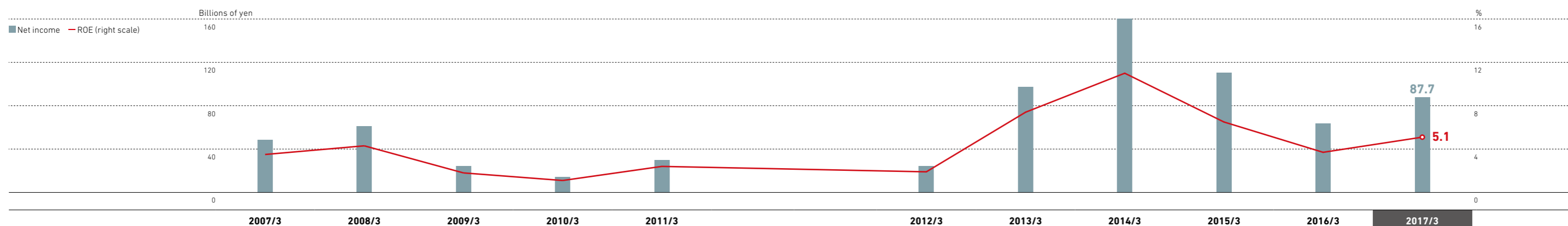
\*1. MHI acquired shares in UniCarriers Holdings Corporation (now UniCarriers Corporation) on March 31, 2016. The cost of this acquisition was provisionally posted in fiscal 2015. This transaction was finalized in fiscal 2016, with the acquisition price finalized and the allocation of this acquisition price revised.

\*2. In principle, MHI on a non-consolidated basis.

\*3. Data is for production sites of MHI on a non-consolidated basis. However, figures for the fiscal year 2014, include the Nagasaki, Takasago, and Yokohama plants of Mitsubishi Hitachi Power Systems, Ltd.

# ELEVEN-YEAR FINANCIAL AND NON-FINANCIAL DATA

Mitsubishi Heavy Industries, Ltd. and its subsidiaries  
Years ended March 31



Years ended March 31 or as of March 31	2006 Medium-Term Business Plan		2008 Medium-Term Business Plan		2010 Medium-Term Business Plan		2012 Medium-Term Business Plan		2015 Medium-Term Business Plan		2017/3	Millions of U.S. dollars*
Orders received	¥3,274.7	¥3,715.2	¥3,268.7	¥2,476.2	¥2,995.4	¥3,188.8	¥3,032.2	¥3,420.0	¥4,699.1	¥4,485.5	<b>¥4,275.6</b>	<b>\$38,110</b>
Net sales	3,068.5	3,203.0	3,375.6	2,940.8	2,903.7	2,820.9	2,817.8	3,349.5	3,992.1	4,046.8	<b>3,914.0</b>	<b>34,887</b>
Operating income	108.9	136.0	105.8	65.6	101.2	111.9	163.5	206.1	296.1	309.5	<b>150.5</b>	<b>1,341</b>
Income before income taxes and minority interests	83.7	101.3	64.9	28.1	39.4	69.8	155.4	214.4	232.6	132.6	<b>169.7</b>	<b>1,512</b>
Profit attributable to owners of parent	48.8	61.3	24.2	14.1	30.1	24.5	97.3	160.4	110.4	63.8	<b>87.7</b>	<b>781</b>
Research and development expenses	¥ 106.3	¥ 107.9	¥ 101.3	¥ 129.2	¥ 123.2	¥ 121.4	¥ 120.0	¥ 138.5	¥ 145.5	¥ 150.6	<b>¥ 160.7</b>	<b>\$ 1,432</b>
Capital investment	175.9	191.4	196.6	177.1	126.6	120.7	118.8	148.6	156.1	175.5	<b>204.4</b>	<b>1,821</b>
Depreciation	106.7	129.2	153.8	140.4	134.4	126.2	119.4	134.9	157.0	158.7	<b>172.7</b>	<b>1,539</b>
Total assets	¥4,391.8	¥4,517.1	¥4,526.2	¥4,262.8	¥3,989.0	¥3,963.9	¥3,935.1	¥4,886.0	¥5,520.3	¥5,491.7	<b>¥5,481.9</b>	<b>\$48,862</b>
Net assets*	1,446.4	1,440.4	1,283.2	1,328.7	1,312.6	1,306.3	1,430.2	1,774.2	2,120.0	1,998.0	<b>2,107.2</b>	<b>18,782</b>
Interest-bearing debt	1,273.5	1,365.3	1,612.8	1,495.3	1,325.6	1,157.1	1,031.2	957.4	975.5	1,052.1	<b>925.5</b>	<b>8,249</b>
Cash flows from operating activities	¥ 158.7	¥ 161.8	¥ 79.5	¥ 117.9	¥ 337.8	¥ 200.3	¥ 288.3	¥ 296.2	¥ 212.8	¥ 270.0	<b>¥ 95.9</b>	<b>\$ 854</b>
Cash flows from investing activities	(158.6)	(193.0)	(156.5)	(180.7)	(137.2)	(47.0)	(76.7)	(151.5)	(174.1)	(262.4)	<b>8.7</b>	<b>77</b>
Free cash flows	0.0	(31.2)	(77.0)	(62.7)	200.5	153.3	211.6	144.6	38.6	7.5	<b>104.6</b>	<b>932</b>
Cash flows from financing activities	48.7	71.2	262.0	(105.2)	(169.7)	(183.6)	(154.2)	(136.6)	(45.8)	(23.1)	<b>(162.0)</b>	<b>(1,443)</b>

## Per share information of common stock Yen

												U.S. dollars
Net income—basic	¥ 14.56	¥ 18.28	¥ 7.22	¥ 4.22	¥ 8.97	¥ 7.31	¥ 29.01	¥ 47.81	¥ 32.90	¥ 19.02	<b>¥ 26.12</b>	<b>\$ 0.232</b>
Net assets	425.54	423.17	369.94	380.80	376.17	374.08	410.90	459.99	530.65	500.30	<b>530.86</b>	<b>4,731</b>
Cash dividends	6.00	6.00	6.00	4.00	4.00	6.00	8.00	8.00	11.00	12.00	<b>12.00</b>	<b>0.106</b>

## Ratios

Overseas sales ratio	47.7%	48.7%	48.9%	50.3%	49.0%	41.9%	44.8%	49.3%	53.4%	55.4%	<b>53.5%</b>	
Operating income ratio	3.5%	4.2%	3.1%	2.2%	3.5%	4.0%	5.8%	6.2%	7.4%	7.6%	<b>3.8%</b>	
Return on equity**3	3.5%	4.3%	1.8%	1.1%	2.4%	1.9%	7.4%	11.0%	6.5%	3.7%	<b>5.1%</b>	
Return on assets**4	1.2%	1.4%	0.5%	0.3%	0.7%	0.6%	2.5%	3.6%	2.1%	1.2%	<b>1.6%</b>	
Current ratio	154.2%	160.9%	158.7%	181.7%	167.9%	153.9%	155.0%	139.2%	146.2%	135.7%	<b>139.4%</b>	
D/E ratio**5	88%	95%	126%	113%	101%	89%	72%	54%	46%	53%	<b>44%</b>	
Equity ratio**6	32.5%	31.4%	27.4%	30.0%	31.6%	31.7%	35.0%	31.6%	32.3%	30.6%	<b>32.5%</b>	
Dividend payout ratio**7	41.2%	32.8%	83.2%	94.8%	44.6%	82.0%	27.6%	16.7%	33.4%	63.1%	<b>45.9%</b>	

\*1. U.S. dollar amounts in this report are translated from yen, for convenience only, at the rate of ¥112.19 = U.S. \$1, the exchange rate prevailing at March 31, 2017.

\*2. In calculating the net assets, MHI and its consolidated subsidiaries have applied the "Accounting Standard for Presentation of Net Assets in the Balance Sheet" (Accounting Standards Board of Japan (ASBJ) Statement No. 5) and the "Guidance on Accounting Standard for Presentation of Net Assets in the Balance Sheet" (ASBJ Guidance No. 8) since the year ended March 31, 2007.

\*3. Return on equity = profit attributable to owners of parent income / (net assets – share subscription rights – non-controlling interests)

\*4. Return on assets = profit attributable to owners of parent income / total assets

\*5. D/E ratio = interest-bearing debt / net assets

\*6. Equity ratio = (net assets – share subscription rights – non-controlling interests) / total assets

\*7. Dividend payout ratio = dividends / profit attributable to owners of parent

\*8. Number of section managers or above, excluding medical staff, as of April 1. Figures through fiscal 2013 are for MHI on a non-consolidated basis. Figures from fiscal 2014 include Mitsubishi Hitachi Power Systems, Ltd.

\*9. In principle, MHI and Mitsubishi Hitachi Power Systems, Ltd on a non-consolidated basis.

\*10. Includes MHI on a non-consolidated basis and 20 Group companies.

\*11. MHI on a non-consolidated basis (production plants and offices). However, the figure for the fiscal year 2014, includes the Nagasaki, Takasago, and Yokohama plants of Mitsubishi Hitachi Power Systems, Ltd.

\*12. Includes MHI on a non-consolidated basis and 133 Group companies.

\*13. Data is for production sites of MHI on a non-consolidated basis. However, figures for the fiscal year 2014, include the Nagasaki, Takasago, and Yokohama plants of Mitsubishi Hitachi Power Systems, Ltd.

## Non-financial indexes

Number of employees	68,887	68,213	80,583	81,845	83,932	<b>82,728</b>	
Number of overseas employees	13,036	14,129	19,909	27,489	28,941	<b>28,751</b>	
Number of female managers**8	67	82	74	85	102	<b>126</b>	Consolidated
Industrial accident frequency rate**9 (%)	0.27	0.11	0.23	0.15	0.20	<b>0.37</b>	<b>0.35</b> *10
Energy input**11 (TJ)	10,346	10,303	9,796	9,885	7,398	<b>5,995</b>	<b>15,344</b> *12
Greenhouse gas (CO <sub>2</sub> ) emissions**13 (kilotons)	474	533	538	548	406	<b>318</b>	<b>824</b> *12
Water usage**13 (million cubic meters)	7.22	7.02	6.82	6.23	5.08	<b>4.00</b>	<b>8.65</b> *12
Social contribution expenses (billions of yen)	2.0	1.4	1.4	1.9	2.1	<b>2.5</b>	



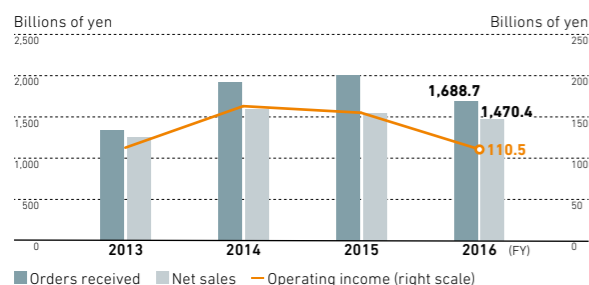
# BUSINESS SEGMENT HIGHLIGHTS

## Overview of Fiscal 2016

### Energy & Environment

In overseas markets, MHI Group received orders in the United States and Mexico for "J-series gas turbines," which achieve the world's highest level of thermal efficiency. In Indonesia, we also received an order for facilities for use in ultra-supercritical-pressure thermal power plants. We won orders in Japan for the world's most advanced integrated coal gasification combined-cycle power plants in Iwaki and Futaba in Fukushima Prefecture. However, consolidated orders received came to ¥1,688.7 billion, lower than in the previous fiscal year because of a decrease in orders for gas turbine combined-cycle (GTCC) and chemical plants for large-scale overseas projects, and other factors. Consolidated net sales were ¥1,470.4 billion, down year on year due to such factors as a drop in sales of thermal power generation systems. Operating income fell to ¥110.5 billion, partially attributable to the impact of yen appreciation.

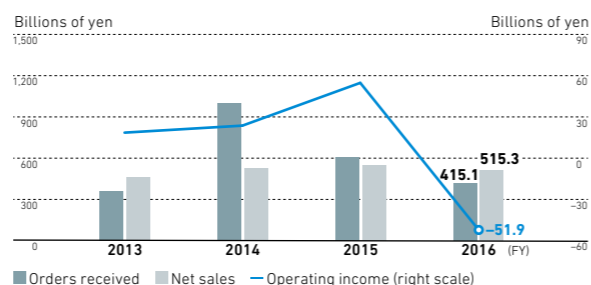
#### Orders Received / Net Sales / Operating Income



### Commercial Aviation & Transportation Systems

In transportation systems, MHI received an order for fully automated, driverless cars for New Transit Yurikamome and signed a new contract to provide 20 Mitsubishi Regional Jets (MRJs), which are currently under development. This order brought the total number of MRJs on order to 427. However, consolidated orders received dropped year on year, to ¥415.1 billion, stemming from fewer orders in the commercial ship and land transportation systems businesses. In the first category, orders of LNG and LPG vessels were down, associated with the shale gas revolution in the United States. In the second category, the decrease reflected comparison with numerous orders received for large-scale products in the previous year. Consolidated net sales came to ¥515.3 billion, down year on year in part because of lower sales of commercial airplanes, despite higher transportation system orders. The segment reported an operating loss of ¥51.9 billion due to such factors as a drop in sales of commercial airplanes, increased MRJ development expenses, and the effect of yen appreciation.

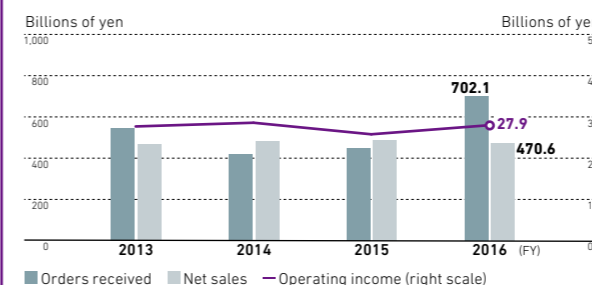
#### Orders Received / Net Sales / Operating Income



### Integrated Defense & Space Systems

In the space-related business, MHI Group received an order to provide service to launch the successor to the Michibiki, the first quasi-zenith satellite, via an H-IIA launch vehicle. The Group also received an order to provide H-IIB launch services for an H-II Transfer Vehicle. These orders, plus an order for Patriot advanced-capability surface-to-air missiles (PAC-3MSEs) in the defense-related business, pushed up consolidated orders received in Integrated Defense & Space Systems to ¥702.1 billion. Consolidated net sales were down year on year, to ¥470.6 billion, due mainly to decreased sales of missile systems, despite an uptick in the space-related business owing to an increase of the number of H-IIA/B launches, from three in the previous fiscal year to four in the year under review. Operating income rose to ¥27.9 billion owing to streamlining of operations.

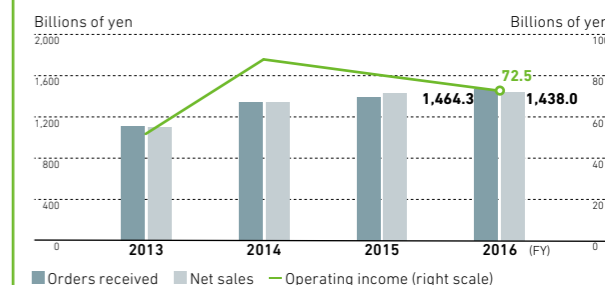
#### Orders Received / Net Sales / Operating Income



### Machinery, Equipment & Infrastructure

Consolidated orders received rose year on year, to ¥1,464.3 billion. Contributing factors included increased business in material handling equipment due to the effect of the merger of UniCarriers Holdings Corporation, which joined MHI Group at the end of the previous fiscal year. Also, sales of turbochargers increased, amid the reinforcement of environmental and fuel performance regulations for automobiles. Consolidated net sales remained flat, at ¥1,438.0 billion; while sales of material handling equipment and turbochargers increased, sales of metals machinery and compressors were lower, affected by a downturn in business investment. Operating income was down year on year, to ¥72.5 billion, due to decreased compressor sales and other factors.

#### Orders Received / Net Sales / Operating Income



### Objectives of the Domain Restructuring:

#### Harnessing Group Synergies and Promoting Reforms in the Commercial Aircraft and Commercial Ships Businesses

In April 2017, MHI Group restructured its business domains into three. From 2013 to 2014, we consolidated and reconfigured our nine business headquarters based on customer and market characteristics into four business domains, minimizing our conventional top-down business management and seeking to harness Group synergies. While maintaining the objectives of our previous reconfiguration, the new restructuring seeks to clarify roles and management concepts to achieve Group growth in individual domains. We aim to promote dramatic reforms in the commercial aircraft and commercial ships businesses.

Through stable growth in the Power Systems and Industry & Infrastructure domains, we aim to ensure their ongoing contribution to earnings and will promote autonomous management in line with domain characteristics. Rather than assigning a domain head, the Aircraft, Defense & Space Domain will operate under the CEO's direct oversight, pursuing the prompt formation of a strong development foundation and a rapid shift to stable earnings.

### Power Systems Domain

- Thermal power (Mitsubishi Hitachi Power Systems)
- Turbomachinery other than Mitsubishi Hitachi Power Systems  
Aero engines ②, compressors ⑤
- Nuclear power, renewable energy

Aim for a business model that can stand up to GE and Siemens, pursuing greater synergies in the turbomachinery business as a whole and reinforcing our service business.

### Industry & Infrastructure Domain

- Core machinery business companies  
Forklifts/Engines/Turbochargers (Mitsubishi Heavy Industries Forklift, Engine & Turbocharger Holdings), Metals Machinery (Primetals Technologies), Air Conditioning and Refrigeration, Machinery and Equipment
  - Engineering + related machinery businesses  
Ship engineering, Commercial ships ③, Transportation and urban systems ③, Chemical plants ①, Environmental systems
- \* Transferred Engineering Headquarters from the shared technology framework into the I&I domain

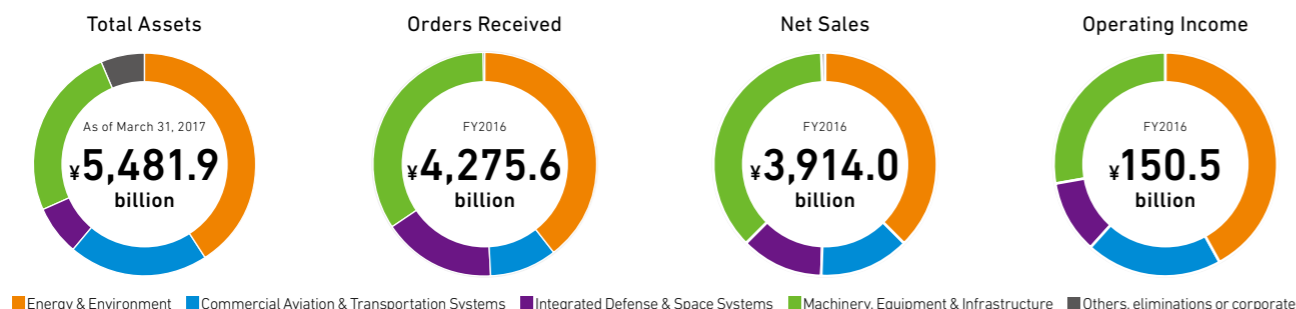
Pursue earnings expansion and creation of global niche products through portfolio management in various machinery businesses, and the integration and strengthening of engineering businesses.

### Aircraft, Defense & Space Domain

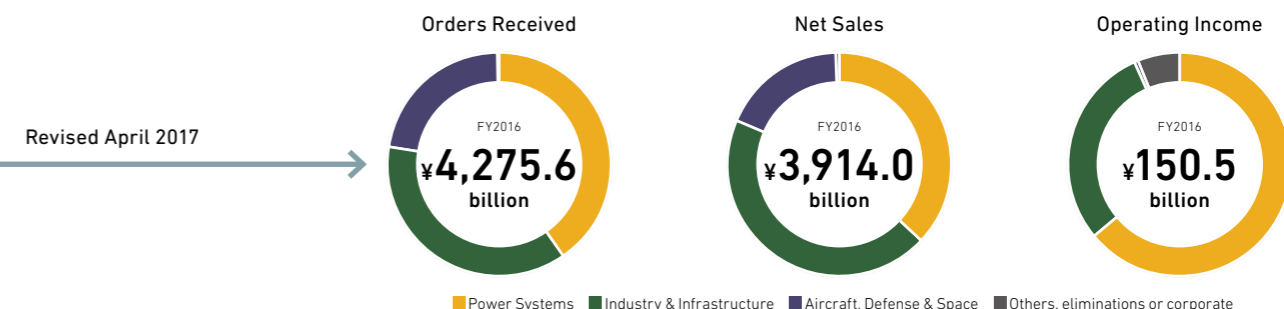
- Integrated Defense & Space Systems Segment  
Integrated Defense & Space Systems
- Commercial Aviation Systems Segment ④  
Tier1
- MRJ Business (Reporting directly to the CEO) ④

As long-term growth businesses, cultivate synergies with Integrated Defense & Space Systems and pursue growth. At the same time, concentrate on rebuilding Tier1 and the MRJ businesses.

### Composition of the Four-Domain Structure



### Composition of the Three-Domain Structure



BUSINESS SEGMENT OVERVIEW

# POWER SYSTEMS DOMAIN

We aim to be the industry leader in the energy solutions and turbomachinery businesses.

- Thermal Power:** Generation systems offering the world's highest levels of thermal efficiency and output. A full range of output levels, from small and medium-sized to large. State-of-the-art environmental technologies (AQCS<sup>1</sup>, IGCC<sup>2</sup>). Abundant experience in EPC capabilities.
- Nuclear Power:** Highest levels in the world in safety technologies and product quality.
- Renewable Energy:** Extensive track record in orders for offshore wind turbines (second-largest share of the world market (MVOW<sup>3</sup>)).
- Turbomachinery (rotating machinery):** Turbomachinery synergies (Mutual use of technologies, human resources, and facilities) [Gas turbines, aero engines, aero-derivative gas turbines (PWPS<sup>4</sup>), compressors, pumps, MET turbochargers<sup>5</sup>, Organic Rankine cycle (ORC)]

<sup>1</sup>. AQCS: Air quality control system  
<sup>2</sup>. IGCC: Integrated coal gasification combined cycle  
<sup>3</sup>. MVOW: MHI Vestas Offshore Wind A/S (Joint venture with Vestas of Denmark)  
<sup>4</sup>. PWPS: PW Power Systems, Inc.  
<sup>5</sup>. Turbochargers for marine engines

- Thermal Power:** Profitability (delayed PMI)
- Nuclear Power:** Little experience in constructing new plants overseas
- Renewable Energy:** Limited lineup (offshore wind turbines, geothermal, organic Rankine cycle)
- Compressors:** Track record in the oil and gas market
- Aero Engines:** Market led by European and US engine manufacturers

**W**  
WEAKNESSES

- Thermal Power:** Need for high-efficiency, green power generation in line with increasingly stringent environmental regulations. Need for supply and demand adjustments in accordance with the expansion of renewable energy.
- Nuclear Power:** Introduction of new generation capacity, centered on emerging markets.
- Renewable Energy:** Growing demand for offshore wind turbines.
- Compressors:** Increasingly vigorous oil and gas markets.
- Aero Engines:** Sustained market growth.

- Thermal Power:** Increasingly stringent competition with overseas companies. Backlash against fossil fuel generation in advanced countries. Market domination by renewable energy.
- Nuclear Power:** Trend away from nuclear power generation in advanced countries.
- Renewable Energy:** Demand for rapid reduction in the unit cost of wind power generation (decline in government subsidy systems). Competitors expanding scale of business through M&A (pursuing economies of scale).
- Compressors:** Delayed recovery in the oil and gas market, increasingly severe competition.
- Aero Engines:** Aircraft component business changing due to technological innovation.

**T**  
THREATS

**O**  
OPPORTUNITIES

## Operating Environment

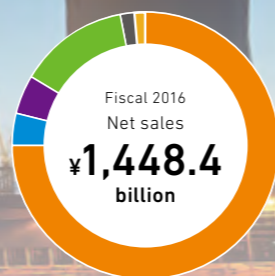
Over the medium to long term, in the power generation field demand related to renewable energy is likely to grow due to measures to counter global warming and increasingly stringent environmental regulations, while that for generation using fossil fuels is expected to taper off.

The main business in this domain—natural gas and coal-fired thermal power generation facilities and nuclear power generation facilities—will continue to represent major sources of power. Therefore, demand for maintenance services for our main business remains robust. On the other hand, we expect demand for newly constructed power plants to stagnate—particularly for coal-fired thermal generation. Competition for orders is likely to heat up as a result.

In wind power and other types of renewable energy, demand is forecast to continue growing. Going forward, needs in this area will include increased generation efficiency and lower unit generating costs. We also expect the need for supply and demand adjustment systems and electricity storage systems to grow, in order to stabilize sources of electric power.

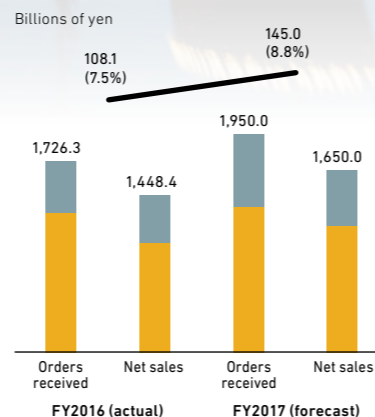
At the same time, future prospects in the oil and gas field are subject to the protracted curtailment of investment as the price of crude oil falls. Nevertheless, we anticipate a resurgence in demand for compressors as the market recovers. Given the globally robust aircraft market, we believe the market for aero engines will continue to deliver solid growth.

### Net Sales by Core Business



Legend for Net Sales by Core Business:  
 Thermal Power generation systems (Orange)  
 Compressors (Blue)  
 Aero Engines (Purple)  
 Nuclear Power (Green)  
 Renewable Energy (Yellow)  
 Others (Grey)

### Operating Performance



Legend for Operating Performance:  
 MHPs\* (Yellow), Others (Blue), Operating income (operating margin) (Black line)  
 \* MHPs: Mitsubishi Hitachi Power Systems (thermal power generation systems)



## Directions for Fiscal 2017 and Focus Strategies for the Medium to Long Term

We expect the operating environment to remain challenging in fiscal 2017. Even so, we plan to meet our sales and profit targets, thanks to growth in the service business and steady progress on the construction of large-scale domestic thermal power plants for which we have already received orders. Also, as we move forward toward the new business plan that will commence in fiscal 2018, we will seek to bolster profitability by accelerating PMI at MHPs and augmenting competitiveness through turbomachinery synergies, building a solid financial and technological foundation.

Over the medium to long term, we expect the composition of power generation sources to change and become more diverse in response to needs to lower environmental impact and move toward a low-carbon society. Responding accordingly to customer demands in these respects, it will become increasingly important for us to develop more sophisticated generation technologies and provide optimal solutions for the efficient use of energy.

In thermal power generation facilities, we have taken the lead and are moving enthusiastically forward in the gas turbine combined cycle (GTCC) arena by accelerating the development of a 1,650°C-class next-generation gas turbine that realizes one of the world's highest levels of efficiency. In coal-fired generation, we are proceeding with the construction of integrated coal gasification combined cycle (IGCC) facilities that offer increased generation efficiency and reduced CO<sub>2</sub> emissions.

In nuclear power generation systems, we are concentrating on providing support for the restart of a pressurized water reactor (PWR) that conforms to Japan's new standards, which are some of

the world's highest. At the same time, we are stepping up collaboration with the AREVA Group of France, working in the nuclear fuel cycle process field and engaging in new overseas projects.

Offshore wind power generation facilities are a focal area in the renewable energy field. In this category, we are working with MVOW of Denmark. We plan to launch a cutting-edge 9.5MW turbine and expand the North American, Asian, and other markets. To respond to the increase in demand for supply and demand adjustment, which is caused by growth in renewable energy generation, we will provide systems that leverage our aero-derivative gas turbines—with their rapid startup capabilities—as well as demand for facilities to store electricity.

From the perspective of energy-efficient operation, we propose solutions that utilize Internet of Things (IoT) and artificial intelligence (AI) technologies. Specifically, we will begin offering the MHPs-TOMONI™ digital solution service for optimizing facility operation and maintenance, as well as the ENERGYCLOUD® Service, which realizes energy-efficient operations at factories and other facilities.

We will also seek to maximize synergies from consolidating our turbomachinery technologies, centered on gas turbines. In compressors, we intend to secure orders for petrochemical plants, which has typically been an area of strength for MHI. We will also seek to combine these offerings with gas turbines to provide new compressor trains, increasing their introduction into the upstream oil and gas market. In aero engines, we aim to expand the business of maintaining engines that are currently in operation, as well as developing next-generation engines.

## Business Directions at a Key Subsidiary: MHPs

Fiscal 2016 was characterized by a lackluster global market for thermal power plants, and orders and sales did not meet our targets as a result. In fiscal 2017, we will commence full-scale construction of new plants in Japan for which we have already received orders. Orders should thus rebound, but we do not expect the business environment to improve significantly for the foreseeable future. We will face this difficult business environment head on, striving to sustain our business expansion by adopting new strategies and shoring up our retrenchment strategies.

First of all, in new strategies we will operate the MHPs TOMONI™ service system for thermal power plants. This system, which we have already begun providing, employs IoT and AI technologies. Through the system, we will work to expand our service business in the areas of long-term plant maintenance and operational support. As orders for overseas projects increase, we will expand our bases in the core markets in Asia; North, Central, and South America;

the Middle East; and Eastern Europe. This move will strengthen our ability to accumulate information about potential business. We will also reinforce our ability to structure projects by obtaining support from export credit agencies, and leveraging yen loan systems. Going forward, we anticipate growth in the market for large-scale gas turbines of 300MW or more. We aim to take the lead over our competitors in the development of superior new models that should garner a top share of the market. We aim to launch the first of these 1,650°C-class next-generation gas turbines in fiscal 2019, 1.5 years ahead of schedule.

As to retrenchment strategies, we will work to restore profitability by accelerating PMI. In particular, we will streamline product lineups at each factory in the aim of augmenting production efficiency and using assets more effectively. Through these measures, we expect to cut fixed costs by between ¥10.0 billion and ¥15.0 billion. We will also strive to optimize our supply chain by utilizing overseas locations.

BUSINESS SEGMENT OVERVIEW: POWER SYSTEMS DOMAIN

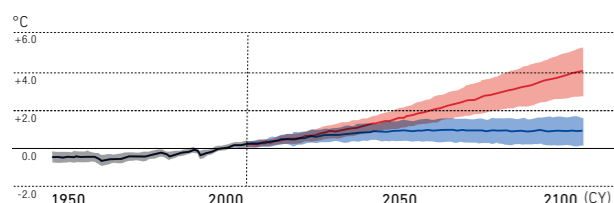
Addressing Social Issues

An Energy Portfolio that Contributes to the Realization of a Low-Carbon Society

Social Issues

Since the second half of the 20th century, global warming has been driving changes in the climate: atmospheric and ocean temperatures have been rising, increasing ocean levels and reducing the amount of polar ice. The Intergovernmental Panel on Climate Change (IPCC) surmises that rising concentrations of CO<sub>2</sub> and other greenhouse gases are highly likely to be a major cause. Worst-case scenarios predict that average global air temperatures will rise by around 4°C by the year 2100, presenting the serious risk of climate change across the entire world. Global efforts to counter this situation by realizing a low-carbon society, such as by adopting the Paris Accord, are growing. As electric power generation has a particularly large effect on CO<sub>2</sub> emissions, renewable energy use is forecast to grow substantially over the medium to long term.

Forecast of Global Changes in Average Global Surface Air Temperatures



Source: Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report Red shows the scenario if greenhouse gas emissions are not reduced. Blue indicates the scenario if all measures are implemented.

MHI Group's Solutions

MHI Group provides some of the world's most efficient thermal power plants. We also have an extensive menu of power generation offerings in the area of renewable energy, including offshore wind turbines and geothermal generation systems. Through combined systems that incorporate AQCS and SOFC\*, we can contribute to a reduction in greenhouse gases, meeting needs in regions around the world.

Looking first at our thermal power plants, which boast some of the highest efficiencies in the world, as one aspect of our activities as a world leader in high-efficiency gas turbine combined cycle (GTCC) systems, at our demonstration facility in the Takasago district (Hyogo Prefecture) we are promoting a cycle of development, design, manufacturing, demonstration (our proprietary tests on the burden of long-term operation), mass production, and reflection (simultaneously employing the results we have received into the next round of development, design, and manufacturing). Throughout, we pursue high levels of efficiency, reliability, and environmental friendliness.

MVOW is developing the offshore wind turbine business in Europe, where the use of renewable energy is expanding rapidly. Established in 2014 as a 50-50 joint venture between MHI and Vestas Wind Systems of Denmark, MVOW is steadily accumulating orders for the construction of large-scale wind farms off the coast of Denmark and the United Kingdom. MVOW has the world's

second-largest share of the world market for offshore wind power generation facilities (cumulative performance as of the end of 2016). The company's generation facilities boast world-leading output and are contributing substantially to lowering customers' generation costs.

In the field of geothermal generation, MHI Group has accumulated orders for more than 100 projects in 13 countries, including Mexico and Kenya. With combined capacity of more than 3 million kW, we hold a leading share of the world's installed geothermal power generation capacity. We believe geothermal is a promising generation method, as it emits no CO<sub>2</sub> and generates stable power that is unaffected by the weather.

Meanwhile, demand for coal-fired generation is high in coal-producing countries in Southeast Asia and other parts of the world. There, we propose integrated coal gasification combined cycle (IGCC) systems, which feature world-leading technologies. The IGCC process gasifies coal at high temperatures and pressures in air-blown gasifiers and utilizes a combined-cycle method that combines gas and steam turbines, thereby achieving substantially higher generation efficiency than with conventional coal-fired generation and reducing CO<sub>2</sub> emissions by around 15%. IGCC systems facilitate the use of low-grade coal, which is problematic with conventional thermal generation. This is expected to achieve the dual benefit of making effective use of resources and helping to protect the environment. Combining an IGCC system with our AQCS curtails the environmental impact of coal-fired generation, optimizing facilities for the regions where they will be used.

By commercializing SOFCs as a next-generation technology, from fiscal 2017 MHI Group will begin launching hybrid units combining SOFCs and micro gas turbines. SOFCs reform natural gas and LNG into hydrogen and carbon monoxide, reacting with the oxygen in the air to generate power directly. As the heat produced in this process can also be used effectively, energy efficiency is extremely high, leading to expectations for future use in distributed or concentrated power sources.

\* SOFC: Solid oxide fuel cell



Geothermal generation facility (Mexico)

Initiatives in This Domain Related to Material ESG Issues

Material Issue 3: Response to Mega Trends

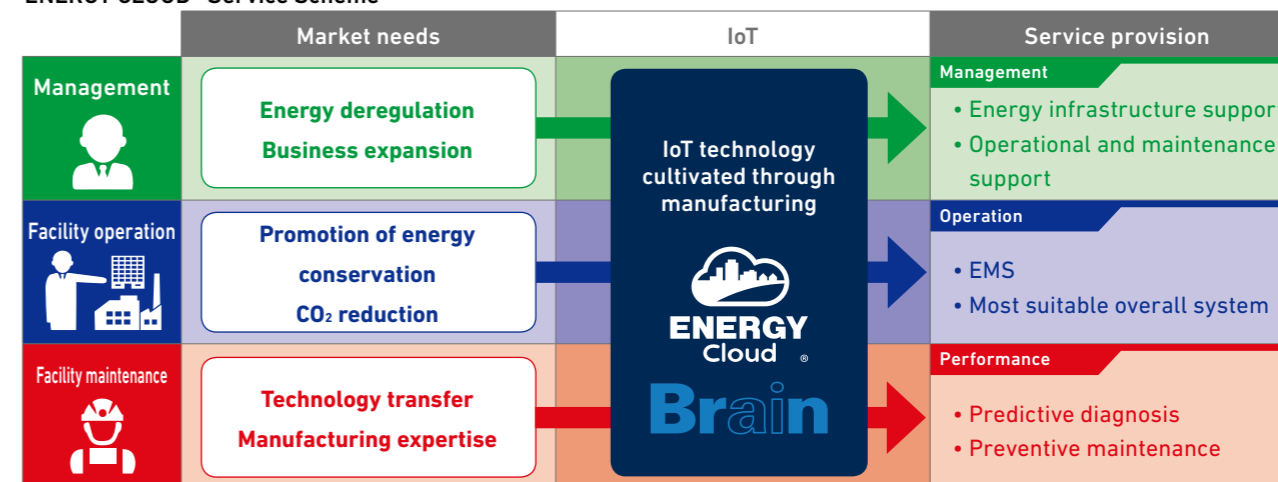
Solutions Combining IoT and AI Technologies, as Well as the Knowledge Cultivated Over Many Years

In this domain, we are leveraging leading-edge IoT and AI technologies to respond to diverse customer needs. For thermal power plant customers, in March 2017 MHPS began providing MHPS-TOMONI™, which optimizes operational and maintenance costs of thermal power generation facilities and enhances their environmental performance. Leveraging big data analysis and AI technology derived from the innovative technologies and specialized knowledge we have cultivated in thermal generation over decades, in-house O&M know-how, total plant knowledge, and customer partnerships, MHPS-TOMONI™ is a comprehensive family of digital solutions MHPS developed for the power industry.

Also, in April 2017 we began providing the ENERGY CLOUD® Service for customers that use large amounts of energy. ENERGY CLOUD® is a general term for the energy solution service based on MHI Group's industry-leading technological strength and

experience in power generation facilities and related businesses, as well as comprehensive analysis from the Group's own diversified plant operation expertise, configured with our unique ENERGY CLOUD® Brain AI technology. Data is measured through our newly developed facility operation monitoring system, and analysis is performed using this AI technology. The data and analysis enable energy demand to be forecast to a high level of accuracy—higher than 90%. By performing this forecasting and ascertaining facility operational status, the system helps improve energy procurement and production efficiency. ENERGY CLOUD® can also be configured into an energy management system (EMS) that uses a network connection and operates over multiple business sites. We have begun considering an overseas rollout in line with needs in various regions. We anticipate that this could become a ¥100.0 billion business.

ENERGY CLOUD® Service Scheme



R&D Case Study

Development of Elemental Technologies for 1,650°C-Class Next-Generation Gas Turbines

MHI has developed high-efficiency gas turbine combined cycle (GTCC) systems for many years. We are now working on the development of elemental technologies, including the gas turbines with a turbine inlet temperature in the 1,650°C class and a next-generation air cooling system, in the aim of achieving combined thermal efficiency of more than 64%, exceeding that of new machines offered by our competitors. Specifically, we are developing technologies to predict the risk of combustion instability

and flashback (backfire) associated with higher turbine inlet temperatures, as well as prediction technology for turbine blade heat transfer coefficient distribution to minimize the rise in cooling air temperature, leading to increased generation efficiency. In the aim of gaining the top share of the market for gas turbines larger than 300MW, the main market for these technologies, we are accelerating development with a view to market launch in fiscal 2019.

## BUSINESS SEGMENT OVERVIEW

## INDUSTRY &amp; INFRASTRUCTURE DOMAIN

While continuing to strengthen earning capabilities through the reorganization of small-to medium-sized businesses and PMI implementation for joint venture companies, we are focusing on further growth in core businesses and expanding engineering-related businesses.

- Expertise cultivated in a wide range of product fields and effective utilization of resources within the domain
- **Metals machinery:**  
Full product lineup and global presence
- **Turbochargers:**  
Development of highly efficient products leveraging high-speed rotational technologies
- **Forklift trucks:**  
Third in the world by business scale
- **Air-conditioning and refrigeration:**  
Extensive product lineup and world-class environmental and energy-saving technologies
- **Chemical plants:**  
Engineering prowess based on technologies and expertise cultivated through the construction of various types of plants
- **Land transportation systems:**  
Overall system integration capabilities and optimized technology for a bogie design of rubber-wheel vehicles
- **Commercial ships:**  
Superiority over competitors in environmental and energy-saving technologies

S  
STRENGTHS

- **Turbochargers:**  
Growing trend toward downsized engines with turbochargers in response to environmental and fuel performance regulations
- **Material handling equipment:**  
Increasing market for logistics solutions with expansion of e-commerce business
- **Engines:**  
Growing power generation market in line with increases in demand for distributed power systems
- **Air-conditioning and refrigeration:**  
Rising awareness toward environmental protection
- **Chemical plants:**  
Growing capital investment for high-value-added natural gas in gas-producing countries
- **Land transportation systems:**  
Numerous infrastructure plans, including urban transport
- **Commercial ships:**  
Increasingly stringent environmental regulation of maritime transport

O  
OPPORTUNITIES

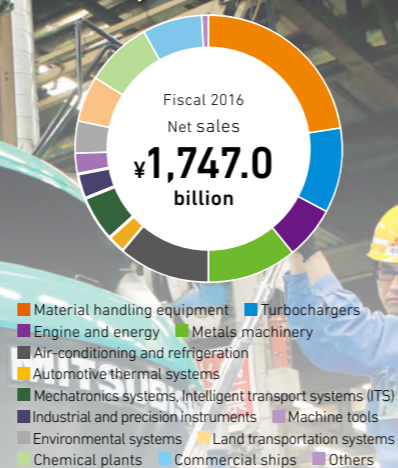
- Tendency to be affected by short-term economic fluctuations
- Redundancy in functions and bases after integration
- **Chemical plants:**  
Volatility in sales amount
- **Commercial ships:**  
Relatively weak cost competitiveness on repeated construction of ships with the same specifications

W  
WEAKNESSES

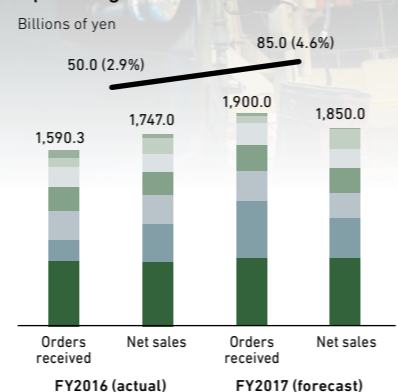
- Rise of manufacturers in emerging countries
- Sense of uncertainty in the global economy
- Ongoing commoditization
- **Metals machinery:**  
Global overcapacity forecasted to continue
- **Chemical plants:**  
Geopolitical risk in gas-producing countries
- **Land transportation systems:**  
Increasingly strong Chinese and big-three competitors
- **Commercial ships:**  
Increasingly severe competition in the gas carrier and ferry markets, as the gap between supply and demand for new ships persists

T  
THREATS

## Net Sales by Core Business



## Operating Performance



\*1. Material handling equipment, Turbochargers, Engines  
\*2. Chemical plants, Land transportation systems, Environmental systems

## Operating Environment

Comprising 13 businesses, the Industry & Infrastructure domain is affected by a variety of global trends. The logistics industry is increasingly active worldwide due to such factors as the growing popularity of e-commerce. The global market for forklifts is expanding along with this trend, and the market for logistics solutions, such as unmanned and automated systems, is growing at a rapid pace. Along with substantial increases in awareness of environmental protection, the turbocharger market continues to expand as the percentage of passenger cars with turbocharged engines grows in response to increasingly stringent environmental regulations. The market for air conditioning and refrigeration that requires high environmental performance is also expected to

continue expanding over the medium to long term. In chemical plants, as gas prices fall the need for high-value-added natural gas is increasing, leading to more business opportunities. In ITS, the Japanese market remains flat, while the overall global market is expanding, as road networks are progressing in Southeast Asia and other regions. In land transportation systems, a rising number of airport expansion projects is expected to push up demand for APMS\*1. In commercial ships, while a persistent global oversupply continues, we anticipate movement in response to increasingly strict environmental regulations on ships.

\*1. APM: Automated people mover



## Directions for Fiscal 2017 and Focus Strategies for the Medium to Long Term

In fiscal 2017, we aim to meet our targets by expanding sales of material handling equipment and turbochargers, by securing profit through acceleration of PMI\*2 at joint ventures, and through structural reforms in the commercial ship business. Over the medium to long term, we will promote increases in both sales and operating income, focusing on further growth in core businesses and expanding engineering-related businesses.

In turbochargers, to ensure continuous growth we will promote the development and introduction of products for diversified automotive powertrains—such as for electric vehicles (EVs), hybrid vehicles (HVs), and plug-in hybrid vehicles (PHVs)—and the establishment of a global supply structure capable of delivering 11 million units per year. In air conditioning and refrigeration, we will leverage our industry-leading product lineup and environmental and energy-saving technologies to expand the thermal solutions business, thereby promoting global expansion and reinforcing our services business. In ITS, we will sustain profitability in the Japanese market, where model changes are expected to spark demand. We also aim to cultivate new business based on an ongoing new project in Singapore for a next-generation electronic road pricing (ERP) system.

In the commercial ship business, we consolidated the business integration and engineering functions in July 2017. We are increasing our ability to build ships primarily involving outfitting work, developing energy-saving ships, and collaborating with other domains to step up initiatives in new fields. Furthermore, through alliances with other companies we intend to cultivate business in new

areas, such as gas-powered ships, that leverage our technological expertise. In chemical plants, we will work to stabilize earnings by participating in the operation, maintenance, and after-sales service businesses, while also striving to expand orders in strategic regions. Taking advantage of our track record with large-scale CO<sub>2</sub> recovery plants featuring the highest processing capability in the world, we plan to make a full-scale entry into the CO<sub>2</sub>-EOR\*3 business. In land transportation systems, based on our strengths in system integration and AGT\*4 systems, which are competitive and reliable, we will develop the total solution business in the area of urban transport, including O&M\*5. In engineering-related businesses, including environmental systems, we will enhance our project management capabilities and quality, cost, delivery (QCD) control and pursue horizontal development into other businesses. Furthermore, we aim to create new businesses and cultivate new fields by managing resources and enhancing synergies among engineering-related businesses. Meanwhile, we are making steady progress on reorganizing small- and medium-sized businesses to strengthen business operations and aim to complete this process during fiscal 2017.

See the section below, entitled "Business Directions at Key Subsidiaries," regarding our business strategies for metals machinery and material handling equipment.

\*2. PMI: Post-merger integration (the integration process following a corporate or business merger)

\*3. EOR: Enhanced oil recovery

\*4. AGT: Automated guideway transit

\*5. O&M: Operation and maintenance

## Business Directions at Key Subsidiaries: Primetals Technologies and M-FET

At Primetals Technologies, a joint venture with Siemens AG of Germany, we are seeing a gradual upturn in orders, but we still forecast global steel overcapacity and a tough market environment to persist. Under these conditions, we are promoting further PMI to secure earnings at the current scale of business. To date, we have pursued organizational reforms and workforce optimization. We will implement PMI by consolidating our current 40 worldwide locations to 26, setting new cost targets, and optimizing the design, procurement, and manufacturing processes. We also aim to bolster our market share by meeting customer needs and technology trends, pushing ourselves into a leading global position.

In October 2017, Mitsubishi Heavy Industries Forklift, Engine & Turbocharger Holdings, Ltd. (M-FET) will undergo management integration with two M-FET group companies: Mitsubishi Nichiyu Forklift Co., Ltd., and UniCarriers Corporation. As a result, we plan to pursue PMI that will raise the operating margin in the material handling equipment business to 8% by fiscal 2019. Specifically, we are pursuing optimization of production bases by separating functions and consolidating redundant functions. As a result, we expect to boost productivity, reinforce the procurement system, and lower costs substantially. In addition, starting from the development structure at bases in Japan, North America, and Europe, we will pursue a regionally tailored multibrand strategy to expand our global scale.

BUSINESS SEGMENT OVERVIEW: INDUSTRY & INFRASTRUCTURE DOMAIN

Addressing Social Issues

Optimization Initiatives for Rapidly Changing On-Site Logistics

Social Issues

The rapid expansion of the e-commerce market, the proliferation of the Internet of Things (IoT) and artificial intelligence (AI), and falling childbirth and aging populations are resulting in a shortage of on-site personnel to perform forklift and order picking operations. Consequently, the social environment surrounding the logistics industry is undergoing profound change. Accordingly, global demand for optimization is growing at warehouses, factories, and other on-site logistics locations.

MHI Group's Solutions

MHI Group companies Mitsubishi Nichiyu Forklift Co., Ltd. and UniCarriers Corporation have unveiled a series of firsts, both in Japan and the world: Japan's first battery-powered forklift (1939), Japan's first engine-powered forklift (1949), and the world's first automated guided forklift (1971). In so doing, we have improved working environments and safety and responded to the social need for higher levels of efficiency and reduced labor. The automated guided forklift, in particular, has a raising/lowering function that enables automated loading at various heights in addition to automatic travel, contributing significantly to the automation of logistics locations.

For conventional automated guided forklifts, it was common to use electromagnetic signaling to guide travel paths. Now, MHI Group is accelerating the market introduction of a laser-guided automated guided forklift that does not rely on signal lines. Following introduction in Europe, which leads the market, we launched this forklift in Japan in April. The new forklift addresses some of the issues faced by conventional automated guided forklifts (the time and cost required to construct electromagnetic signal lines and the need to change complex routes). By leveraging the new forklift's advantages, we are working to optimize logistics sites.



Laser-guided automated guided forklift for the Japanese market

Rather than focusing just on forklifts, MHI Group aims to provide logistics solutions that improve customer operations and energy efficiency, reducing expenses and generating profits. In response to the need to automate forklifts and save labor, we are developing warehouse management systems that integrate the management of in-warehouse storage (automated warehouses) and material handling (laser-guided forklifts).

To meet demand for efficiency, safety, and peace of mind, we are pursuing various ways to achieve increases in safety by using IoT to gather and analyze big data on forklifts. We will also provide information aimed at better preventive maintenance and higher levels of safety. In addition, we intend to offer proposals on optimizing vehicle layouts and equalizing operations, which should help in conserving energy and extending battery life.

On October 1, 2017, Mitsubishi Nichiyu Forklift Co., Ltd. and UniCarriers Corporation will undergo management integration, forming Mitsubishi Logisnext Co., Ltd. Under the "Logisnext" name, signifying "Logistical Equipment & System Solutions Next," we aim to contribute to the future of global society as a next-generation logistics leader. Going forward, MHI Group will continue providing advanced logistics solutions that match the needs of customers in areas around the globe.



Laser-guided automated guided forklift for the European market

Initiatives in This Domain Related to Material ESG Issues

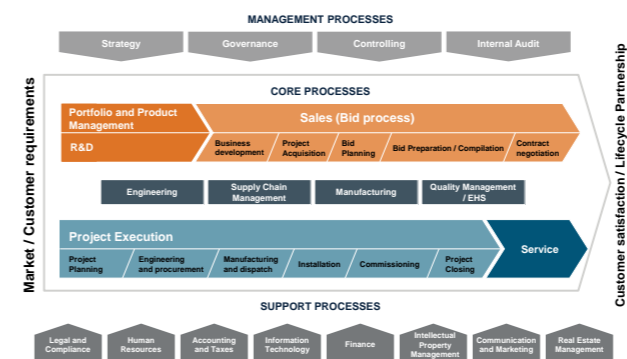
Material issue 1: An optimal governance structure based on our corporate culture

Governance at Primetals Technologies, Where People of Different Nationalities and Cultures Work Together (Establishment and Promulgation of Global Guidelines for Business Processes)

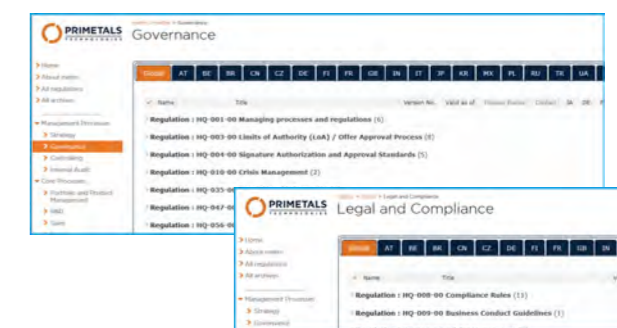
Primetals Technologies (PT) was established in January 2015 as a joint venture between Mitsubishi-Hitachi Metals Machinery, Inc., and Siemens VAI Metals Technologies GmbH, the metals machinery division of Siemens AG of Germany. Headquartered in London, PT is one of the largest global group companies in the MHI Group. Worldwide, PT employs around 7,000 people in more than 20 countries. PT promotes organizational governance across numerous countries and differing cultures and aims to integrate diverse cultures into one corporate culture. As one such initiative, PT has created certain Global Guidelines, which stipulate the standard of each business process common to all PT Group companies around the world. The Global Guidelines are implemented in each country. If necessary the Global Guidelines may be complemented by local guidelines to cover special regional requirements. To increase awareness of and support for the guidelines among all PT staff, PT has set up the "METRIS" system

on its intranet. This system enables all PT staff to easily access global and local guidelines for their regions and fosters a clear understanding of each business process, encouraging systematization and regularization. At the same time, METRIS provides the necessary information in relation to actions required in order to execute the guidelines. By publicizing and providing this information on its intranet through METRIS, PT is making apparent its intent to promulgate the guidelines and promote the global standardization of processes.

In relation to compliance, the company has set up a structured organization to ensure that PT staff follow company guidelines. Working under global leadership, locally responsible staff operate directly under compliance leaders for each region, so that compliance checks and reports can operate systematically and at a global level without concern for national borders and time differences, as well as to promote paperless operations.



Example of a METRIS screen. From the left, the screen shows the overall structure and enables access to individual process guidelines (global and local).



R&D Case Study

Development of a Marine SOx Scrubber in Response to Increasingly Stringent Regulations on Sulfur Oxide Emissions

MHI's Ship & Ocean Division and Mitsubishi Hitachi Power Systems, Ltd. (MHPS) have jointly developed a Large-scale Rectangular Marine Scrubber that efficiently removes sulfur oxides (SOx) from the exhaust gases emitted by marine diesel engines. The scrubber was developed based on MHPS's comprehensive flue-gas treatment technologies cultivated through desulfurization systems for thermal power plants, leveraging MHI's expertise in marine engineering. The adoption of a rectangular box-shape configuration—a world first—offers outstanding ease of installation in small spaces and superlative emissions treatment for high-output engines used on large-scale container

ships. The new scrubber was developed in response to stringent new SOx emissions regulations in all oceans that come into effect globally in 2020. It is able to purify exhaust gas emitted from inexpensive heavy fuel oil to a level equivalent to more expensive low-sulfur fuels, and has been designed to allow easy installation on existing ships. Aiming to begin delivering the scrubber in 2020, both companies will seek certification from selected countries while conducting extensive tests on ships. Sales offerings will focus on installations for both newly commissioned ships and ships already in service, including ships constructed by MHI as well as other shipyards.

## BUSINESS SEGMENT OVERVIEW

## AIRCRAFT, DEFENSE &amp; SPACE DOMAIN

We are dramatically improving the profit-earnings structure of the Tier1 commercial aircraft business and concentrating on the faithful execution of the MRJ development schedule as we cultivate our base of operations from a long-term perspective.

## Commercial Aircraft

Long-term customer relationships, a long history of expertise in building aircraft, and the creation of relationships with parts suppliers based on the foundation of a domestic aircraft industry

Design and manufacturing technologies for large composite main wings and other structural components  
Complete aircraft (MRJ) offering high levels of efficiency and reliability and outstanding economy

## Defense and Space

Leading-edge technologies fostered through the development of defense and space products

- **Defense:**  
Ability to make proposals for integrated defense systems  
Expertise and channels cultivated through Japan-U.S. joint development of the SM-3 missile
- **Space:**  
Development capabilities in launch vehicles and launch vehicles' engines  
World-leading levels of reliability

S  
STRENGTHS

## Commercial Aircraft

New demand for approximately 33,000 aircraft over the next 20 years  
Expected market scale over the next 20 years of around 3,500 aircraft with 70-90 seats

## Defense and Space

- **Defense:**  
Cabinet approval of the Three Principles on Transfer of Defense Equipment and Technology  
Accelerating development and procurement of new products in line with the formulation of Japan's Medium-Term Defense Program
- **Space:**  
Increase in the need for satellite launches in emerging countries  
Under Japan's Basic Plan on Space Policy, domestic market scale expected to grow to ¥5 trillion over the next 10 years  
A growing launch market in line with expanding needs for the use of satellites

O  
OPPORTUNITIES

## Commercial Aircraft

High degree of reliance on specific customers  
High sensitivity to foreign exchange fluctuations, as business concentrated on overseas customers  
Shortage of experience in aircraft development

## Defense and Space

- **Defense:**  
Limited experience in pursuing and leading projects overseas
- **Space:**  
Inadequate cost competitiveness in global markets

W  
WEAKNESSES

## Commercial Aircraft

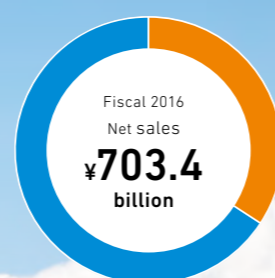
The globalization of aircraft production (business being promoted separately in advanced countries and emerging countries)  
Increasingly stringent competition in the market for regional aircraft  
Ongoing yen appreciation

## Defense and Space

- **Defense:**  
Severe competition with domestic and overseas manufacturers
- **Space:**  
Concern regarding price-cutting by new U.S. companies entering the market for overseas launch services

T  
THREATS

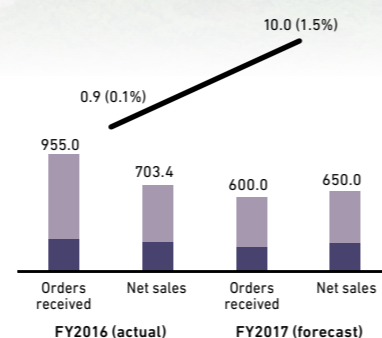
## Net Sales by Core Business



Commercial Aviation Systems  
Integrated Defense & Space Systems

## Operating Performance

Billions of yen



Commercial Aviation Systems  
Integrated Defense & Space Systems  
Operating income (operating margin)

## Operating Environment

In the Tier 1 commercial aircraft business, the business environment was characterized by reduced production levels by customers and a downward trend in contract prices from fiscal 2016. As we expect this situation to continue for the foreseeable future, we recognize that strengthening cost competitiveness is essential. Also, ongoing yen appreciation depresses sales. In the MRJ business circumstances, the market for 70-to 90-seat regional jets is forecast to grow by 4% annually for the next 20 years, to around 3,500 aircraft. However, as a competitor is slated to launch a next-generation 90-seat aircraft in 2021, in order to maintain our predominance we will need to catch up with the delay in our development schedule.

The MRJ is the only next-generation aircraft in the 70-seat class. As the defense and space business is largely dependent on government budgets, the scale of this business has remained essentially flat for more than 20 years. This is one issue we face in terms of expanding our scale of business. Another issue is a fragile profit structure. In the defense business, we view the Cabinet decision on the Three Principles on Transfer of Defense Equipment and Technology and government consideration of the National Defense Program Guidelines as opportunities to increase the defense business. Similarly, we believe the revision of the Basic Plan on Space Policy and Implementation Schedule and the formulation of the Vision for the Space Industry present opportunities in the space business, and we believe these moves will translate to business growth.



## Directions for Fiscal 2017 and Focus Strategies for the Medium to Long Term

In the Tier1 commercial aircraft business, we are working to quickly improve earnings. First, we are using robotics to automate assembly and enhancing the efficiency of management and indirect work processes through the use of artificial intelligence (AI) and the Internet of Things (IoT). We are also engaging in supply chain reforms. These efforts include the configuration of harmonized production processes, collaboration through the shared technology framework, and the optimization of order placements through the establishment of the Commercial Aircraft Procurement Center. Over the medium to long term, we will pursue synergies with the MRJ business, developing differentiation technologies that include weight reduction and material development. We are also promoting initiatives into new fields, such as functional components and equipment. Furthermore, we will leverage comprehensive Group strengths, harnessing integrated traffic control system synergies and component-related synergies with the defense and space business. In these ways, we aim to flexibly reconfigure our business portfolio.

In the defense and space business, we are pursuing three principal growth strategies: overseas expansion, dual-use development (commercial business), and expansion of existing fields. In the first category, overseas development, we will leverage the international joint development know-how and channels we have cultivated through the F-35 stealth fighter and the SM-3 Block IIA (ballistic missile defense interceptor with enhanced capabilities),

which is currently under Japan-US joint development. We will also make use of key technologies cultivated in the defense and space systems business. At the same time, initiatives are underway with the Japanese government toward potential international joint development projects. International companies are also discussing the adoption of MHI components for use in overseas equipment. Future initiatives include delivering the F-35 as the first domestically assembled aircraft, building up a track record in this area and preparing to erect an MRO&U\* facility. Regarding the SM-3, in line with government policy we will commence preparation of a joint production system. We will also produce and export components for Japan/US deployment missiles. In the second strategy, dual-use development, in fiscal 2016 we began specific considerations toward adapting cybersecurity technology for control systems in defense products. We are currently assessing potential applications in control systems for power plants. Regarding expansion in existing fields, we will promote attractive business proposals that leverage our leading-edge technologies and track record in the future fighter program and the Patriot system. In satellite launch services, through the price-competitive H3 launch vehicle, we aim to obtain more commercial and overseas orders.

See the section below, entitled "Business Directions at a Key Subsidiary" regarding the MRJ business strategy.

\*MRO&U: Maintenance, repair, overhaul, and upgrade

## Business Directions at a Key Subsidiary: Mitsubishi Aircraft Corporation

Mitsubishi Aircraft Corporation, which is handling the MRJ development, aims to acquire type certification in 2019 and, with the aim of delivering the first aircraft in mid-2020, will undergo static structure tests and the construction of final test aircraft in Japan. The aircraft will then be subjected to flight tests in Japan and the United States, and the company is putting together a customer support structure. Going forward, Mitsubishi Aircraft will continue working to achieve aircraft performance that surpasses competitors and provide extensive customer support. At the same time, the company will implement cost reductions while maintaining development and schedules and draft development and marketing strategies for subsequent commercial production and the MRJ70's commercial viability.

To these ends, in November 2016 we established the MRJ Business Promotion Committee, chaired and directly overseen by MHI's CEO. The committee aims to accelerate decision-making and implementation through the seamless exchange of information among the three-base development structure, comprising the city

of Komaki in Aichi Prefecture, Seattle, and Moses Lake in the United States. The development organization has also been revised from one led by Japanese employees with foreign advisors to one centered on non-Japanese members of the general manager class. This structural change is aimed at making full use of foreign experts. Simultaneously, the company is reinforcing customer relations to prevent market launch delays from affecting orders already received. Alongside these MRJ Development Team efforts, the Future Advanced Technology Development Team is pursuing the development of further advanced technology from a medium- to long-term perspective. The team is also engaging in technical strategy planning and development of next-generation aircraft concepts.

Development expenses are forecast to peak in fiscal 2019, and we plan to cover these costs with the free cash flow generated by the MHI Group as a whole. Although the payback period will be prolonged, the impact of increased development expenses on profit for each fiscal year should be minimal, and we anticipate virtually no impact on the management of the entire MHI Group.

## BUSINESS SEGMENT OVERVIEW: AIRCRAFT, DEFENSE & SPACE DOMAIN

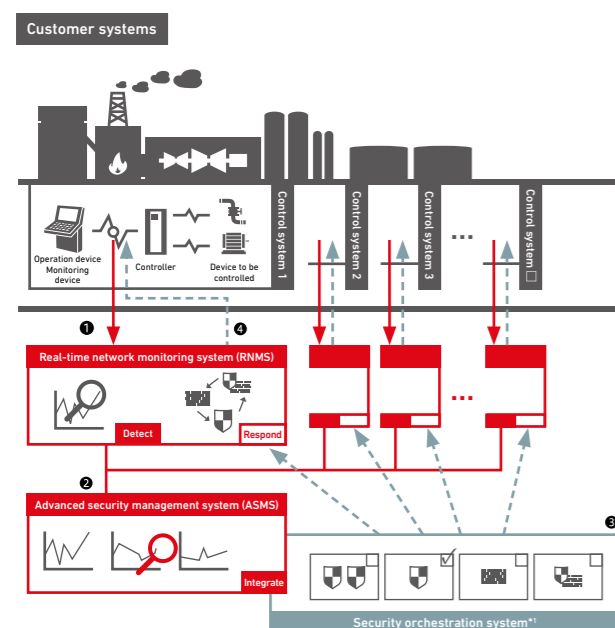
### Addressing Social Issues

#### Cybersecurity Technologies That Protect Infrastructure Control Systems

##### Social Issues

The proliferation of the Internet has led to an increase in convenience, with all manner of systems and large numbers of physical items being connected over networks. At the same time, this connectedness has prompted a sharp increase in cyberattacks, and measures to protect important infrastructure are of particular importance. Effective security measures have been developed to address such cyber threats as malware, including malicious software and computer viruses, and distributed denial-of-service (DDoS) attacks aimed at bringing down systems via a huge volume of data requests. However, recent years have seen a rise in serious malware that monitors the operational characteristics and control commands of equipment being targeted for attack, and then seeks to damage the targeted equipment by altering the timing and content of these instructions. New measures are sought to counter such potential attacks.

##### InteRSePT Framework and Characteristics



##### Targets:

Critical infrastructure such as power plants and transportation systems where continuous availability is of high importance.

- 1 Collects and analyzes packets of sensor information flows in the control system network to monitor the overall operating status.
- 2 Processes the real-time detection data in an integrated manner with the ASMS and monitors the behavior of the entire control system to enable early detection.
- 3 Performs appropriate control over different devices based on integrated security information and changes the communication control rules of the RNMS in response to operational conditions.
- 4 Analyzes and blocks the packets based on rules according to the operating status determined by the security orchestration system/technology.

##### MHI Group's Solutions

In March 2016, MHI and NTT concluded an agreement for joint research in cyber security technologies applicable to critical infrastructure control systems. At the same time, MHI opened the Cyber Lab to serve as a base to verify the effectiveness of security at power generation facilities and in a broad range of other fields. By combining the high-reliability and safe control technology developed by MHI in the fields of defense and space and the security orchestration technology\*1 developed by NTT, in late November 2016 we completed a prototype of InteRSePT\*\*2 cyber-security technology, which enables real-time anomaly detection of unknown cyberattacks.

InteRSePT® consists of a real-time network monitoring system and an advanced security management system, and monitors real-time data flows in networks in an integrated manner. The system delivers real-time security measures that place importance on availability\*3 by changing the security remediation rules on each operating state of the target device. This enables protection against cyber-attacks that exploit control commands.

Going forward, MHI and NTT will evaluate the technology prototype at Cyber Lab and verify its adaptability to control systems, to further advance InteRSePT® and expand its application to the operation and maintenance business. We will focus on commercial fields in which availability is essential, such as at thermal power plants and chemical plants.



Cyber Lab

\*1. Security orchestration technology/system: Technologies/systems that collect and analyze cyberattack related information including target device and system status and anomaly events, and comprehensively control diversified security appliances.

\*2. InteRSePT®: Abbreviation of Integrated Resilient Security and Proactive Technology, a registered trademark of MHI.

\*3. Availability: Continuous operation of a system without stoppage.

### Initiatives in This Domain Related to Material ESG Issues

Material issue 2: The Use of Global Human Resources

#### MRJ Development Structure Incorporating Foreign Experts

To restructure the development schedule in the MRJ business, in late 2016 we began actively recruiting foreign engineers with experience in the airframe business, and we have been allocating key roles in our organizational structure to these personnel. As of June 2017, some 2,000 employees were involved in the MRJ business at our three locations. Foreign engineers have reached one third of this number, or around 600 people. At our development base in Komaki, Aichi Prefecture, foreign staff participate in meetings, which are held in English. We are conducting training on cross-cultural communications and training non-Japanese staff on Japanese-style leadership in an effort to facilitate communications and mutual understanding. By building a globally fluent organizational structure and culture, we are working to reinforce leadership and the transfer of authority, thereby accelerating decision-making. At the same time, by fostering open-minded communication and information-sharing, we are enhancing teamwork and speeding up development activities.

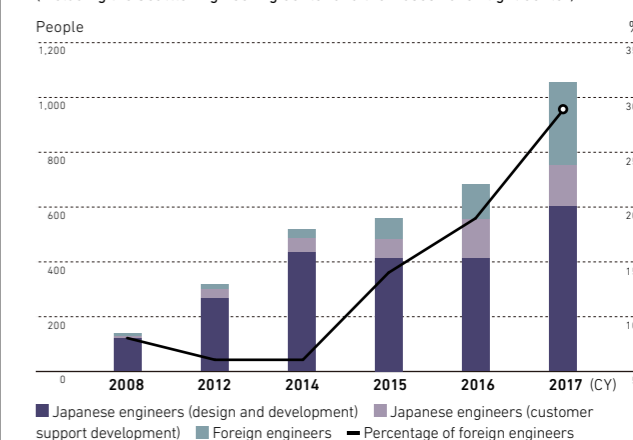


#### R&D Case Study

##### Improving Engine Combustion Stability to Lower Costs and Improve Reliability on the H3 Launch vehicle

MHI is currently developing the H3 launch vehicle in the aim of reducing costs and improving reliability in comparison with the current H-IIA/B launch vehicle. In the development of a launch vehicle, its engine is an important factor affecting reliability, cost, and performance. Ensuring combustion stability is essential in developing a launch vehicle engine capable of generating propulsive power at hydrogen and oxygen combustion temperatures exceeding 3,000°C. In fiscal 2016, a significant improvement in combustion stability was attained through improvement in the

##### Technical Managers and Core Engineers (Including the Seattle Engineering Center and the Moses Lake Flight Center)



Project spearheaded by Mitsubishi Aircraft Corporation

Promotion by MHI Group under a structure headed by the CEO



injector and resonator by establishing and applying a proprietary combustion stability evaluation tool. By July 2017, a combustion test of the total engine system had been conducted, confirming its technical feasibility. MHI has earned a strong international reputation for the reliability of its launch services, but further cost reductions are an issue. By bolstering cost competitiveness through the development of the H3 launch vehicle, we aim to expand the number of commercial and overseas launch orders.

## MESSAGE FROM THE OUTSIDE DIRECTORS



From left: Kuroyanagi, Ito, Ahmadjian, Shinohara, Kobayashi

### Naoyuki Shinohara

Professor, The University of Tokyo,  
Policy Alternatives Research Institute  
(Former Deputy Managing Director of  
the International Monetary Fund (IMF))

Appointed director in June 2015

Appointment Background:  
Provides a range of insights related  
to financial policy gained as a  
regulator, as well as global perspec-  
tives gained as an executive at  
a major international institution

### Proactively using external strengths while upholding MHI's traditions and diversity

Today we live in an increasingly multipolar world, where technological innovations have significantly reduced cross-border costs. Given the rapid pace of change and global uncertainty, we must constantly consider how we should respond effectively to these shifts.

MHI has a highly diversified combination of human resources, but relying on this alone will present major challenges in this rapidly changing global environment. What MHI must do is actively pursue tie-ups with other industries and bring in outside human resources to provide new perspectives, while also preserving the values it has cultivated through the years. In this respect, I think the joint venture Primetals Technologies serves as a good example.

When I worked for an international organization, I personally experienced working with people of different nationalities and backgrounds, and the challenges involved. From this, I learnt that the best way to adapt to a cross-border world is to put oneself in the midst of diversity. At MHI, increasing opportunities for employees to establish global contacts and networks from a young age is vital for incorporating and making good use of knowledge derived from outside the Company.

### Ken Kobayashi

Chairman of the Board,  
Mitsubishi Corporation

Appointed director in June 2016

Appointment Background:  
Extensive knowledge and experience  
of top management, experience  
operating across global markets

### Collaborating with the "right partners" key to global success

Japan, a trading nation, was able to develop rapidly on the strength of its commercial trading capabilities, backed by a diligent workforce and reliable technology. Today, that is no longer sufficient. As many markets develop local manufacturing capacity, growth in global trade volumes has slowed significantly. The days when Japan could rely on merely making good products and selling them overseas have ended.

Much has also changed in the global environment. We now face increased geopolitical risks, widening socio-economic gaps, rapid technological change and remarkable demographic shifts. In light of these changes, MHI must take aggressive steps towards leveraging its well-established technological strengths to expand business globally.

More than ever before, what is vital in this context is identifying the "right partners" and working with them to provide products and solutions that more precisely meet local needs. Today, what is demanded isn't just economic value, but also the pursuit of societal and environmental value. As a major corporation MHI must pursue these aims in a way that enhances its trustworthiness in the eyes of the global community.

I believe MHI is on the right path in proactively pursuing lucrative M&A opportunities, but greater speed will be needed in integrating such companies if synergies are to be realized. For this to happen, the Group needs to be proactive in raising awareness internally about the changes that ought to be made, while retaining the best aspects of its corporate culture. Raising awareness will take time, and there is no quick measure for achieving the desired results in one leap, but I trust that MHI will be able to make steady progress in its business initiatives, while maintaining transparency and sound governance at all times.

### Nobuo Kuroyanagi

Senior Advisor,  
The Bank of Tokyo-Mitsubishi UFJ, Ltd.

Appointed statutory auditor of MHI in  
June 2009, and director and Audit  
and Supervisory Committee member  
in June 2015

Appointment Background:  
Extensive knowledge and experience  
serving in top management at  
international financial institutions

### Aiming for an organization in which all employees can link global changes to their individual roles

As an outside director, I consistently focus on how we can enhance MHI's brand value. For many years MHI has been a provider of outstanding products globally, and in that context expectations have been held high among shareholders and other stakeholders. However, at a time when globalization is occurring at rapid pace, what worked in the past will not necessarily be effective in future. In order for MHI to continue to meet society's needs and enhance brand value, it is important not only for management but also for individual employees to maintain focus on how MHI products and services bring value and satisfaction to people's lives and on where the source of global competitive strength lies.

When I served as part of the executive management team at a global bank, I repeatedly told the officers and management staff to visit workplaces "a hundred times," a practice I carried out myself. There are things that can only be properly communicated to employees, and that can only be observed, by going directly to actual work sites. I firmly believe that if we can get a global grasp on the macro-changes taking place in society and simultaneously, at the micro level, maintain awareness of what is demanded of MHI, of each department, and of each individual, then MHI will become a much stronger organization.

### Christina Ahmadjian

Professor, Hitotsubashi University  
Graduate School of Commerce and  
Management

Appointed director of MHI in June  
2012, and director and Audit and  
Supervisory Committee member in  
June 2015

Appointment Background:  
A broad knowledge and global  
perspective developed during her  
career as a researcher in the field of  
corporate governance and corporate  
management

### For MHI to become a truly global company, all employees must be given opportunities to contribute

Five years have passed since I became an outside director at MHI, and during this time I have seen the consistent progress made in implementing management reforms. I have also observed an increased sense of urgency—in a positive sense—throughout the Company due to awareness of global competition.

Big strides have also been made with respect to diversity. In 2016, for the first time women accounted for 10 percent of all new recruits working in tech. The number of women in management roles has also been trending upward in recent years.

However, for MHI to advance while keeping morale high, it is important to give employees responsibilities and authority from a young age, and to provide them with opportunities for development and growth. For many years I have been involved in the study of business management and corporate governance, and I have seen how companies around the world approach these issues. Unfortunately, there are still too few Japanese companies that give clear missions to all their employees and evaluate them based on results. As MHI increasingly pursues M&A and collaboration with outside partners, it will need to create such growth opportunities and put the right evaluation mechanisms in place.

MHI is seeing significant changes in its external environment while facing the challenge of implementing Groupwide reforms. If all employees are able to understand the Company's vision for the future and the necessity of these reforms, then I believe MHI will achieve strong momentum towards achieving this.

### Shinichiro Ito

Chairman of the Board,  
ANA Holdings Inc.

Appointed statutory auditor of MHI in  
June 2013, and director and Audit and  
Supervisory Committee member in  
June 2015

Appointment Background:  
Extensive knowledge and experience  
serving in top management at airline  
companies, focus on quality and  
safety management

### MHI must continue to take on new challenges, using its comprehensive strengths and diversity

MHI's long history sometimes means it dwells too much on past successes, leading to inflexibility within the organization. However, thanks to the management reform initiatives of recent years, such as the introduction of the business domain system, new synergies are now being realized, resources are more effectively used, and the speed of decision-making has improved substantially.

At the same time, the Company has faced a number of major risks large enough to impact earnings. Some degree of risk is inevitable when conducting business at a global level, but in order for MHI to continue providing value to society it cannot cease to take up new challenges. To weather such risks and difficulties, I believe it is important to share among the experience and knowledge acquired in these processes among the Group.

In my own case, as managing officer at a major airline I devoted significant energy to educating employees about the difficult periods experienced by the company and the various challenges it encountered throughout the years. Based on that experience, I realized the influence that top management can have on the development of both corporate culture and employees.

Today, MHI is involved in a number of new business endeavors, like the MRJ. To make an even greater leap into the future, I would like to see the Company actively apply the diversity it has cultivated, unifying its Groupwide technologies and human resources, and taking on the challenges of tomorrow with its comprehensive strengths.



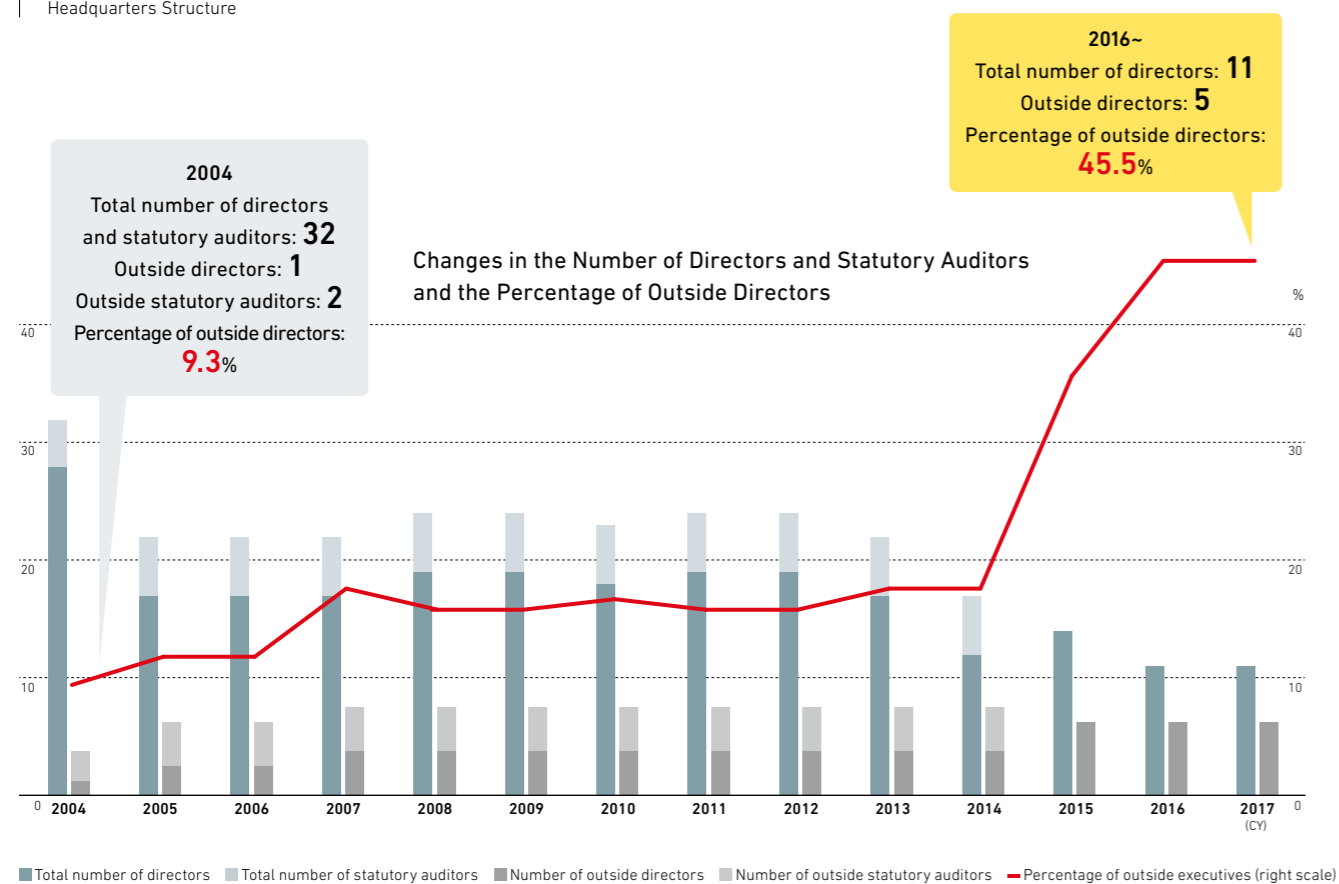
# CORPORATE GOVERNANCE

## Basic Approach

As a company responsible for developing the infrastructure that forms the foundation of society, MHI's basic policy is to execute management in consideration of all stakeholders and strive to enhance corporate governance on an ongoing basis in pursuit of sustained growth of MHI Group and improvement of its corporate value in the medium and long terms. In accordance with this basic policy, MHI endeavors to improve its management system, such as by enhancing its management oversight function through the separation of management oversight and execution and the inclusion of outside directors, and develop "Japanese-style global management," focusing on the improvement of the soundness and transparency of its management as well as on diversity and harmony.

## Recent Corporate Governance Reforms

- 2005**
  - Shortened the term of office for directors from two years to one
  - Introduced an executive officer system
  - Increased the number of outside directors from one to two and outside statutory auditors from two to three
  - Reduced the number of directors from 28 to 17
- 2006**
  - Abolished the system of director retirement allowances and bonuses, switching to system of monthly remuneration and performance-linked remuneration
  - Introduced a stock option system for directors, except outside directors
- 2007**
  - Increased the number of outside directors from two to three
- 2011**
  - Integrated a matrix structure of Business Headquarters and Works into the Business Headquarters Structure
- 2013**
  - Consolidated and restructured the nine Business Headquarters, transitioning to the Business Domain Structure (full transition by April 2014)
- 2014**
  - Introduced the Chief Officer System [Page 49](#)
  - Reduced the number of representative directors from 12 to six
  - Decreased the number of directors from 17 to 12
- 2015**
  - MHI transitioned to a company with an Audit and Supervisory Committee. The number of directors was reduced to 14, including five Audit and Supervisory Committee members. (Prior to the transition, the Board of Directors comprised 17 members, including the statutory auditors.) The number of outside directors was set at five, including three Audit and Supervisory Committee members. [Page 49](#)
- 2016**
  - Abolished stock options and introduced a new stock remuneration system for directors (excluding outside directors and directors who are serving as Audit and Supervisory Committee members) and executive officers. (Directors who are Audit and Supervisory Committee members receive base remuneration only.)
  - Formulated the Corporate Governance Guidelines of Mitsubishi Heavy Industries, Ltd.
- 2017**
  - Restructuring into three business domains
- 2016**
  - Established the Nomination and Remuneration Meeting [Page 50](#)
  - Reduced the number of directors from 14 to 11 (with the number of outside directors remaining constant at five)
  - Board Evaluation of Board of Directors effectiveness



## Outside Directors

The Company has five outside directors (of whom three are Audit and Supervisory Committee members). Outside directors are expected to enhance the soundness and transparency of the Company's management decision-making by providing beneficial views and candid assessments on the Company's management from an objective standpoint that is not biased by an internal company perspective. These individuals have diverse backgrounds in such areas as corporate management, public finance, and corporate governance.

Each of the outside directors meets MHI's independence criteria for outside directors.\* Accordingly, the Company judges all outside directors to be independent from its management team and has reported them as independent directors to the Tokyo Stock Exchange and other financial instruments exchanges in Japan.

All the outside directors are independent from management and supervise or audit management. At meetings of the Board of Directors, they receive reports on the status of the establishment and operation of internal control systems, including compliance, risk management, and other activities, and the results of internal audits, and they state their opinions when appropriate. The Audit and Supervisory Committee, a majority of whose members are outside directors, also conducts audits in collaboration with the Internal Audit Department, Management Audit Department, and accounting auditor. In addition, the Audit and Supervisory Committee shares information about the status of audits with outside directors who are not serving as Audit and Supervisory Committee members.

\* Indicated in the Corporate Governance Guidelines of Mitsubishi Heavy Industries, Ltd.

### Principal Activities of Outside Directors

#### Naoyuki Shinohara

Attended 14 of 14 meetings of the Board of Directors in fiscal 2016

#### Ken Kobayashi

Attended 9 of 10 meetings of the Board of Directors in fiscal 2016

### Principal Activities of Outside Directors (Audit and Supervisory Committee Members)

#### Nobuo Kuroyanagi

13 of 14 meetings of the Board of Directors in fiscal 2016  
16 of 17 meetings of the Audit and Supervisory Committee in fiscal 2016

#### Christina Ahmadjian

13 of 14 meetings of the Board of Directors in fiscal 2016  
15 of 17 meetings of the Audit and Supervisory Committee in fiscal 2016

#### Shinichiro Ito

13 of 14 meetings of the Board of Directors in fiscal 2016  
15 of 17 meetings of the Audit and Supervisory Committee in fiscal 2016

## Board Evaluation

MHI took the enactment of Japan's Corporate Governance Code as an opportunity to analyze and evaluate the effectiveness each year of the overall Board of Directors. We seek to increase the effectiveness of the Board of Directors and ensure it is substantially fulfilling its duty of accountability to shareholders by verifying the overall effectiveness and role of the Board of Directors. In fiscal 2016, this evaluation was conducted as follows.

### Key Points of Analysis and Evaluation

- Composition of the Board of Directors
- Operation of the Board of Directors
- Supervisory function performed by the Board of Directors
- Support system for outside directors

### Evaluation Process

- Self-evaluation by all directors using a questionnaire survey
- Opinion exchanges in meetings among independent outside directors
- Deliberation at the Board of Directors based on questionnaire results
- Following the above, Board of Directors resolution based on the results of the Board of Directors evaluation

### Evaluation Results

The Board of Directors confirms it functioned effectively in fiscal 2016

### Initiatives Targeting Principal Issues Recognized in Fiscal 2015

- Ongoing consideration regarding the selection of agenda items for the Board of Directors of a company with an Audit and Supervisory Committee
- Decentralization of agenda items based on the proposed annual schedule for the Board of Directors, sending Board of Directors materials in advance
- Providing and operating an information environment in which outside directors have access to basic management data at all times

### Principal Issues Recognized in Fiscal 2016 and Future Initiatives

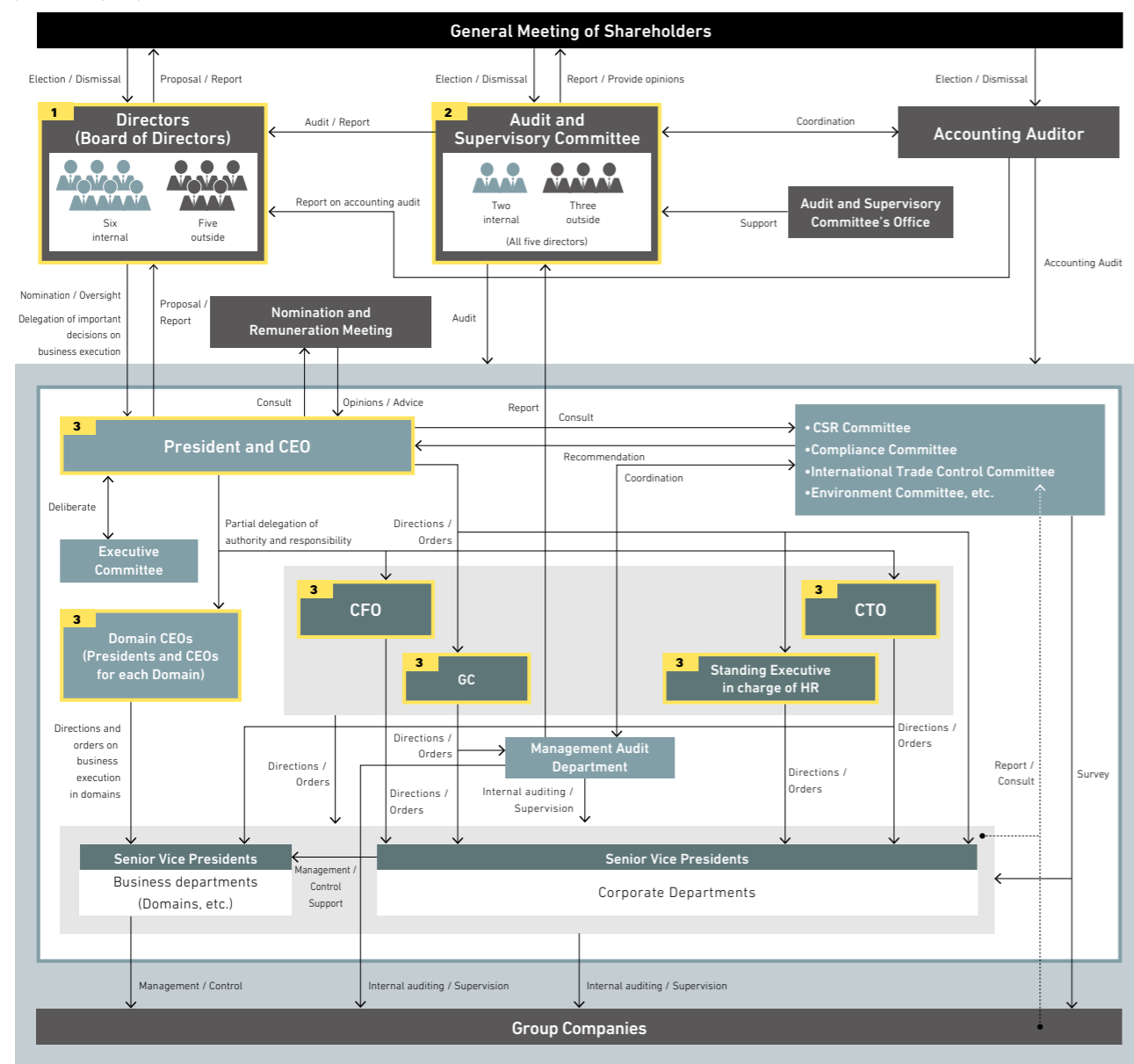
- To ensure a more effective Board of Directors supervisory function, expand opportunities for training on changes in the environment and MHI's initiatives in response
- Enhance deliberations at the Board of Directors by providing more extensive materials in advance
- Strengthen the Board of Directors supervisory function by setting agenda items appropriately as a company with an Audit and Supervisory Committee
- Expand opportunities for communication among outside directors

## CORPORATE GOVERNANCE

Corporate Governance Structure and Roles  
(Including Internal Control Systems)

MHI has adopted the form of a company with an Audit and Supervisory Committee as its corporate structure under the Companies Act. The Company delegates decisions on certain important matters of business execution to the president and CEO in accordance with a resolution by the Board of Directors based on the Company's Articles of Incorporation. These initiatives enable MHI to facilitate swift decision making and flexible business execution and strengthen the Board of Directors supervisory function by promoting the separation of management supervision and business execution.

(As of June 22, 2017)



### 1 Directors (Board of Directors)

Of the Company's 11 directors (of whom five are Audit and Supervisory Committee members), five (of whom three are Audit and Supervisory Committee members) are elected from outside the Company. In addition, the Company delegates decisions on the execution of important operations to the president and CEO. This approach enables swifter decision making and enhances the flexibility of business execution while also strengthening the Board of Directors' oversight of business execution.

### 2 Audit and Supervisory Committee

To ensure the effectiveness of the Audit and Supervisory Committee's activities, the Company's Articles of Incorporation stipulate the selection of full-time members of the Audit and Supervisory Committee. Accordingly, two full-time members of the Audit and Supervisory Committee are mutually selected by the committee's members.

The full-time members of the Audit and Supervisory Committee attend meetings of the Executive Committee and other key meetings related to business planning, enabling them to accurately assess and monitor the status of management in a timely manner. As part of the audit, Audit and Supervisory Committee members make sure the execution of directors' duties comply with laws and regulations and the Articles of Incorporation and ascertain whether or not business operations of the Company are being executed appropriately by conducting spot checks and verifying compliance with relevant laws and regulations, and by monitoring the status of the establishment and operation of internal control systems, including those in relation to financial reporting. Furthermore, one member of the Audit and Supervisory Committee has extensive knowledge of finance and accounting from many years of business experience in the accounting and finance departments.

The Audit and Supervisory Committee periodically exchanges information and opinions with the Management Audit Department and accounting auditors, and it collaborates closely with them in other ways, including receiving audit results and attending accounting audits. Audit and Supervisory Committee members also receive reports from the internal control department and other departments concerning the status of compliance, risk management, and other activities on both a regular and an individual basis. To support auditing activities, an Audit and Supervisory Committee's Office has been set up with its own dedicated staff of six to facilitate the work carried out by the Audit and Supervisory Committee.

### 3 Chief Officers and Standing Executives in Charge of Operations

The CEO\*<sup>1</sup> takes charge of overall business strategies and issue-response initiatives, and the domain CEOs take control of executing businesses within their individual domains based on overall Group strategies. The CFO\*<sup>2</sup> takes charge of finance, accounting, and management planning. The CTO\*<sup>3</sup> is in charge of the supervision and execution of overall operations related to technology strategies, research and development of products and new technologies, ICT, value chain, marketing, innovation, and engineering in general. In addition, the CFO and CTO have Companywide authority to give instructions and commands and provide support to business domains.

The GC\*<sup>4</sup> and standing executive in charge of HR\*<sup>5</sup> assist the CEO with his duties by supervising and executing activities in line with the CEO's mission. The GC takes overall control of management audits, general administration, legal affairs, and global base support. The standing executive in charge of HR takes overall responsibility for human resources and labor relations.

\*1. CEO: Chief Executive Officer

\*2. CFO: Chief Financial Officer

\*3. CTO: Chief Technology Officer

\*4. GC: General Counsel

\*5. HR: Human Resources

## CORPORATE GOVERNANCE

### Officers' Remuneration Structure

The remuneration of directors (excluding Audit and Supervisory Committee members and outside directors) consists of base remuneration, performance-linked remuneration, and stock remuneration from the viewpoint of reflecting earnings and sharing values with shareholders.

Performance-linked remuneration is determined based on consolidated earnings while also taking into account the roles of each director and the business performance and accomplishments of the business of which he or she is in charge, etc.

For stock remuneration, the Board Incentive Plan Trust structure is used. MHI shares are issued, and remuneration is paid based on stock award points that are granted in accordance with return on equity (ROE) and other such indicators linked to MHI's medium/long-term earnings and stock price.

The remuneration of directors who are serving as Audit and Supervisory Committee members consists exclusively of base remuneration from the viewpoint of ensuring duties such as audit work and supervision of execution of operations are conducted appropriately.

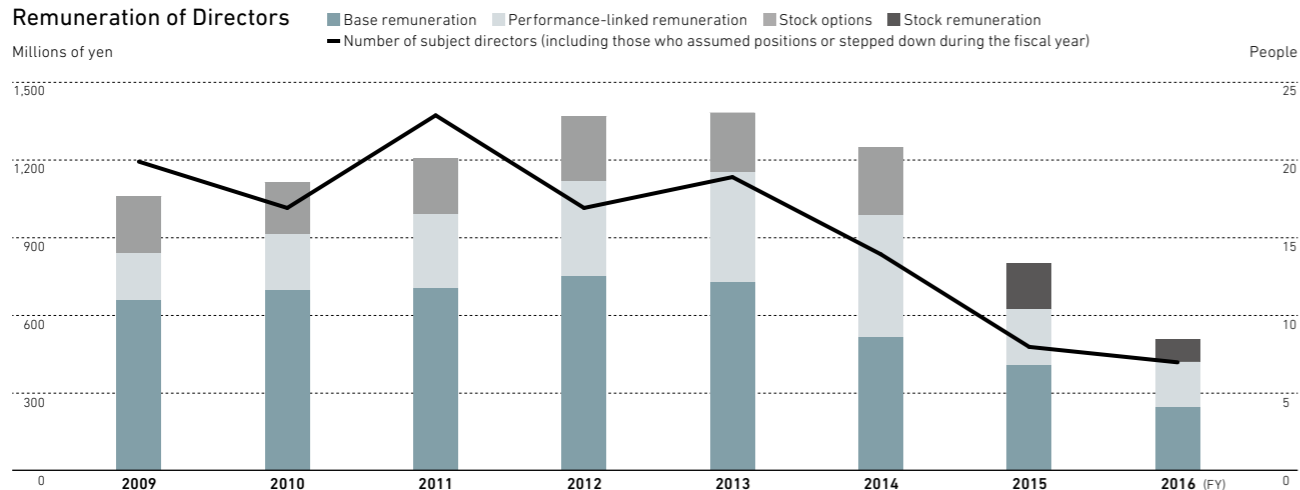
The remuneration of chief officers and administrative executive officers who are not directors is the same as for directors (excluding Audit and Supervisory Committee members and outside directors).

#### Remuneration of Directors

Position	Monetary Remuneration				Stock Remuneration		Total Amount of Remuneration (Millions of yen)
	People	Total Amount (Millions of yen)	People	Total Amount (Millions of yen)	People	Total Amount (Millions of yen)	
Directors who are not Audit and Supervisory Committee members	10	268	7	176	4	87	532
(Of which, outside directors)	(3)	(26)	(—)	(—)	(—)	(—)	(26)
Directors who are Audit and Supervisory Committee members	5	210	—	—	—	—	210
(Of which, outside directors)	(3)	(50)	(—)	(—)	(—)	(—)	(50)
<b>Total</b>	<b>15</b>	<b>478</b>	<b>7</b>	<b>176</b>	<b>4</b>	<b>87</b>	<b>742</b>
(Of which, outside directors)	(6)	(76)	(—)	(—)	(—)	(—)	(76)

Notes: 1. The recipients include four directors who were not Audit and Supervisory Committee members who stepped down in fiscal 2016.  
 2. The maximum permitted monetary remuneration amount for directors who are not serving as Audit and Supervisory Committee members is ¥1,200 million per year (resolution of the 90th Ordinary General Meeting of Shareholders on June 26, 2015).  
 3. The total amount of stock remuneration is the amount of expenses recognized for the 228,000 stock award points granted in total during fiscal 2016 (equivalent to 228,000 shares of MHI\*) concerning the Board Incentive Plan Trust, which is a stock remuneration system that delivers or provides shares of MHI and money in the amount equivalent to the liquidation value of MHI shares based on stock award points granted to directors (excluding outside directors and directors who are serving as Audit and Supervisory Committee members) in accordance with, among other factors, the rank of the position of each director and the financial results of MHI. The maximum permitted amount of stock award points is 500,000 points (resolution of the 90th Ordinary General Meeting of Shareholders on June 26, 2015) per fiscal year for directors (excluding outside directors and directors who are serving as Audit and Supervisory Committee members).  
 4. The maximum permitted monetary remuneration amount is ¥300 million per fiscal year for directors who are serving as Audit and Supervisory Committee members (resolution of the 90th Ordinary General Meeting of Shareholders on June 26, 2015).  
 \* MHI will consolidate its shares on a one for 10 basis on October 1, 2017. The corresponding number of Company shares after that date will be 22,800 shares.

#### Remuneration of Directors



### Nomination and Remuneration Meeting

The Nomination and Remuneration Meeting is composed solely of the five outside directors and the president and CEO. Prior to deliberation by the Board of Directors, this meeting serves as a forum for eliciting the opinions and advice of outside directors on the nomination of director candidates, the dismissal of directors, the appointment and dismissal of other executive officers, and matters related to remuneration.\* The aim of this meeting is to further augment transparency and fairness. In fiscal 2016, the Nomination and Remuneration Meeting met twice.

\* Excluding directors who are serving as Audit and Supervisory Committee members.

### Risk Management

Throughout its history, MHI Group has achieved sustained growth by taking up diverse new challenges and initiatives in numerous business areas. At the same time, on occasion we have experienced losses on a large scale. In recent years especially, with the globalization of its business activities, the expanding scale of individual projects, and ongoing development of increasingly complex technologies, the scale of attendant risks is becoming larger than ever before.

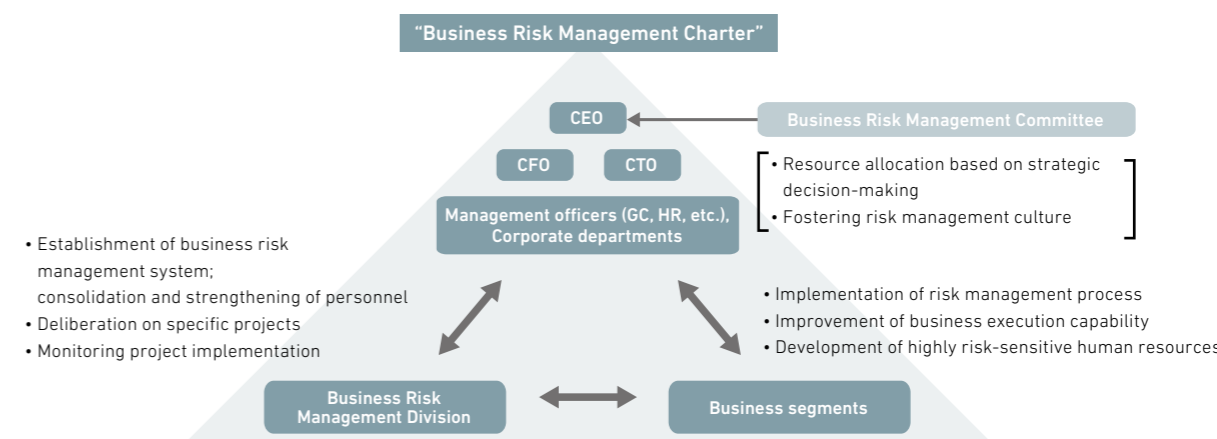
In order for MHI Group to mark sustained growth amid an ever-changing business environment, it is necessary to continue to take up challenges in new fields, new technologies, new regions, and new customers as well as to improve and strengthen operations in its existing business markets. Such challenges will entail business risks, and a company's ability to curb risks wields significant influence on its business results and growth potentials.

To promote challenges of this kind and prepare for the next leap into the future, MHI Group, applying its past experience and lessons learned, aims to create the mechanisms that will ensure the effective execution of business risk management, to foster a culture responsive to risk, and to forge the foundation for consistent growth.

#### Organized Business Risk Management

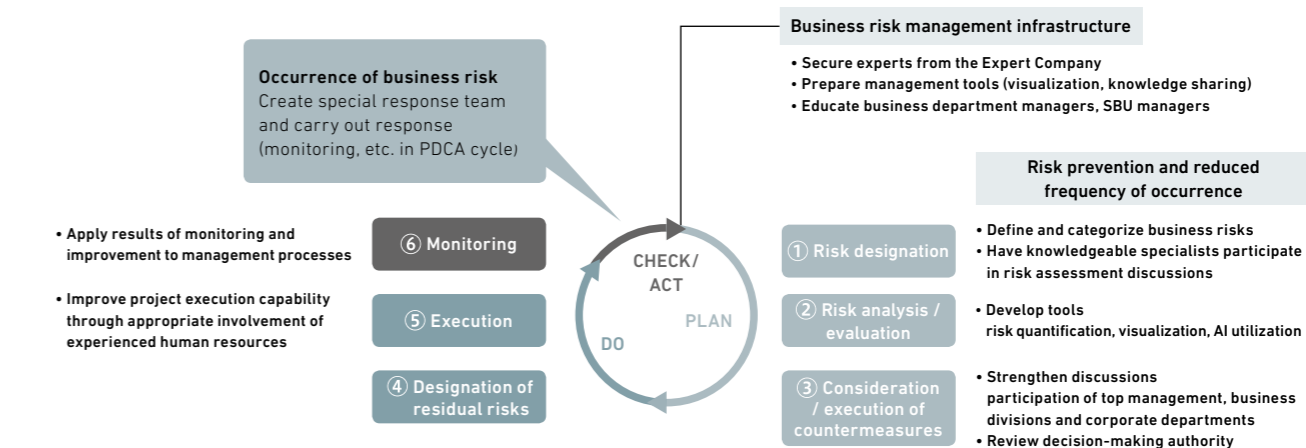
Specifically, through the following measures we are pursuing more organized business risk management and clarifying the roles of management, business segments, and corporate departments.

- 1** Establish "Business Risk Management Charter" as Company's foremost set of rules  
→ Clarify risk management targets, etc.
- 2** Establish "Business Risk Management Committee" headed by CEO  
→ Discuss policy response by top-level management



#### Content of Activities

With the Business Risk Management Department as the responsible department that reports directly to the CEO, MHI Group engages in business risk management activities in line with the activity cycle outlined below, bringing together management, business segments, and corporate departments.



# CORPORATE DATA (AS OF MARCH 31, 2017)

**Head Office:** 16-5, Konan 2-chome, Minato-ku, Tokyo 108-8215, Japan  
 Phone: +81-3-6716-3111  
 Fax: +81-3-6716-5800

**Established:** January 11, 1950

**Paid-in Capital:** ¥265.6 billion

**Total Number of Issuable Shares:** 6,000,000,000

**Total Number of Shares Issued:** 3,373,647,813

**Number of Shareholders:** 281,648

**Number of Employees:** 82,728 (Consolidated)  
 16,824 (Non-consolidated)

**Stock Listings:** Tokyo, Nagoya, Fukuoka, and Sapporo Stock Exchanges

**Ticker Code:** 7011

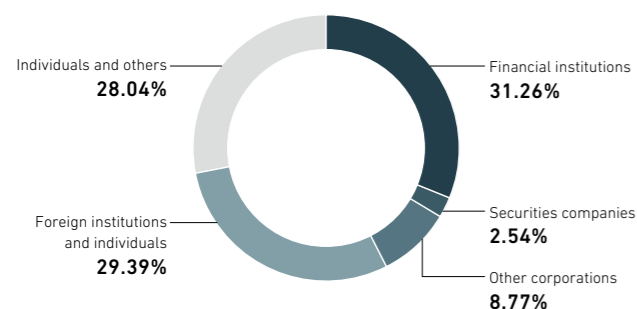
**Manager of the Register of Shareholders:** Mitsubishi UFJ Trust and Banking Corporation  
 4-5, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-8212, Japan

**Independent Auditors:** Ernst & Young ShinNihon LLC Hibiya Kokusai Bldg.,  
 2-3, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo 100-0011, Japan

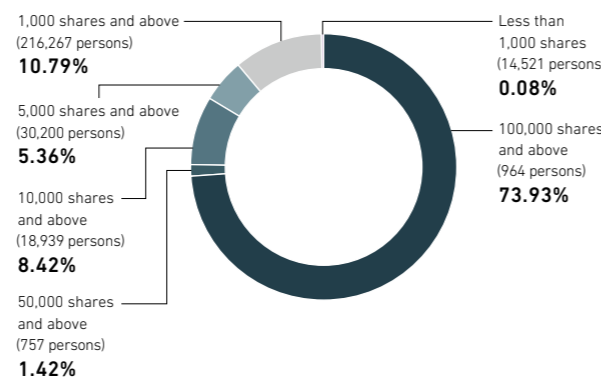
## Major Shareholders

	Number of shares owned by major shareholders	% of total shares
Japan Trustee Services Bank, Ltd. (Trust Account)	170,156,900	5.04%
The Master Trust Bank of Japan, Ltd. (Trust Account)	146,123,000	4.33%
The Nomura Trust and Banking Co., Ltd. (Retirement Benefit Trust Account for The Bank of Tokyo-Mitsubishi UFJ, Ltd.)	105,263,000	3.12%
Meiji Yasuda Life Insurance Company	80,022,741	2.37%
Japan Trustee Services Bank, Ltd. (Trust Account 5)	61,577,000	1.82%
State Street Bank West Client-Treaty 505234	48,495,460	1.43%
Japan Trustee Services Bank, Ltd. (Trust Account 1)	45,662,000	1.35%
Japan Trustee Services Bank, Ltd. (Trust Account 7)	45,238,000	1.34%
Japan Trustee Services Bank, Ltd. (Trust Account 2)	45,143,000	1.33%
THE BANK OF NEW YORK MELLON SA/NV 10	37,168,172	1.10%

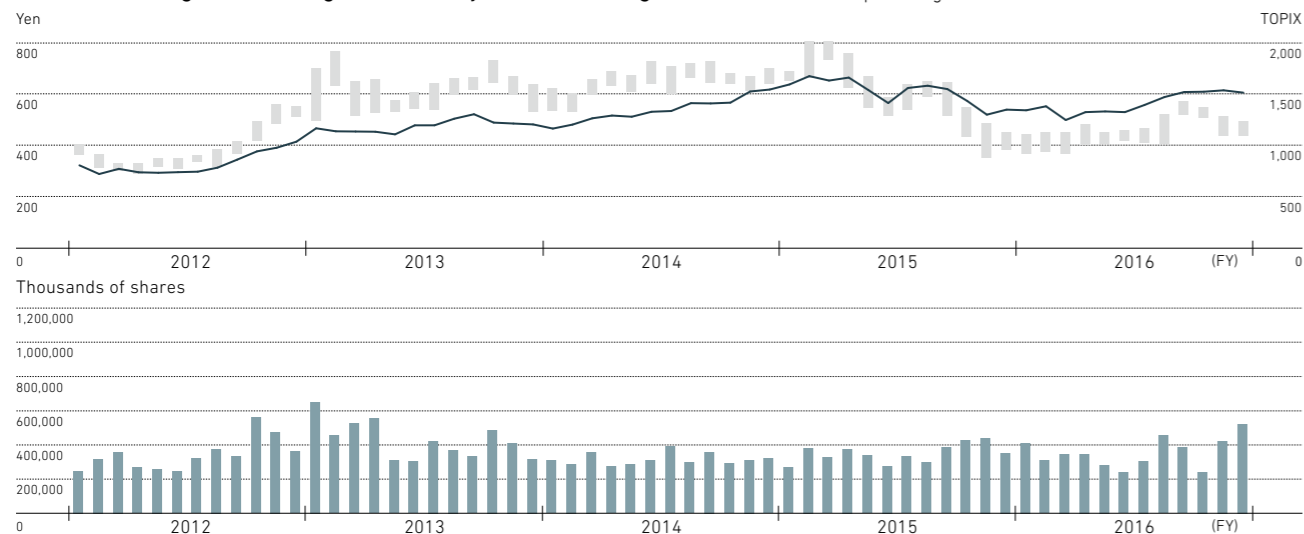
## Classified by Type of Shareholder



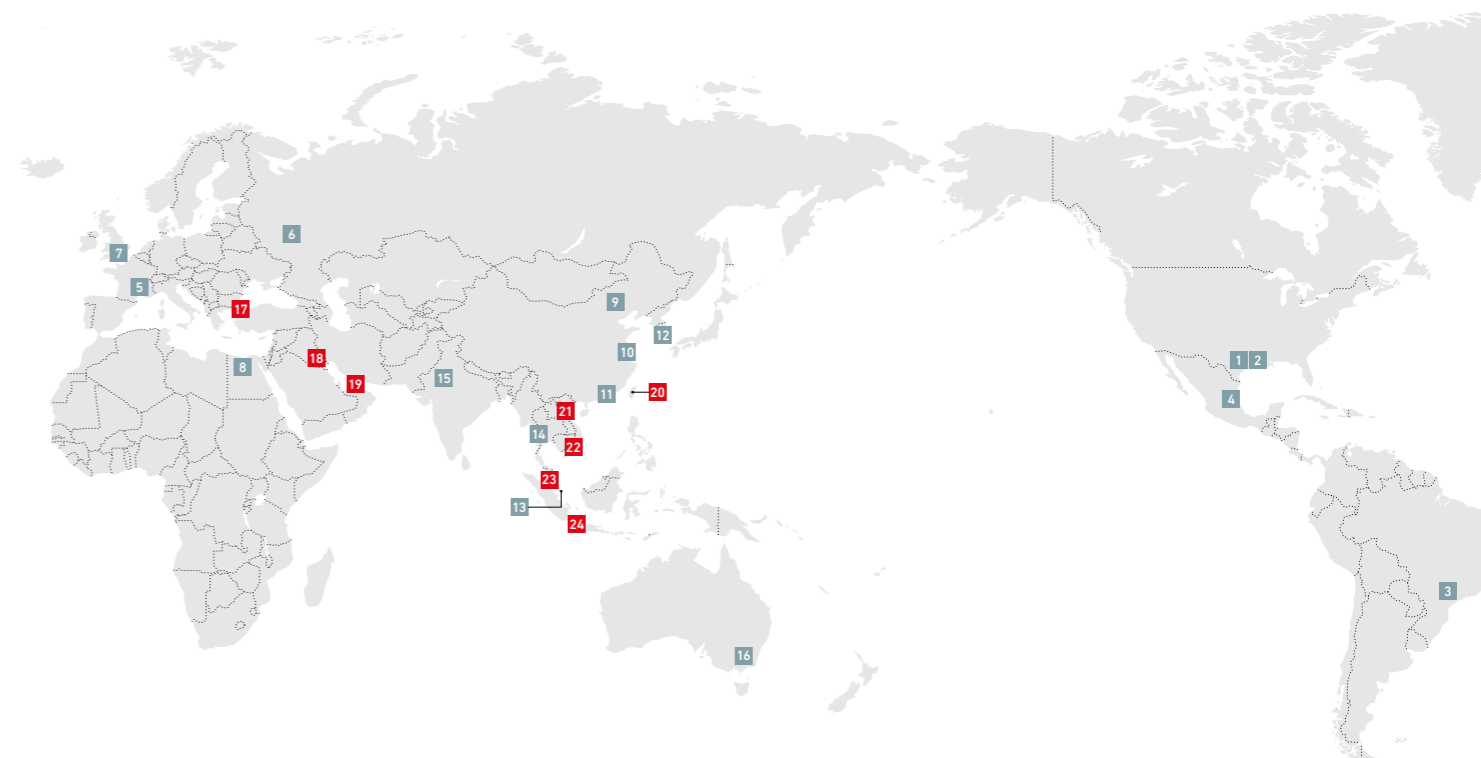
## Classified by Number of Holdings



## Stock Price Range and Trading Volume (Tokyo Stock Exchange)



# OVERSEAS HEAD OFFICES AND NETWORKS / OVERSEAS OFFICES



## Overseas Head Offices and Networks

- North America**
  - 1 Mitsubishi Heavy Industries America, Inc.
  - 2 MHI Shared Services Americas, Inc.
- Latin America**
  - 3 Mitsubishi Industrias Pesadas do Brasil Ltda.
  - 4 Mitsubishi Heavy Industries Mexicana, S.A. de C.V.
- Europe**
  - 5 Mitsubishi Heavy Industries France S.A.S.
  - 6 MHI Russia LLC
  - 7 Mitsubishi Heavy Industries Europe, Ltd.
- Africa**
  - 8 MHI Technologies S.A.E.
- Asia and Oceania**
  - 9 Mitsubishi Heavy Industries (China) Co., Ltd.
  - 10 Mitsubishi Heavy Industries (Shanghai) Co., Ltd.
  - 11 Mitsubishi Heavy Industries, (Hong Kong) Ltd.
  - 12 MHI KOREA, Ltd.
  - 13 Mitsubishi Heavy Industries Asia Pacific Pte. Ltd.
  - 14 Mitsubishi Heavy Industries (Thailand) Ltd.
  - 15 Mitsubishi Heavy Industries India Private Ltd.
  - 16 MHI Australia, Pty. Ltd.

## Overseas Offices

- Europe**
  - 17 Turkey Liaison Office
- Middle East**
  - 18 Basra Liaison Office
  - 19 Dubai Office
- Asia**
  - 20 Taipei Office
  - 21 Hanoi Liaison Office
  - 22 Ho Chi Minh City Liaison Office
  - 23 Kuala Lumpur Office
  - 24 Jakarta Liaison Office

For information on overseas Group companies not provided above, please refer to the "Global Network" section of our website.

> <http://www.mhi.com/network/>

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