

**HITACHI**

**The Hitachi Metals Group Report 2019**  
**Integrated Report**



MISSION  
Corporate Creed

The origins of our company can be traced back  
one hundred ten years,  
and our main products have been standing at the top  
in each industry both qualitatively  
as well as quantitatively.

We devote ourselves to technology and  
aspire to contribute to society by being  
the best enterprise based on “*Wa sureba tsuyoshi*”  
our people possess and their loyalty to the company.

VALUE  
Corporate Philosophy

## *Wa sureba tsuyoshi*

“*Wa*” refers to “individuals with different characters  
coming together to create harmony.” “*Tsuyoshi*”  
means “strength to accomplish the results we hope  
for.” “*Wa sureba tsuyoshi*” portrays our endeavor to  
work as one while improving ourselves individually in  
order to create the best possible company.

## To Our Stakeholders

### On the Publication of the Hitachi Metals Group Report 2019

I took office as Representative Executive Officer, and  
President and Chief Executive Officer in April 2019. The  
Hitachi Metals Group began operating under a new  
Medium-Term Management Plan from fiscal 2019.  
Under this new plan, all of us will move forward one  
step, one day at a time, to be “One step ahead  
tomorrow of where you are today!” to build innovation  
that contributes to the resolution of customers’ and  
society’s issues, and become a high-performance  
materials company supporting sustainable societies.

This report is a communications tool to help our  
stakeholders understand how we are working to  
enhance corporate value, including the Group’s  
strengths, Corporate Creed, and our process for  
creating value, together with a systematic compilation  
of financial and non-financial information that can be  
considered important for continuous growth. This  
report references the International Integrated Reporting  
Council’s The International Integrated Reporting  
Framework and the Ministry of Economy, Trade and  
Industry’s Guidance for Integrated Corporate Disclosure  
and Company-Investor Dialogues for Collaborative  
Value Creation. The report is prepared in close  
cooperation with our corporate divisions to consolidate  
our thinking across the Group, and is intended to  
present this information in a way that is easy to  
understand.

### Koji Sato

Representative Executive Officer,  
President and Chief Executive Officer





Highlights of fiscal 2018

Revenues	ROE*2	EBIT
¥1,023.4 billion	5.5%	¥45.3 billion
Adjusted operating income*1	ROA*3	R&D expenses
¥51.4 billion	2.9%	¥18.6 billion
Adjusted operating margin	Overseas sales ratio	Number of employees
5.0%	56%	30,304

\*1 Adjusted operating income = Revenues – Cost of sales – Selling, general and administrative expenses  
\*2 ROE (return on equity) = Net income attributable to shareholders of the parent company ÷ Average of beginning and end-year equity attributable to shareholders of the parent company x 100  
\*3 ROA (return on assets) = Net income attributable to owners of the parent company ÷ Average of beginning and end-year total assets x 100

Scope of operations by region in fiscal 2018

Europe	North America	Japan
Revenues ¥50.4 billion	Revenues ¥310.9 billion	Revenues ¥449.0 billion
Number of employees 180	Number of employees 7,235	Number of employees 13,860
China	Other Asia	Other
Revenues ¥76.2 billion	Revenues ¥124.5 billion	Revenues ¥12.4 billion
Number of employees 3,222	Number of employees 5,807	Number of employees –

External ESG-related recognitions

Included in the MSCI Japan ESG Select Leaders Index, a fundamental index for ESG investment.

Included in the MSCI Japan Empowering Women Index, an index comprising companies from various industries with high scores for gender diversity.

Included in the FTSE Blossom Japan Index, an index of companies that demonstrate strong environmental, social, and governance practices.

Included in the new S&P/JPX Carbon Efficient Index, which focuses on the “E” (Environment) in ESG.

The MSCI ESG Leaders Indexes comprise companies from various sectors that demonstrate strong ESG practices.

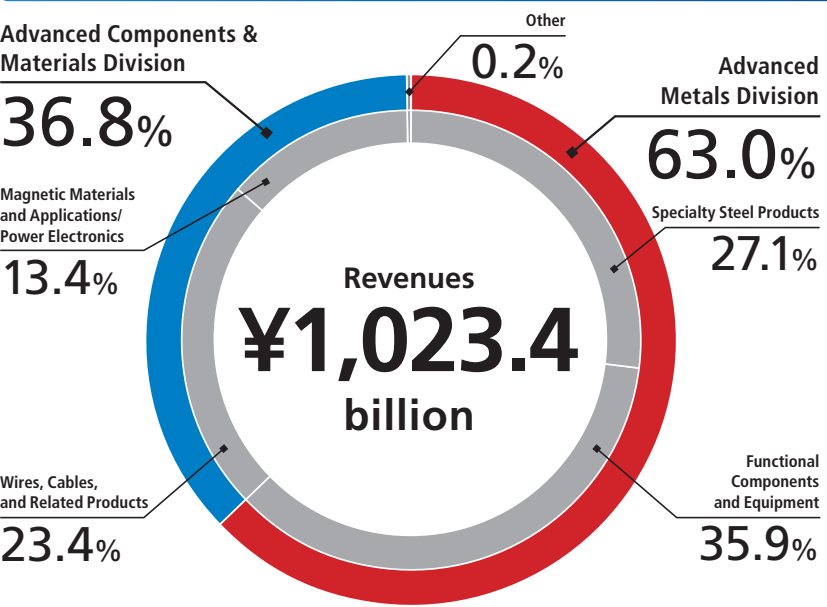
Included as a target for investment in the SNAM Sustainability Index, which is used to invest in companies that are rated highly for their ESG performance.

The FTSE4Good Index is an index of companies recognized for their environmental and social sustainability, and is used by various market participants when structuring sustainable investment products.

Selected as a fiscal 2017 Nadeshiko Brand by the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange as a company that “encourages women’s success in the workplace.”

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Percentage of fiscal 2018 revenues by segment\*



Advanced Metals Division
Revenues ¥644.5 billion
Adjusted operating income ¥32.9 billion
Advanced Components & Materials Division
Revenues ¥377.1 billion
Adjusted operating income ¥16.5 billion

\* As of April 1, 2019, soft magnetic and materials and applied products were transferred from the Specialty Steel Products segment to the Magnetic Materials and Applications segment, and the name of the Magnetic Materials and Applications segment was changed to the Magnetic Materials and Applications/Power Electronics segment. Fiscal 2018 actual results have been retroactively adjusted to reflect the segment change (the adjusted figures have not been audited).  
\* Segment results are simple totals prior to eliminations for intersegment transactions.

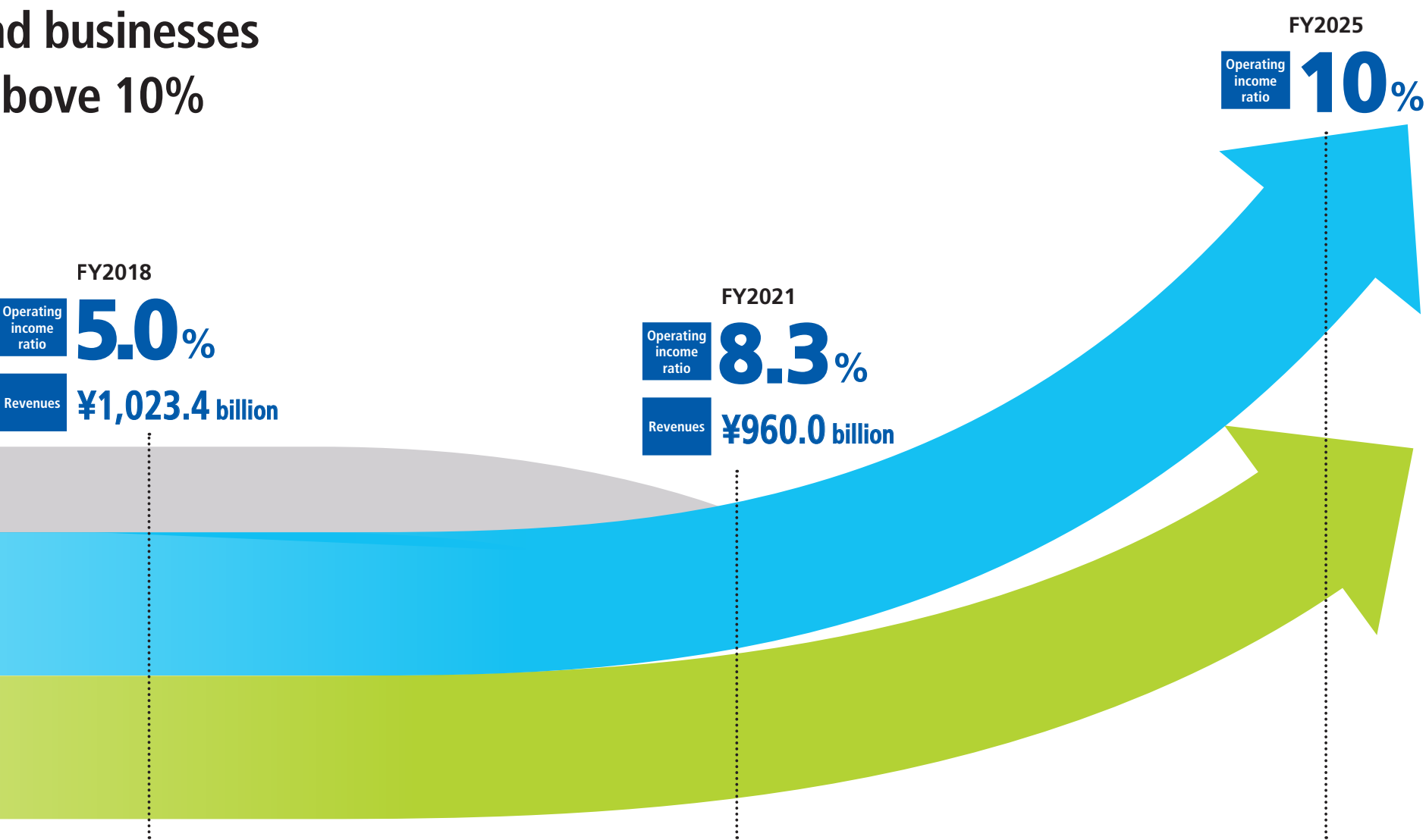


# Expanding “Only 1, No. 1” products and businesses with the aim of an operating margin above 10%

The Hitachi Metals Group is expanding its “Only 1, No. 1” products and businesses in growing businesses and core businesses with the aim of achieving an operating margin of above 10% by fiscal 2025.






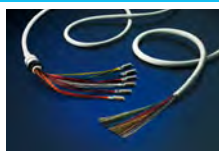
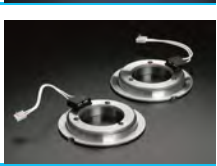


During the period covered by the Fiscal Year 2021 Medium-Term Management Plan, we are focusing on strengthening and expanding our “Only 1, No. 1” products and businesses in both growing businesses and core businesses. At the same time, we are pursuing selection and concentration to downsize, withdraw from, or spin off products and businesses that are deemed not to be core to our business. We are, therefore, forecasting a turnaround to a decline in revenues in fiscal 2021, but with an increase in the operating margin. We will develop a muscular product and business portfolio made up of highly competitive “Only 1, No. 1” products and businesses with the aim of achieving an operating margin of above 10% by fiscal 2025.

- Downsizing, withdrawing, spinning off**  
(business selection and concentration to downsize, withdraw from, or spin off non-core businesses)
- Growing businesses**  
(aiming for business expansion through proactive, disciplined investment in growth areas)
- Core businesses**  
(continuing to expand high-value-added products for which there is strong market demand)



## Product/Business Portfolio

### Growing businesses

The largest share worldwide		Components and materials for aircraft		Magnet wires	
The largest share worldwide		Power electronics materials		Medical cables and tubes	
The largest share worldwide		Magnets for drive motors		Magnets for drive motors	

### Core businesses

The largest share worldwide		The largest share worldwide		The largest share in Japan	
The largest share worldwide		The largest share worldwide		The largest share in Japan	
The largest share worldwide		The largest share in Japan		The largest share in Japan	

\* Shares are Hitachi Metals' estimates in target markets.



Mission/Value

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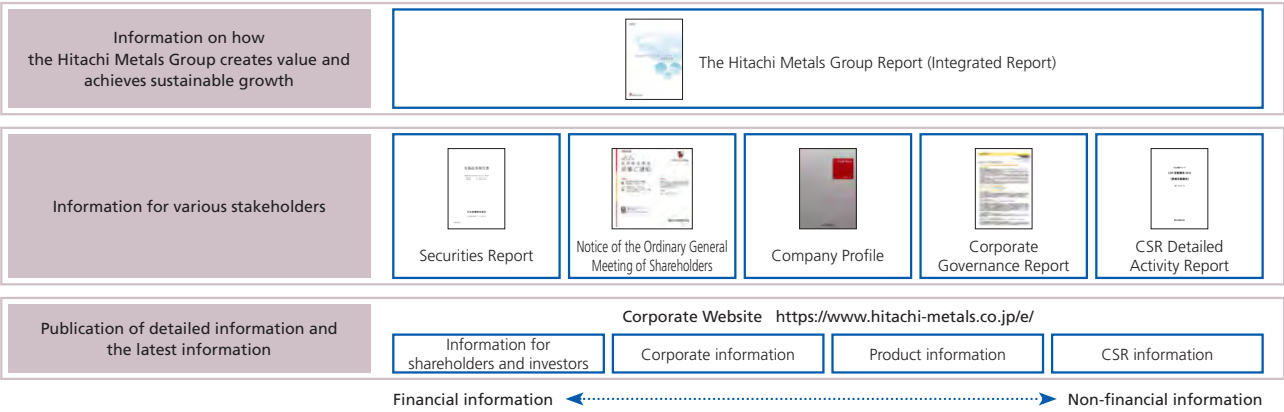
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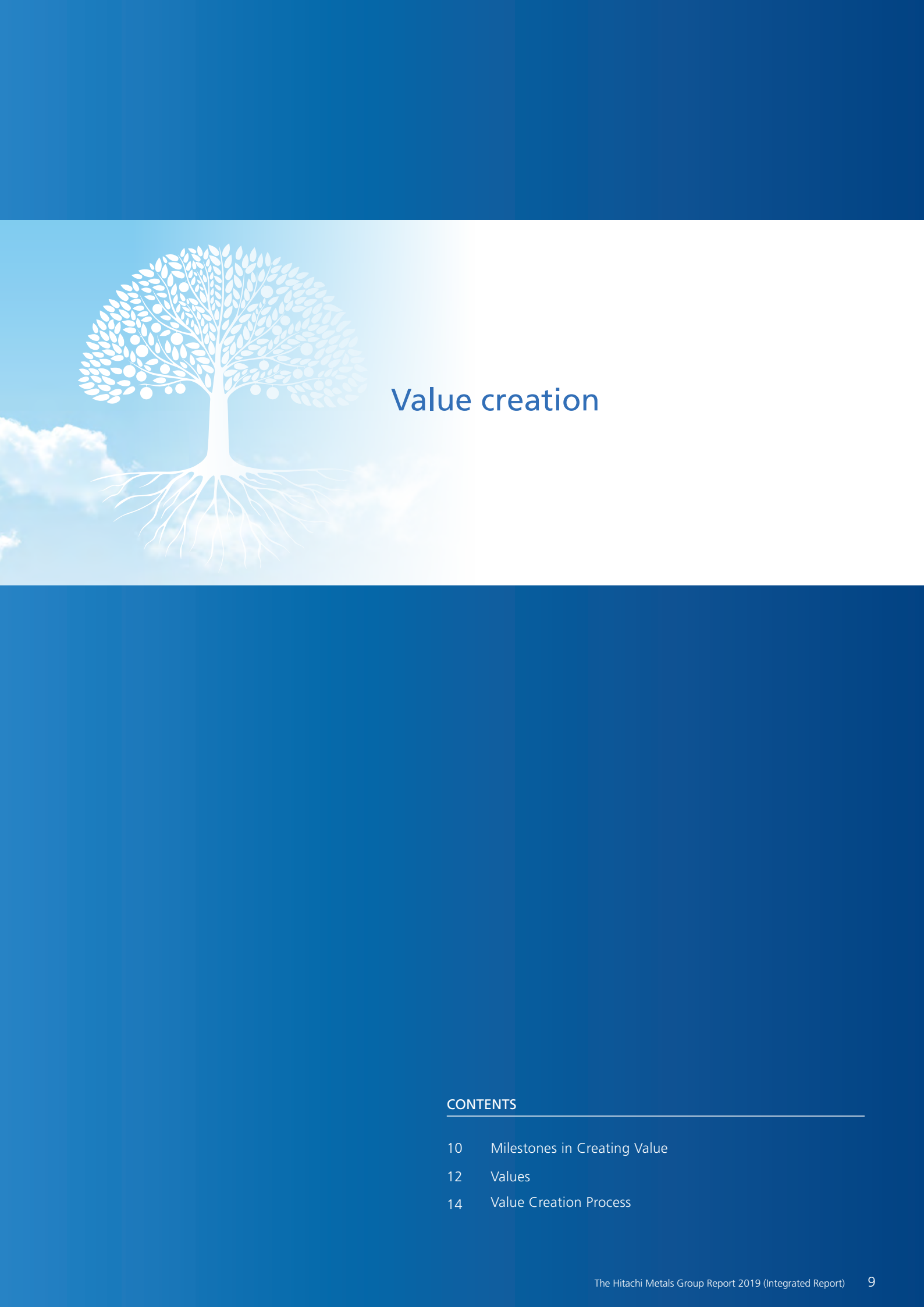
Information provided by the Hitachi Metals Group



**Editorial Policy**  
From 2016 (Fiscal 2015 Report), we have released the Hitachi Metals Group Report (Integrated Report) for all stakeholders, including shareholders and other investors. The aim of the report is to deepen understanding among stakeholders about how the Group utilizes its strengths to create value for customers and achieve sustainable growth. This report was edited referencing the International Integrated Reporting Council's The International Integrated Reporting Framework and the Ministry of Economy, Trade and Industry's Guidance for Integrated Corporate Disclosure and Company-Investor Dialogues for Collaborative Value Creation. In addition to the Hitachi Metals Group Report (Integrated Report), we provide information to our various stakeholders as shown in the chart. We also periodically update our corporate website with the latest information, including detailed information and news releases.

**Review Period**  
Fiscal 2018 (April 1, 2018–March 31, 2019)  
Note: Where possible, the latest information is used at the time of publication.

**Relevant Entities**  
Hitachi Metals, Ltd. and its consolidated subsidiaries  
Note: In cases where information contained herein refers to a review period and/or relevant entities different from those stated above, this is pointed out accordingly.



Value creation

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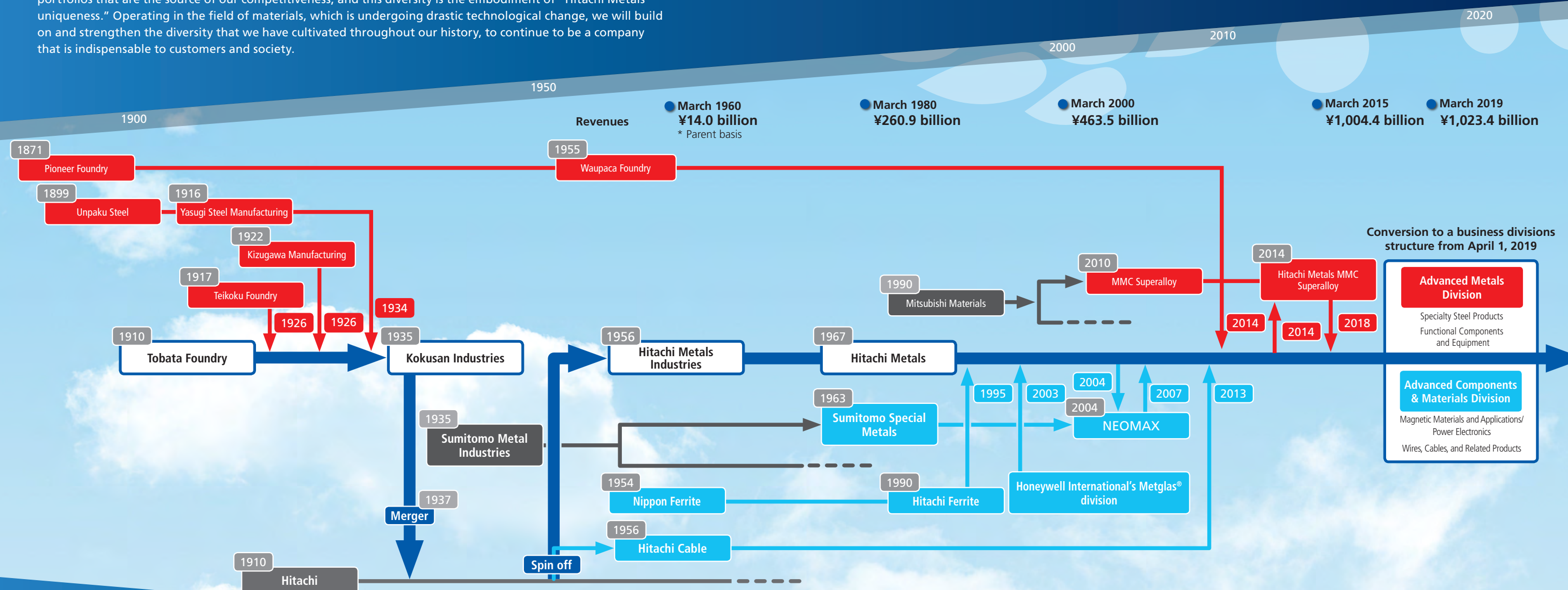
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## Milestones in Creating Value

# Diversity is the embodiment of Hitachi Metals' uniqueness.

Over our more than 100-year history, the Hitachi Metals Group has continued to grow through a succession of mergers and acquisitions. Through this process, we created the diverse technologies, products, and business portfolios that are the source of our competitiveness, and this diversity is the embodiment of "Hitachi Metals' uniqueness." Operating in the field of materials, which is undergoing drastic technological change, we will build on and strengthen the diversity that we have cultivated throughout our history, to continue to be a company that is indispensable to customers and society.



### 1910 Tobata Foundry

At a time when a modernizing Japan relied on imports for almost all of its industrial goods, Yoshisuke Ayukawa acquired malleable cast iron manufacturing technology and established Tobata Foundry, the predecessor of Hitachi Metals. In 1911, the company began manufacturing Gourd brand-black heart malleable cast iron pipe joints. The company later began to produce products for other uses including shipbuilding, railways, and spinning machines, and orders grew steadily as the superior quality of these products was recognized. Business areas were diversified through mergers with Teikoku Foundry, which at the time was producing steel for steel rolling, Kizugawa Manufacturing, a producer of fittings, and steelmaker Yasugi Steel Manufacturing.

### 1935 Kokusan Industries

As the business expanded to cover heavy industries in general, Tobata Foundry changed its name to Kokusan Industries.

### 1956 Hitachi Metals Industries

Hitachi transferred its metals business with five originally Tobata Foundry plants (Tobata, Fukagawa, Kuwana, Wakamatsu, and Yasugi) to establish Hitachi Metals Industries.

### 1967 Hitachi Metals

Hitachi Metals Industries changed its name to Hitachi Metals. Through creative *monozukuri* and proactive mergers and acquisitions, the Company went through a succession of changes and grew to become one of the world's leading materials manufacturers. Today, the Company provides technologies and services that are contributing to the shift in automobiles to electric vehicles, and advances in industry, infrastructure, and electronics around the world.

### 1995 Hitachi Ferrite

Merged with Hitachi Ferrite in 1995 to strengthen the soft magnetic materials business in response to increased demand for noise reduction in automobiles and electronics.

### 2003 Honeywell International Inc.'s Metglas® division

Acquired the Metglas® (amorphous metal materials) division of Honeywell International of the United States. Strengthened the soft magnetic materials division as demand in the electronics segment grew for size and weight reductions, energy conservation, and electromagnetic noise reduction.

### 2007 NEOMAX

Established through the merger of the magnetic materials and applications operations of Hitachi Metals and Sumitomo Special Metals to manufacture high-performance neodymium magnets and ferrite magnets widely used in motors for automotive equipment and home appliances. With demand for automotive-use motors expected to grow, the merger was carried out in 2007 to integrate the magnetic materials businesses and increase synergies.

### 2013 Hitachi Cable

Merged with Hitachi Cable, the Hitachi Group's electric wires and cable business, in 2013. As the pace of movement toward a low-carbon society accelerated, the merger was intended to create synergies in terms of technologies and sales in the automotive, electronics, and industrial infrastructure segments.

### 2014 Waupaca Foundry

Made Waupaca Foundry, the world's largest manufacturer of automotive-use castings with an overwhelming share of the U.S. market, a subsidiary in 2014. Expanded our business to become the world's largest supplier of iron castings.

### 2014 Hitachi Metals MMC Superalloy

Made MMC Superalloy, with extensive experience and technological capabilities in aircraft parts, a subsidiary with a view toward global growth in core industries including aircraft and energy. Hitachi Metals' Okegawa Works established in April 2018.



# Value that only we can create

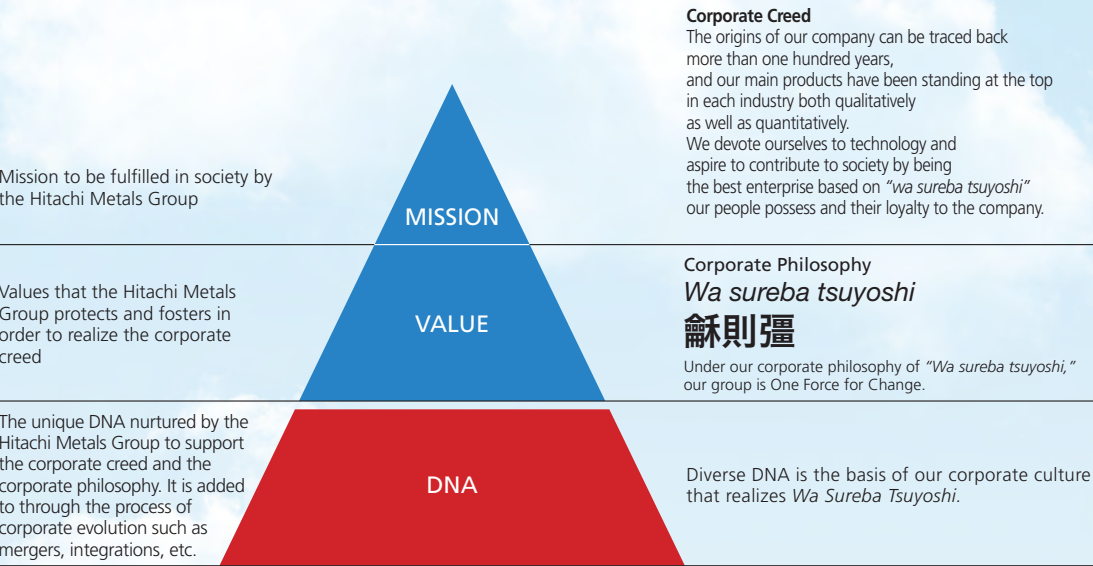
Our DNA has been cultivated over our more than 100-year history. The Hitachi Metals Group’s DNA consists of the distinctive technologies and products of all of the companies in the Hitachi Metals Group and the unique human resources that create them.

By further integrating our diverse DNA with the common value represented by our Corporate Philosophy of “*Wa sureba tsuyoshi*,” we are paving a unique path for growth that other companies cannot match.

To achieve this growth, our mission is to implement our Corporate Creed to become the “best enterprise.”

## Hitachi Metals WAY

The Hitachi Metals WAY is based on the Hitachi Metals’ Good Practice Guidance and standards for decision-making, systematically incorporating the Corporate Creed (Mission), Corporate Philosophy (Value), and our diverse DNA that are the embodiment of Hitachi Metals’ uniqueness.



## Corporate Creed

The Hitachi Metals Group aims to be the “best enterprise” by “mass-producing high-quality materials”<sup>\*1</sup> with our major products leading the industry in terms of both quality and quantity, with attention to technology as a “genuinely development-driven company”<sup>\*2</sup> where all employees come together to create synergies. Using a large tree as an example, the Hitachi Metals Group’s DNA (a tree’s roots—diverse human resources, technologies, and products) passes through our Corporate Philosophy (tree trunk—common sense of values) to reach fruition as our Corporate Creed (flowers and fruit—technologies, products, and services). By growing as a “tree” that provides the flowers and fruits that meet the needs of society and individuals, we will achieve our Corporate Creed of being the “best enterprise.”

<sup>\*1</sup> Advanced *monozukuri* that provides both “quality” and “quantity” in products and services that resolve issues for customers and society.  
<sup>\*2</sup> A company that carries out research and development guided by business strategies that embody the needs of customers around the world and paves the way to the future.

## Corporate Philosophy

Our Corporate Philosophy is our diverse DNA brought together as a common sense of values, or, to use the example of the Hitachi Metals Group as a large tree, our Corporate Philosophy plays the role of the trunk. Creative and diverse human resources, technologies, and products (with a “strong individuality”) form a platform that is essential for the Hitachi Metals Group’s growth, and, without this, cohesiveness innovation will not occur. Based on our Corporate Philosophy of “*Wa sureba tsuyoshi*,” we bring together diverse “strong individuality” to create successive innovation that other companies cannot match, and use those achievements to provide products and services that resolve issues for individuals and society.

## DNA

Our DNA consists of the distinctive technologies and products of all companies in the Hitachi Metals Group, and the unique, talented human resources who create them. Using the example of the Hitachi Metals Group as a large tree, our DNA would be the roots.

With many roots over a wide area, we will be able to obtain more nourishment as the roots grow stronger, and overcome changes in the operating environment and continue to grow. The diversity incorporated in our DNA is the growth driver that is our strength.

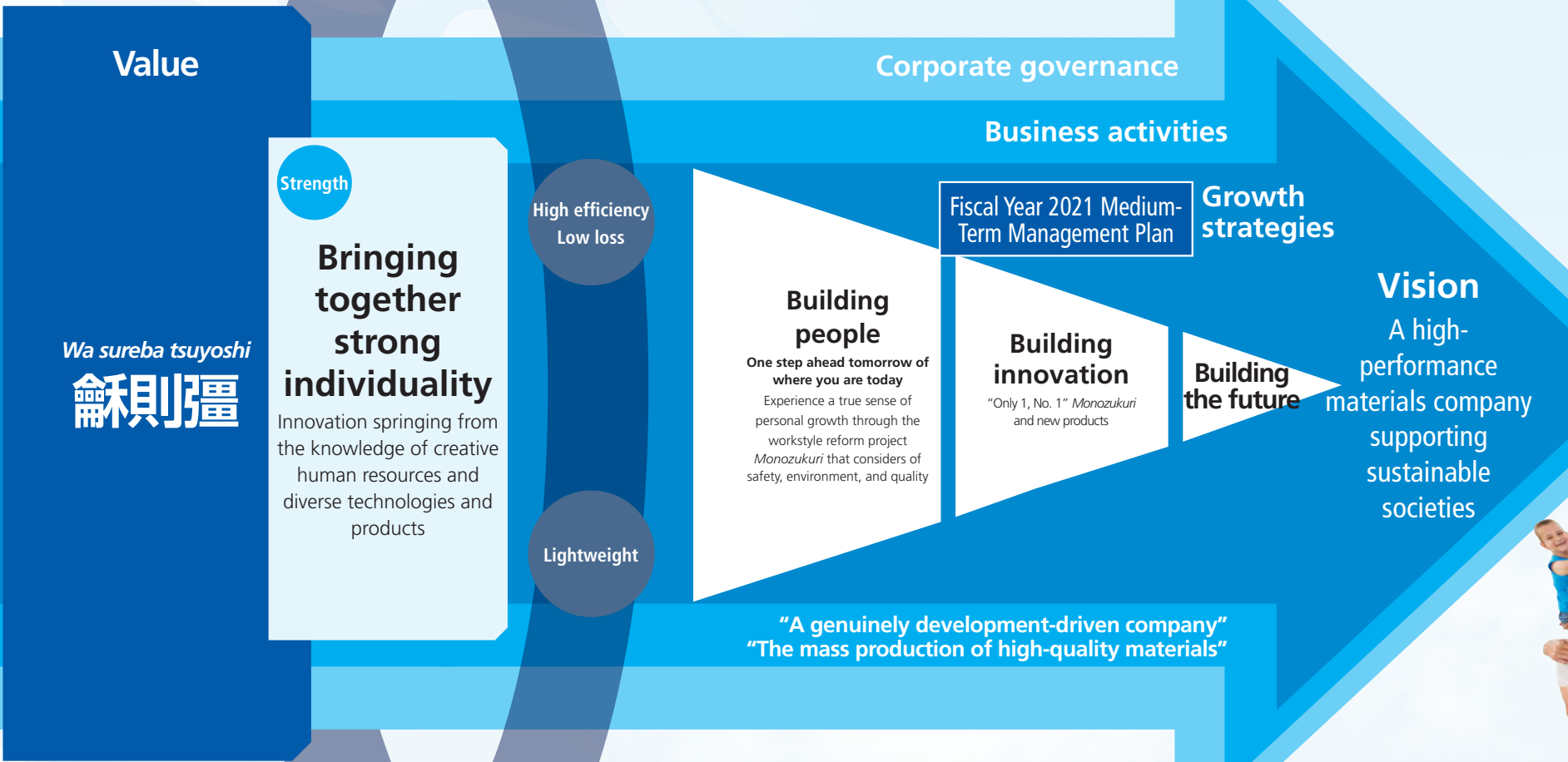


Our strength lies in the “strong individuality” of our creative, diverse human resources, technologies, and products, and we create innovation that brings together the “strong individuality” embodied in our Corporate Philosophy of “*Wa sureba tsuyoshi*.” Using this strength, we are addressing the materials-related needs of customers based on global megatrends and market needs, to become a high-performance materials company supporting sustainable societies. By pursuing a growth strategy supported by corporate governance based on the principle of “obey the law and walk the path of virtue” and business activities as “a genuinely development-driven company” engaged in the “mass production of high-quality materials,” we will work to become the “best enterprise” that contributes to society’s sustainable development by continuing to be a company that is indispensable to customers and society.

Global megatrends	Climate change	Lack of energy and resources	Urbanization	Demographic changes	Technological advances including in information technology
	Measures for environmental regulation	Increased need for energy conservation		Increased need for mobility	
Market needs	Automotive (electric vehicles)		Electronics (Internet of Things, and semiconductors and displays)		Infrastructure-related (aircraft, railways)

Needs for materials

Environmental resistance  
Safety



Corporate Creed  
Becoming the “best enterprise”

Addressing business risks

Changes in the external environment	Lower profits from high resource prices	Intensified competition from rise of Chinese and emerging-market manufacturers	Lower competitiveness from strengthening yen	Increased costs from higher expectations for quality	Loss of standing for existing products from technological innovation
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**DNA**  
DNA cultivated over more than 100-year history  
(addition and maturation through process of evolution including mergers and acquisitions)

Strength  
Strong individuality with diversity  
Creative human resources, technologies, products

Strength  
Bringing together strong individuality  
Innovation springing from the knowledge of creative human resources and diverse technologies and products

High efficiency  
Low loss

Lightweight

Multifunction

“A genuinely development-driven company”  
“The mass production of high-quality materials”



## Strategy and Vision—Message from the CEO

## Strategies

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## Becoming a high-performance materials company supporting sustainable societies

We began operating under the new Fiscal Year 2021 Medium-Term Management Plan (covering fiscal 2019 through fiscal 2021) from April 2019.

By strengthening and expanding our “Only 1, No. 1” businesses and products, increasing synergies across businesses, and deepening collaboration with customers, the Hitachi Metals Group aims to be a high-performance materials company supporting sustainable societies.

### Koji Sato

Representative Executive Officer,  
President and Chief Executive Officer

March 1986 Completed master's course in metallurgy at the Kyoto University Graduate School of Engineering  
 April 1987 Joined Hitachi Metals, Ltd.  
 August 2002 Completed doctoral course in materials science at the University of California, Berkeley, Department of Materials Science and Engineering  
 January 2011 President and Representative Director of Japan Aeroforge, Ltd.  
 October 2014 General Manager of Metallurgical Research Laboratory of Hitachi Metals, Ltd.  
 January 2016 General Manager of Yasugi Works  
 April 2017 Executive Officer, President of Specialty Steel Company  
 April 2018 Vice President and Executive Officer, President of Specialty Steel Company, General Manager of Technology, Research & Development Division  
 April 2019 Representative Executive Officer, President and Chief Executive Officer (current position)

Koji Sato is highly experienced in metal materials, having served as General Manager of the Metallurgical Research Laboratory, General Manager of the Yasugi Works, and President of the Specialty Steel Company. Since October 2018, on his own initiative, he has been a driving force in Japan's cutting-edge metal materials development, working with Shimane University on its “Creation of global advanced metallic material base – Next Generation TATARA Project,” which was selected by the Cabinet Office as a recipient under its “Regional University and Local Industry Revitalization Grant Program.” He has also collaborated with the University of Oxford in the development of innovative special steel components in the pursuit of further possibilities in materials. With an unwavering belief that “The results of pursuing challenges are always successes and good opportunities for learning. Failure only happens when we lose hope,” our aim is to use “Only 1, No. 1” *monozukuri* to bring about social innovation through the resolution of customers' social issues, and for employees to perform their jobs with a sense of satisfaction, and to have Hitachi Metals share the dreams of its customers.



## Management policies

**We aim to be a company that meets the needs of society through innovation in materials.**

### Becoming a “best enterprise”

The Hitachi Metals Group aims to be a high-performance materials company supporting sustainable societies, and the Fiscal Year 2021 Medium-Term Management Plan lays out a vision of “Building People, Building Innovation, Building the Future.”

To achieve this vision, I consider it extremely important to provide employees, who are the foundation of the Company, with opportunities for both personal growth and rewarding social lives through participation in the management of the Company's businesses. At the same time, we will use combinations of the Group's creative technologies to strengthen our collaboration with customers, to create added value that leads to top market shares and high growth as we strengthen and expand our “Only 1, No. 1” businesses and products.

The integrated flow of combining creative technologies and strengthening collaboration with customers leads to innovation of new materials. Continuously repeating this process makes it possible to respond to the demands of society, a leading example of which are the Sustainable Development Goals (SDGs), and we believe that achieving a sustainable society will contribute to the creation of a future for all of society.

If the Hitachi Metals Group is able to continue to be a company where employees work with a sense of satisfaction and that customers believe shares their dreams, I am confident that we will be able to become the “best enterprise” as per our Corporate Creed regardless of various management indicators.

### Wa sureba tsuyoshi

“Human resources” are of primary importance to a company. Hitachi Metals has a history of more than 100 years of bringing various companies together and accumulating unmeasurable expertise and challenges. Our Corporate Philosophy of “*Wa sureba tsuyoshi*” expresses our sense of value, and can be understood to mean that the diversity we have cultivated over our history is the source of our strength.

In 2017, the Hitachi Metals Group systematically incorporated its corporate culture and Good Practice Guidance as the Hitachi Metals WAY. Firmly instilling this



at Group companies around the world, carried out with vigor by every individual employee, will lead to our becoming the “best enterprise.” We will also continue to hire and employ female employees and non-Japanese employees in the pursuit of diversity in management, and will strive to ensure that diversity is further incorporated in our corporate DNA.

### Steady progress in 12 steps, taking one at a time

Creating added value that is recognized by customers is the source of a company's growth. The Fiscal Year 2021 Medium-Term Management Plan introduces management using ROIC as a new management indicator to improve asset efficiency. Approaching the plan's three-year period as 12 quarterly steps, we will take one step at a time and steadily build up results. Then, as we create value that exceeds stakeholders' expectations, we will gain their trust as a company that addresses the needs of society.

## Recognition of issues as assumptions underlying the new Medium-Term Management Plan

**Expanding collaborative relationships with customers in various business fields with “Only 1, No. 1” products and businesses**

### Looking beyond customers' immediate needs

The Hitachi Metals Group believes that it can contribute to the global megatrend of society overall working toward a low-carbon society with environmentally friendly products in a variety of ways. In automotive materials, for example, in addition to having the top global share in products for internal-combustion engines, we have a diverse range of products to address the shift to xEVs\*, including materials for drive motors, and are, therefore, addressing moves toward both clean engines and xEVs. We also have various materials and applied products that are contributing to smaller-sized, larger-capacity telecommunications equipment.

Even if the business unit for individual products is small, using the Hitachi Metals Group's *monozukuri* capability to mass-produce “Only 1, No. 1” products enables us to provide diverse products across a wide range of industrial segments. We are collaborating more closely with customers in a range of business fields where we have similar perspectives, including developing products that will lead to the realization of a low-carbon society.

\* xEVs: A general term for electric vehicles (EVs), hybrid electric vehicles (HEVs), and plug-in hybrid electric vehicles (PHEVs).

### Selection and concentration

Changes in the external environment also present opportunities, but, at the same time, correct measures are needed in response to changes in demand from geopolitical risk and trade friction, and the decline and obsolescence of existing products from technological innovation. We have competitors around the world. We, therefore, consider it important to look constantly for selection and concentration in businesses and products, and, while thinking about how to grow in these areas, also considering the downsizing, withdrawal from, or spinning off of businesses that are deemed to be non-core.

## Making full use of prior invested equipment

Under the previous Medium-Term Management Plan, we turned from a long period of minimal investment to make a series of major investments in what we correctly identified as growth markets. Nevertheless, because we made rapid and diverse capital investments at the same time, resources were dispersed, the plan was overly optimistic, and, as a result, staffing shortages emerged in terms of production technology. There were also market effects, including the drop in China-related demand, and delays in deploying the equipment purchased meant that the effects of the investments were not achieved as planned, and we fell short of our earnings targets, which was one of the reasons for the weakening of cash flow.

“Selection and concentration” and “making full use of prior invested equipment” are priority issues carried over from the previous Medium-Term Management Plan that we recognize as continuing to take priority under the Fiscal Year 2021 Medium-Term Management Plan.

## Basic policy and key measures of the new Medium-Term Management Plan

### Implementing five action plans to achieve the Fiscal Year 2021 Medium-Term Management Plan

The Fiscal Year 2021 Medium-Term Management Plan seeks to make the Hitachi Metals Group a high-performance materials company supporting sustainable societies by pursuing management strategies and programs to enhance further our strength of “Only 1, No. 1” *monozukuri* and new products. The plan sets final fiscal year targets of revenues of ¥960.0 billion, with adjusted operating income of ¥80.0 billion (for an adjusted operating margin of 8.3%), and ROIC of 7.7%.

The five action plans we will implement are shown on the following pages.



## 1 Concentrating resources on high-growth and high-revenue areas

Through selection and concentration, we are concentrating resources in high-growth and high-revenue areas, and collaborating with customers to bring “Only 1, No. 1” products to market. Areas we are growing include electrification, electric power, power electronics, aircraft, amorphous materials for motors, and fine powders for 3D molding. At the same time, we are restructuring businesses including casting components for automobiles and magnetic materials. In casting components for automobiles, we are pursuing synergies with the melting and casting technologies

developed in specialty steel. In magnetic materials, we are pursuing structure control technologies for magnets, while also offering solutions that combine soft magnetic material and cable material technologies. With regard to mergers and acquisitions, we are emphasizing the impact of being a trillion-yen company in terms of both size and synergies, and, at the same time, if there are businesses outside the Hitachi Metals Group that would be useful to society, we will carefully consider that course as well.

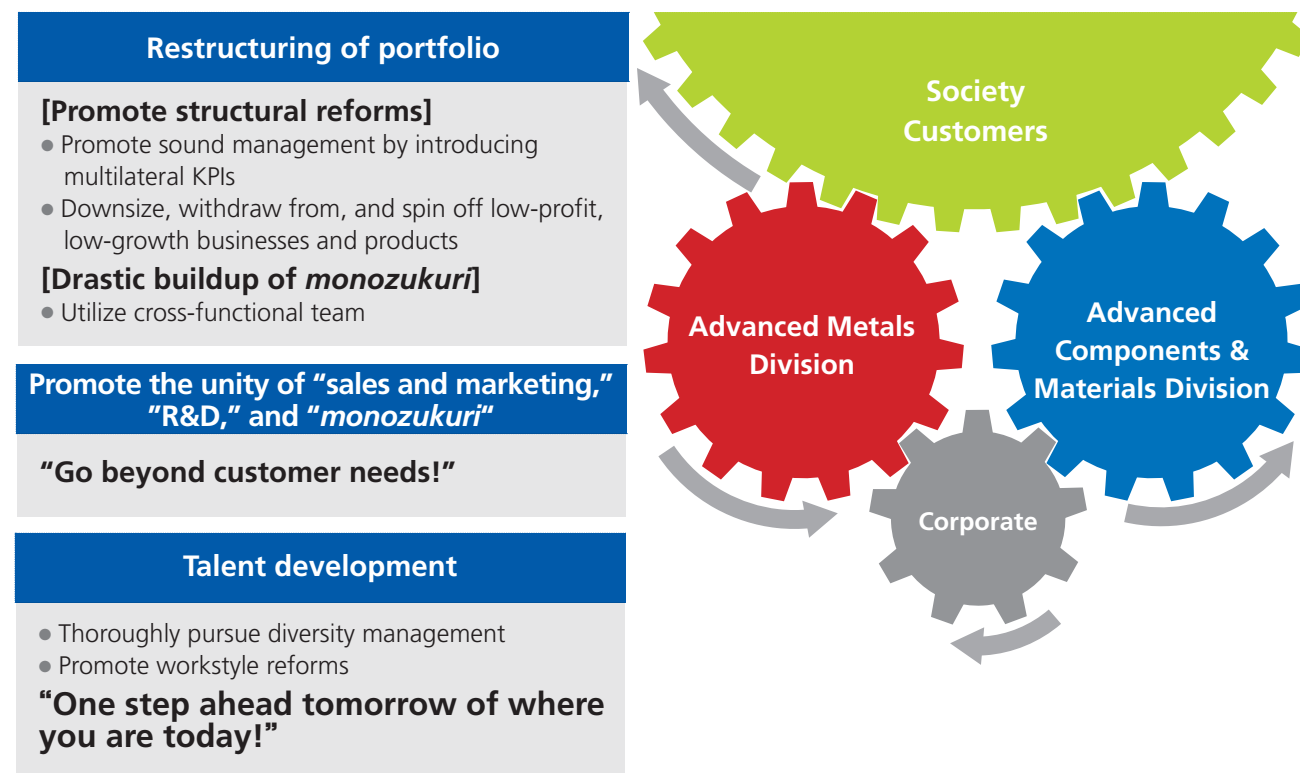
## 2 Maximizing synergies through organizational reforms

We are seeking to maximize synergies derived from organizational reforms. From fiscal 2019, we have transitioned our structure from four internal companies to two business divisions. With larger organizational units, we will use resources more efficiently and strengthen synergies between the specialty steel and functional components, and between the magnetic materials/power electronics and cable materials, and

related materials businesses. At the same time, we are strengthening corporate functions which support the business divisions to reinforce both the strategic planning function and corporate governance. Corporate functions are carried out by cross-functional teams, and, by reflecting corporate intent in organizational management, we expect each business to create solid value.

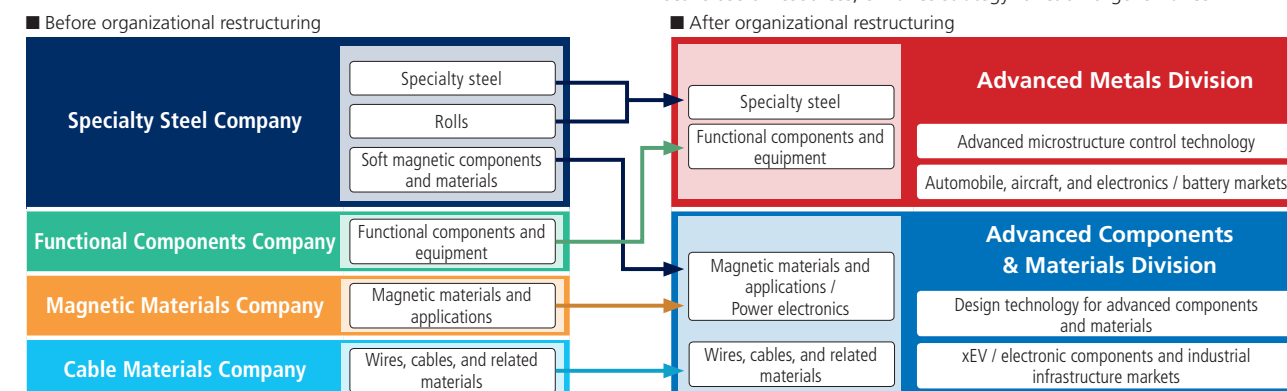
Accelerate the growth strategy under the division system!

Create innovation by three organizations working as a unit to strengthen the management and collaborative creation with customers



## Shift from four-company organization to two-divisional organization

- Commonality among markets / customer needs / elemental technologies  
→ maximize the synergy between segments
- Effective use of resources, enhance strategy function & governance



## 3 Making full use of prior invested equipment

Making full use of prior invested equipment is an important issue. During the three years covered by the previous Medium-Term Management Plan, we made historically large investments totaling ¥251.0 billion. This upfront investment will generate solid cash flow and underpin our return to growth. At the same time,

capital investment under the new Medium-Term Management Plan will be extremely selective. The amount of capital investment under the plan is ¥186.0 billion, of which ¥6.0 billion will be used to ensure intrinsic safety in work environments.

## 4 Strengthening front-line operations and create collaboratively with customers

To strengthen front-line operations, we are continuing with the Next-generation Automotive Components (NAC) Project, initiated in fiscal 2017 to address the growth of the xEV market. Part of this has been to strengthen cooperation across divisions by establishing an account marketing structure, and this has proven highly effective for making the most of our “Only 1, No. 1” products and expanding collaboration with customers. We have also launched a new Power Electronics Components (PEC) Project from fiscal 2019, and begun work to be sure to capture the growth in demand in the emerging area of power electronics materials.

In terms of research and development, we see the integration of materials development and process development becoming increasingly important. Each business division has two division labs, which work together and also cooperate with the Global Research & Innovative Technology center (GRIT), the global technological innovation center that is the Companywide research and development organization. Bringing these together as a Companywide

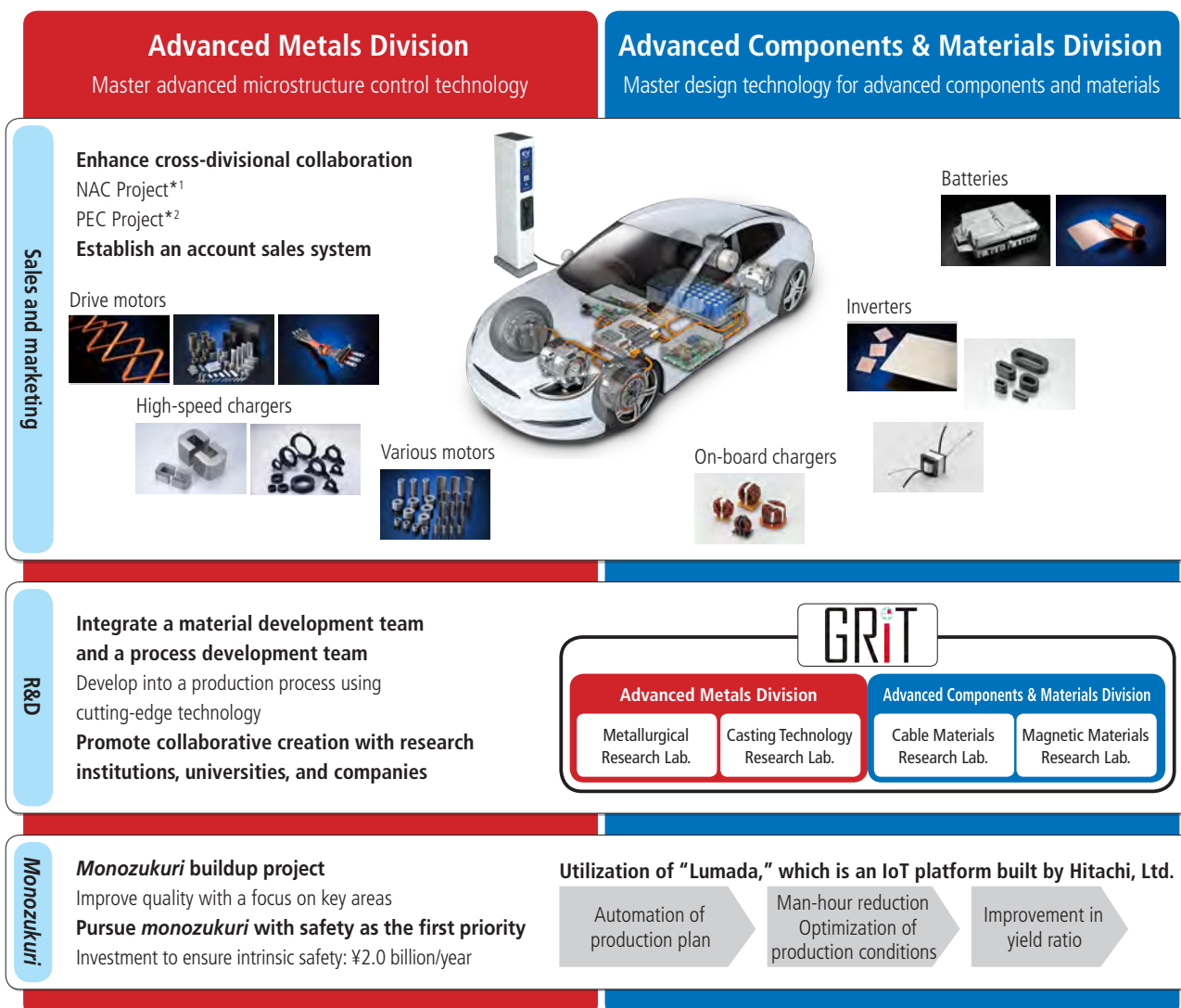
technological development division leads to the sharing of information and reciprocal leveraging of underlying technologies, promoting qualitative and functional innovation and creating new products and businesses. GRIT is also the core entity for promoting collaboration with research and development institutions, universities, and companies.

In addition, we are enhancing synergies across manufacturing bases in Japan and around the world to reinforce *monozukuri*. We are making *monozukuri* capabilities at plants visible and creating indexes that can be compared, so that best practices can be implemented even when product groups or processes are different. We are also using Hitachi’s Lumada platform to improve productivity. In addition, to pursue *monozukuri* with safety as the first priority, we are reemphasizing safety training and continuously making investments to ensure intrinsic safety.



Corporate-wide function between “sales and marketing,” “R&D,” and “*monozukuri*”

Collaboration with customers by strengthening front-line operations and realization of *monozukuri* that supports this collaboration



\*1. Next-generation Automotive Components Project: Cooperation in marketing of next-generation vehicles

\*2. Power Electronics Components Project: Cooperation in marketing of power electronics and electronic materials

## 5 Implementation of structural reforms and measures to build a stronger business base

Continuing to be a company that creates value for society involves more than simply pursuing sales volume; we will also continue to renovate our business portfolio to match our strengths with society's needs. This means downsizing, withdrawing from, or spinning off low-profit businesses and products where sufficient improvement cannot be expected, while also working to concentrate management resources and use them effectively, and growing “Only 1, No. 1” businesses and products. We have introduced management using return on invested capital (ROIC) as a new management indicator, and are working to shorten the Cash

Conversion Cycle (CCC) to reduce invested capital and reduce the risk of fluctuations in resource material prices, while at the same time working to understand our business results from multiple perspectives to improve cash flow and raise capital efficiency.

We are also working to promote diversity in management and workstyle reforms by hiring and training global human resources and promoting active participation by female employees, and, by making the most of the results of these programs, we will create a corporate culture with a strong sense of challenge through innovation.

## Message to stakeholders

With each employee implementing the Hitachi Metals Group's Corporate Philosophy of “*Wa sureba tsuyoshi*,” we will contribute to the realization of a sustainable society.

I like to say, “Our own preconceived notions are an impediment to growth.” Now that we have broken down internal company boundaries with the transition to a business division structure, we have become able to see many issues that currently exist. On the front lines of marketing and plants and at corporate divisions, we are overcoming traditional organizational boundaries, engaging in thorough exchanges of opinions involving different viewpoints, and beginning to work with a clear awareness of the current situation, and, as a result, a streamlined, appropriate structure is taking shape.

Another thing I like to say is, “In *monozukuri* and marketing, logic alone is not enough – inner passion is most important.” In *monozukuri*, it is very important to balance passion, logic, and ethics, and through passionate *monozukuri*, I want to provide customers with products that have soul. I also recognize that one of a CEO's jobs is to create an environment where all employees feel comfortable acting on their own

initiative. To do this, we need to “shake the tree” to make the fruit fall to the ground, and gather the wisdom of all employees on the table and from all of that wisdom extract the best solutions.

The Hitachi Metals Group has various different histories and backgrounds, and is a trillion-yen company that is a collection of diverse DNA. Currently, our business performance is struggling, but I see this as a period of preparing for new growth. Through “*Wa sureba tsuyoshi*,” we have many “Only 1, No. 1” businesses and products, and the passion and strength to use them. Senior management is taking the initiative in spreading the word inside and outside the Company about Hitachi Metals' value and the “Only 1, No. 1” technologies and products that are extensions of that value, and in making a greater contribution to society's sustainable development by stimulating innovation in materials as a company that is indispensable to society.





# Overview of the Medium-Term Management Plan

Under the Fiscal Year 2021 Medium-Term Management Plan, we will build on our existing initiatives for continuous growth, while pursuing management strategies and programs that will further strengthen the “Only 1, No. 1” businesses and products that are our strength, under a vision of “Building People, Building Innovation, Building the Future,” to become a high-performance materials company supporting sustainable societies.

FY2019–FY2021

FY2013–FY2015

## FY2015 Medium-Term Management Plan

Shifted to profit-generating segments and built structures for sustainable growth

- (1) Strengthened capabilities to create new products and develop new technologies
- (2) Strengthened and accelerated global growth strategies
- (3) Established a robust operational foundation

### FY2015 results (1USD=¥120)

Revenues	¥1,017.6 billion
Adjusted operating income**1	¥76.1 billion
Adjusted operating margin	7.5%
Net income attributable to owners of the parent company	¥69.1 billion
D/E ratio	0.44 times
ROE	14.4%
Overseas sales ratio	56%

### Three-year cumulative

Operating cash flow	+¥323.9 billion
Investing cash flow	-¥155.7 billion
R&D expenses	¥56.8 billion

\*1 Adjusted operating income: Revenues – Cost of sales – Selling, general and administrative expenses

FY2016–FY2018

## FY2018 Medium-Term Management Plan

Expand the business globally while improving profitability

Change to be a competitive business;  
Challenge ourselves to meet new targets  
Achieving our goal of becoming the world's leading high-performance materials company

Action Plan

1  
Continuous portfolio remodeling

2  
Organic growth (from capital investment & R&D)

3  
Growth through M&A

### FY2018 results (1USD=¥111)

Revenues	¥1,023.4 billion
Adjusted operating income**1	¥51.4 billion
Adjusted operating margin	5.0%
EBIT	¥45.3 billion
Net income attributable to owners of the parent company	¥31.4 billion
Total assets	¥1,099.3 billion
Equity attributable to owners of the parent company	¥588.0 billion
D/E ratio	0.34 times
ROIC**2	4.1%
ROE	5.5%
CCC**3	90.7 days
Overseas sales ratio	56%
Employees	30,304

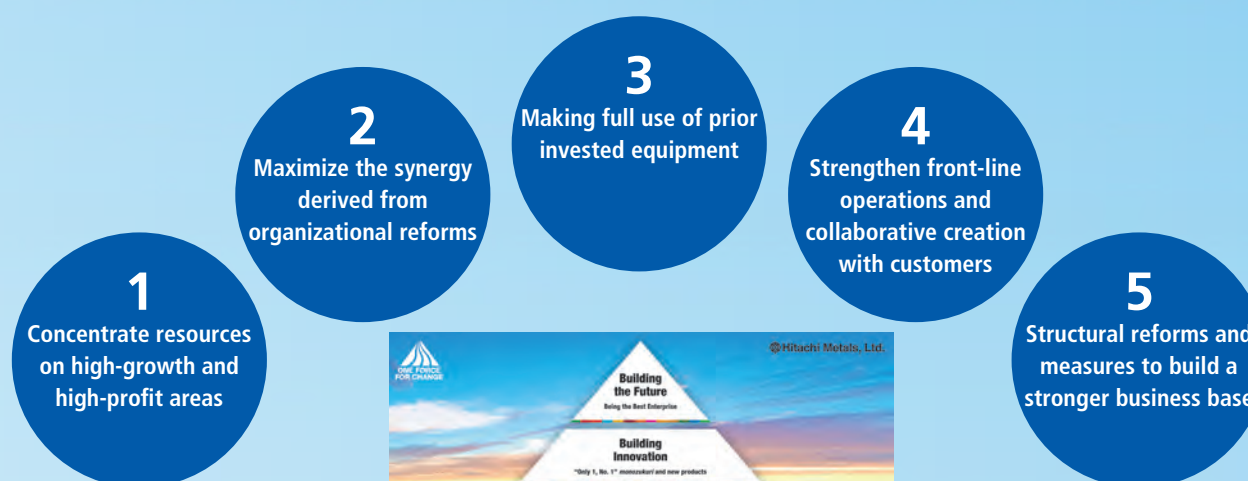
### Three-year cumulative

Operating cash flow	+¥195.1 billion
Investing cash flow	-¥207.2 billion
Capital expenditure	-¥251.0 billion
M&A and others	+¥43.8 billion
Free cash flows	-¥12.1 billion
Depreciation	¥140.0 billion
R&D expenses	¥54.3 billion

## FY2021 Medium-Term Management Plan

A high-performance materials company supporting sustainable societies  
— building people, building innovation, and building the future —

Expand “Only 1, No. 1” businesses and products



### FY2021 Plan (Projected exchange rate: 1USD=¥105)

Revenues	¥960.0 billion
Adjusted operating income**1	¥80.0 billion
Adjusted operating margin	8.3%
EBIT	¥77.0 billion
Net income attributable to owners of the parent company	¥55.5 billion
Total assets	¥1,030.0 billion
Equity attributable to owners of the parent company	¥655.0 billion
D/E ratio	0.5 times or less
ROIC**2	7.7%
ROE	8.9%
CCC**3	81.9 days
Overseas sales ratio	57%
Employees	28,500

### Three-year cumulative plan

Operating cash flow	+¥346.0 billion
Investing cash flow	-¥134.5 billion
Capital expenditure	-¥186.0 billion
M&A and others	+¥51.5 billion
Free cash flows	+¥211.5 billion
Depreciation	¥182.5 billion
R&D expenses	¥59.0 billion

\*2 Return on Invested Capital (ROIC) = Net income attributable to owners of the parent company / (Average of beginning and end-year interest-bearing debt + Average of beginning and end-year equity attributable to owners of the parent company)

\*3 Cash Conversion Cycle (CCC) = Working capital (Trade receivables + Inventories - Trade payables) / Daily average revenues



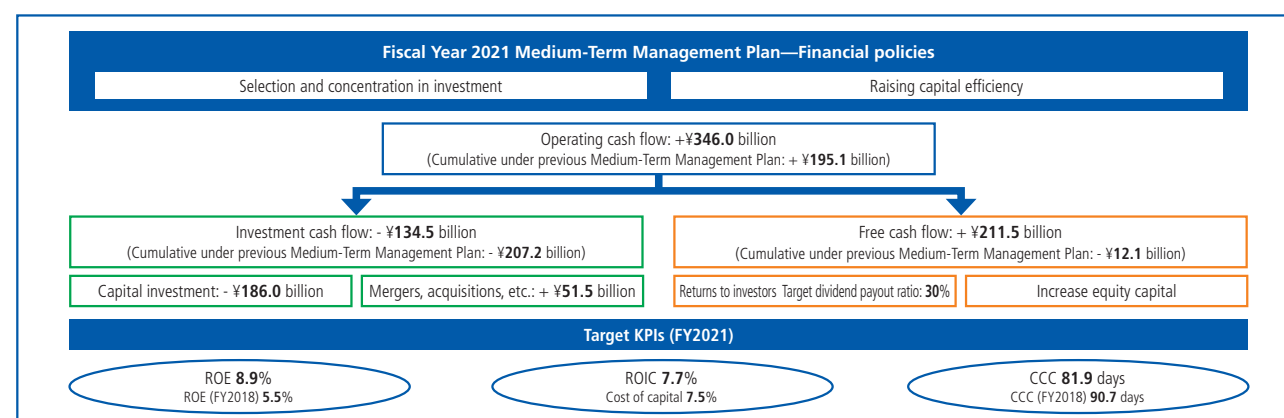
## Message from the General Manager of Finance Division



**We are raising capital efficiency by making full use of prior invested equipment and investing selectively, while also emphasizing maximization of operating cash flow.**

**Hiroaki Nishioka**

Vice President and Representative Officer  
Chief Financial Officer  
General Manager of Finance Division



### Emphasizing selection and concentration in investment and raising capital efficiency

Under the Fiscal Year 2021 Medium-Term Management Plan, the Hitachi Metals Group will emphasize “selection and concentration in investment” and “raising capital efficiency.” In terms of investment, we will be extremely selective while also making full use of prior invested equipment purchased under the previous Medium-Term Management Plan. We have also introduced return on invested capital (ROIC)\*<sup>1</sup> to raise capital efficiency, and will emphasize the maximization of operating cash flow.

The Fiscal Year 2021 Medium-Term Management Plan aims for a cumulative three-year operating cash flow of ¥346.0 billion (the cumulative result under the Fiscal Year 2018 Medium-Term Management Plan was +¥150.9 billion). On the other hand, we are forecasting roughly -¥134.5 billion (previous cumulative result: +¥72.7 billion) for investment cash flow, which includes ¥186.0 billion (- ¥65.0 billion) of highly selective investment in priority areas. As a result, we expect a significant improvement in cumulative free cash flow for the three-year period under the Fiscal Year 2021 Medium-Term Management Plan, to +¥211.5 billion (from +¥223.6 billion).

With regard to raising capital efficiency, we will continuously review our business portfolio by expanding

high-value-added products and growth businesses and withdrawing from or spinning off low-profit, non-core businesses\*<sup>2</sup>, while also working to shorten the Cash Conversion Cycle (CCC)\*<sup>3</sup> to 81.9 days (an 8.8-day reduction from fiscal 2018) and thoroughly implementing effective inventory management.

Through these measures, we are aiming for ROE\*<sup>4</sup> of 8.9% and ROIC of 7.7%, above the 7.5% cost of capital\*<sup>5</sup>.

\*1. Return on invested capital (ROIC): Net income attributable to owners of the parent company ÷ (Average of beginning and end-year interest-bearing debt + Average of beginning and end-year equity attributable to the parent company)  
\*2. Non-core businesses: Group businesses that are not sufficiently efficient  
\*3. Cash Conversion Cycle (CCC): Working capital (Trade receivables + Inventories - Trade payables) ÷ Daily average revenues  
\*4. Return on equity (ROE): Net income attributable to shareholders of the parent company ÷ Average of beginning and end-year equity attributable to shareholders of the parent company × 100  
\*5. Calculated using a capital asset pricing model and share price profit margin, and taking into consideration results at peers.

### Using ROIC as an index to raise capital efficiency

We calculate that the Group's cost of capital is 7.5%, and, currently, the Companywide ROIC is below the cost of capital, so we need to raise ROIC by increasing profit and reducing invested capital.

To increase profit, we will continue to expand high-value-added products and growth businesses, improve product quality through *monozukuri* innovation using the

Internet of Things (IoT), and reduce costs. In addition, we will use information technology to streamline administrative operations and thereby reduce fixed costs. We will also continuously review our business portfolio by downsizing, withdrawing from, and spinning off low-profit, non-core businesses.

We are working to reduce invested capital by formulating optimal production plans using the IoT to shorten the Cash Conversion Cycle and conducting personnel exchanges to share best practices. In addition, we have launched the Reformed Human Resource Training Program in cooperation with Hitachi's IE Master system, to train human resources who will be *kaizen* (improvement) professionals, and implement thorough management from the plant floor to inventories and appropriate warehousing.

We aim to raise ROIC through these initiatives, but, currently, we have businesses where ROIC is significantly higher than the cost of capital, other businesses that are set for steady improvement, and other businesses requiring upfront investment where ROIC will be below the cost of capital over the short term. We, therefore, consider it important to instill management using ROIC by business division and main product group. Setting ROIC targets by business division and main product group based on the unit's profit and invested capital will lead to Groupwide improvement in ROIC.

In addition, the Corporate Management Planning Division and Finance Division are jointly holding an ROIC awareness caravan, and, with the strong commitment of Board members, we are promoting an understanding of ROIC among all ground-level employees so that they can participate in raising ROIC through improvements in their daily operations.

### Clarifying the investment decision-making process

We are reconstructing our processes and criteria for capital investment. For capital investment carried out by business divisions, corporate divisions participate from the advance study stage, with the advance screening process and responsibilities of the manager of the screening division clearly laid out.

In addition to equipment upgrades and streamlining, production capacity increases, establishment of new centers, and investments for safety, investments include mergers and acquisitions, and ordinary investment and strategic investment are separately defined and classified in terms of investment decision-making, recovery of

investment, and other aspects. Proposals for strategic investment emphasize cash flow, and investment decisions are based on a current valuation using discounted cash flow (net present value [NPV]), ROIC, and the period for recovering the investment.

### Balance sheet management

The new Medium-Term Management Plan includes the streamlining of the balance sheet to improve our financial position and raise capital efficiency. With structural reforms through the improvement of working capital by shortening the Cash Conversion Cycle, use of the Hitachi Group's cash pooling system, and selection and concentration, we are forecasting total assets of ¥1,030.0 billion as of the end of fiscal 2021 (a 6.3% reduction from the end of fiscal 2018).

In addition, our basic policy is to cover the funds needed to invest for growth from cash generated by businesses and cash on hand. We have few apparent growth opportunities, however, we are looking to maintain our current debt-equity ratio of approximately 0.3x to 0.5x or less and our credit rating at A+, and will engage in flexible fund procurement.

### Cash allocation

The Group's basic policy for determining the distribution of profit to shareholders is to take comprehensively into account the operating environment, business results, and the future business outlook, together with the retention of internal reserves for medium- to long-term growth.

In terms of enhancing shareholder value, we look to increase total shareholder return (TSR) and aim to distribute profit with a balance between a higher share price through business growth and returns to shareholders. Under the new Medium-Term Management Plan, we will concentrate resources in high-profit, high-growth areas, carry out structural reforms, and strengthen the management base for business growth that leads to a higher share price, while maintaining a stable dividend with a target payout ratio of 30%.

In addition, we recognize that purchases of treasury stock are a useful way to provide returns to shareholders, but, at this time, we consider it rational to invest for strategic growth with high returns, and are, therefore, emphasizing business growth and expansion through strategic investments for growth in research and development and in high-value-added product areas.



# Message from the General Manager of Advanced Metals Division



By integrating our specialty steel and functional components and equipment technologies, we will aim to become a “No. 1 high-performance business structure for advanced metals” through collaborative creation with customers.

**Hiroshi Watanabe**  
Vice President and Executive Officer, General Manager of Advanced Metals Division

Fiscal Year 2021 Medium-Term Management Plan			
		FY2018 Results	FY2021 Targets
Specialty Steel Products	Revenues	¥276.9 billion	¥320.0 billion
	Adjusted operating income [Profit margin]	[8.1%] ¥22.4 billion	[10.3%] ¥33.0 billion
	ROIC	6.3%	8.6%
Functional Components and Equipment	Revenues	¥367.6 billion	¥350.0 billion
	Adjusted operating income [Profit margin]	[2.9%] ¥10.5 billion	[6.9%] ¥24.0 billion
	ROIC	-0.6%	6.8%
Total*	Revenues	¥644.5 billion	¥670.0 billion
	Adjusted operating income [Profit margin]	[5.1%] ¥32.9 billion	[8.5%] ¥57.0 billion
	ROIC	2.7%	7.8%

\* Simple sum before eliminating intersegment revenues

**Initiatives of Fiscal Year 2018 Medium-Term Management Plan**  
In the growing aircraft and energy materials businesses, we started operations at Hitachi Metals’ Okegawa Works following the merger with Hitachi Metals MMC Superalloy, Ltd. We also invested in melting and forging facilities, mainly at the Yasugi Works. In electronic materials, we invested to increase production capacity at the Tsuchiura Works of Hitachi Metals Neomaterial, Ltd., with the aim of expanding our business in clad materials. In addition, we decided to invest in a wide processing line for organic EL components and materials, for which the Group’s global market share is nearly 100%, and started investment.

**Basic policy of Fiscal Year 2021 Medium-Term Management Plan**  
Two issues have remained unresolved at the completion of the Fiscal Year 2018 Medium-Term Management Plan: Increased inventories and a delay in reaping the benefits of the large-scale investments made at the production sites in Japan. Our new Fiscal Year 2021 Medium-Term Management Plan recognizes these issues. Under the plan, we will generate synergies between businesses and collaborate creation with

customers with the aim of becoming a “No. 1 high-performance business structure for advanced metals.”

**Five-part action plan**  
The Advanced Metals Division will implement the following five-part action plan to resolve problems and achieve sustainable growth.

**1 Reduce inventories**  
We will steadily execute our action plan by strictly monitoring the Cash Conversion Cycle (CCC) and other key performance indicators (KPIs) to reduce inventories at an early stage of fiscal 2019.

**2 Create synergy between businesses**  
In addition to identifying needs in the overlapping markets of specialty steel products and functional components and equipment, we will propose materials and products that combine our technologies in these two areas. We will also strategically and functionally allocate management resources, including a workforce of more than 17,000, to growth fields.

**3 Bring innovations to materials and processes**  
We will integrate and develop our technologies in the

specialty steel and functional components and equipment field—namely, structural control technology, alloy design technology, and production technology—and deepen collaboration with the Global Research & Innovative Technology center (GRIT), customers, and external research institutes to develop new alloys and processes, in addition to providing powder materials for 3D printers and metal injection molding (MIM) products.




**4 Ongoing restructuring of business portfolio**  
We will overhaul the portfolios of our core businesses. In automotive castings, for example, we will expand our presence in heavy-duty areas—commercial vehicles, agricultural machinery, construction machinery, rolling stock, and industrial equipment—while promoting process innovation for higher added value, in order to generate reliable earnings. Through these efforts, we plan to increase the sales ratio for heavy-duty automotive castings at Waupaca Foundry, Inc. in the United States to 54% by fiscal 2021, from 42% in fiscal 2018.

In the growth businesses of industrial equipment, aircraft and energy materials, and electronic materials, we will expand medium-term sales and increase the sales ratio.

**5 Take the best advantage of large-scale investments**  
In our core businesses, we have made significant capital investments under the Fiscal Year 2018 Medium-Term Management Plan. As a result, in automotive castings, we increased productivity at Waupaca Foundry and expanded sales of DAC-i™, a new molds and tool steel product. There have been delays in reaping the benefits

of these capital investments, but, going forward, we will engage engineers and other human resources to promptly take the best advantage of these investments.  
In the growing business of aircraft and energy materials, we expect demand for passenger jet aircraft to increase in the future. To capture this demand, we will deepen three-way collaboration among the Okegawa Works, Yasugi Works, and Japan Aeroforge, Ltd. to build an integrated production system that covers melting, forging, and processing. We will also strengthen our business with engine manufacturers and deploy specialized technologies related to isothermal forging, MIM, and precision casting to introduce next-generation products. In the process, we will enter the market for engine core components, targeting ¥60 billion in annual sales of aircraft components and materials by fiscal 2025.  
In electronic materials, another growing business, we look forward to high growth driven by electrification of automobiles and advances in smartphone performance. In organic EL components and materials, we will commission a wide processing line in fiscal 2020, thus taking the best advantage of our investments. The Group also boasts world-class technologies in clad materials, where multiple metals are combined to demonstrate unique properties. Bringing together the unique technologies of the Group’s sites in Yasugi, Suita, Tsuchiura, Kitanihon, and Kagoshima will enable us to supply a wide variety of clad materials. In the electronic materials business, we are targeting a 14% increase in sales by fiscal 2021 compared with the fiscal 2018 figure.

Take the best advantage of large-scale investments

Core businesses	Molds and tool steel	Yasugi Works 10,000-ton forging press (started operation in May 2018) Respond to larger molds and expand the sales of new products such as DAC-i™	 10,000-ton forging press   Production site of piston ring materials in China
	Rolls	Increase production efficiency and capacity (started operation in the 2H of FY2018 at Hitachi Metals Wakamatsu, Ltd.) Expand sales of rolls for steel mills and structural steel castings	
	Industrial equipment	Increase production capacity of piston ring materials (operation in the 1H of FY2018 in China; 2H at Yasugi Works) Responded to the needs for better fuel efficiency of internal-combustion engines	
	Piping components	Increased the system capacity of flexible piping at Kuwana Works (started operation in the 2H of FY2018) Expanded sales in the Chinese and European markets	
	Aircraft/Energy materials	Establish an integrated production system across the three sites (melting, forging, and processing) Increase production efficiency and accelerate acquisition of melting certification to enter world's Top 4 manufacturers	
Growing businesses	Electronic materials	Increase production capacity of clad materials (operation in the 2H of FY2018 at Tsuchiura Works of Hitachi Metals Neomaterial) Increase capacity and integrate technologies of 5 sites to expand sales in new fields	 Clad terminal for a battery



# Message from the General Manager of Advanced Components & Materials Division



## Reaping the benefits of investments, we will concentrate resources and generate synergies aimed at expanding the growth areas.

### Kazuya Murakami

Vice President and Executive Officer,  
General Manager of Advanced Components & Materials Division

#### Fiscal Year 2021 Medium-Term Management Plan

		FY2018 Results	FY2021 Targets
Magnetic Materials and Applications/ Power Electronics	Revenues	¥137.0 billion	¥175.0 billion
	Adjusted operating income [Profit margin]	[2.9%] ¥4.0 billion	[12.6%] ¥22.0 billion
	ROIC	3.9%	8.2%
Wires, Cables, and Related Products	Revenues	¥240.1 billion	¥245.0 billion
	Adjusted operating income [Profit margin]	[5.2%] ¥12.5 billion	[7.8%] ¥19.0 billion
	ROIC	8.2%	11.3%
Total*	Revenues	¥377.1 billion	¥420.0 billion
	Adjusted operating income [Profit margin]	[4.4%] ¥16.5 billion	[9.8%] ¥41.0 billion
	ROIC	5.5%	9.3%

\* Simple sum before eliminating intersegment revenues

#### Initiatives of Fiscal Year 2018 Medium-Term Management Plan

Targeting organic growth, we introduced innovative production lines, established Hitachi Metals San Huan Magnetic Materials (Nantong) Co., Ltd., and introduced a new continuous casting and rolling line. We also transferred our information system business and lead frame business as part of our continuous portfolio restructuring efforts. In addition, we pursued various M&A activities, with Santoku Corporation, a magnet alloy manufacturer, and HTP-Meds, LLC, a U.S. maker of medical products, becoming subsidiaries.

#### Basic policy of Fiscal Year 2021 Medium-Term Management Plan

Under the Fiscal Year 2021 Medium-Term Management Plan, we will work to address the megatrends of urbanization, declining birthrate and aging population, serious environmental problems, and technological advances. Specifically, we will focus on reaping the benefits of investments, concentrating our resources, and generating synergies between businesses. We have identified the following growth areas: automobiles, factory automation (FA) and robots, medical devices, and rolling stock.

#### Expansion into growth areas

##### Automobiles

The Advanced Components & Materials Division offers a wide range of products in the automotive area, including soft magnetic components and materials for power electronics, magnets, and magnet wires for wires, cables, and related products. Leveraging our advanced functional material design technology, we will generate synergies between businesses and meet the rapidly expanding needs of electrification and emerging xEV\*<sup>1</sup> vehicles.

In soft magnetic components and materials, where demand is growing, we commissioned a FINEMET® Ribbon production line at the Metglas Yasugi Works in April 2019. This will quadruple our production capacity, establishing Hitachi Metals as the world's No. 1 manufacturer. In order to increase the production capacity of soft ferrite, meanwhile, we are scheduled to start mass production in the Philippines in January 2020. Our aim is to achieve a 1.4-fold increase in sales of soft magnetic components and materials by fiscal 2021 compared with the fiscal 2018 level.

In ceramic components, there is a growing need for silicon nitride substrates and other substrates that combine high thermal conductivity and mechanical

strength as well as contribute to advances in power module cooling mechanisms in terms of compactness and cost reductions. We are increasing our domestic production capacity for silicon nitride substrates and started mass production of high-thermal-conductivity products. We are also reinforcing our polishing technologies for silicon carbide (SiC) substrates to expand business. Our aim is to achieve a 2.2-fold increase in sales of ceramic products by fiscal 2021 compared with the fiscal 2018 level.

Seeking to improve the efficiency of xEV drive motors, we developed a motor that uses amorphous metals as part of its core (see page 39 for details). Together with German research organization Fraunhofer IISB, we also developed a high-power-density technology that contributes to advances in output and compactness of on-board xEV chargers. We plan to use the outcomes of these activities to expand our business in high-performance soft magnetic components and materials.

In automotive electronic components, we will increase the production capacity for electric parking brake harnesses in Thailand and Vietnam. We will also expand our Feed Assy\*<sup>2</sup> business in Japan and China while focusing on the development of new sensors. Our aim is to achieve a 1.7-fold increase in sales of automotive electronic components by fiscal 2025 compared with the fiscal 2018 level.

In magnet wires, we have commenced mass production in Japan and Thailand in response to strong xEV demand. Going forward, we will step up sales of differentiated products, such as high-PDIV (partial discharge inception voltage) wires and surge-resistant wires.

In magnetic materials, we brought production of magnet alloys 100% in-house, expanded our lineup of

less heavy rare earth magnets to reduce resource risk, and installed new production lines for neodymium magnets and ferrite magnets. Going forward, we will improve the productivity of our new production lines and optimize our global production system in order to enhance profitability and expand orders. We are targeting an adjusted operating margin of 10% for magnetic materials in fiscal 2021.

\*1 xEV: A generic term for electric vehicles (EVs), hybrid electric vehicles (HEVs), and plug-in hybrid electric vehicles (PHEVs).  
\*2 Feed Assy: Wiring parts for xEV motors

#### FA/robots, medical devices, rolling stock

In electric wires and cables for FA/robots, we will strive to increase our market share, deploying our unique technologies that feature thinner and lighter design and longer-life performance. With production in Japan, China, and Vietnam, we will make flexible investment decisions in response to market fluctuations. We are targeting ¥10 billion in sales of electric wires and cables for FA/robots in fiscal 2021.

In medical devices, we will increase the performance of scintillator materials for CT equipment, expand our line of combination products of catheters and cable for catheter testing and treatment equipment, and promote mass production of new probe cables for ultrasound diagnostic equipment. Our aim is to achieve a 1.3-fold increase in sales of medical devices by fiscal 2021 compared with the fiscal 2018 level.

In electric wires and cables for rolling stock, we aim to increase our market share in China, where demand for high-speed rail is growing. In Europe, we will propose cable navigation and other solutions, in addition to supplying products. We are targeting ¥14 billion in sales of electric wires and cables for rolling stock in fiscal 2021.

#### Automotive area

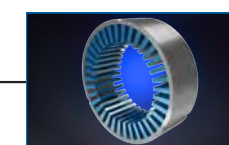
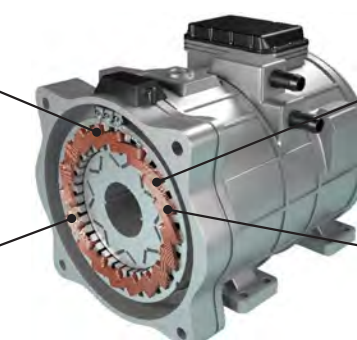
Seek synergy between magnetic materials, power electronics, and wires, cables, and related products



Feed Assy



Magnet wires



Amorphous metals



Magnets

Deeply cultivate the automotive and industrial infrastructure markets with the design technology for advanced components and materials at the core



## Message from the General Manager of Human Resources & General Administration Division



**We strive to be a company with a diverse workforce, where individual employees can fully demonstrate their abilities with rewarding jobs in worker-friendly environments.**

**Naohiko Tamiya**

Vice President and Executive Officer,  
General Manager of Human Resources & General Administration Division

### Rigorous pursuit of diversity-oriented management

A company's business growth is tied directly to its human resource strategy. The wellspring of business growth lies in people—and no matter which era or sector, this will never change. The corporate vision of the Hitachi Metals Group's Fiscal Year 2021 Medium-Term Management Plan is “Building People, Building Innovation, Building the Future.” We will rigorously pursue diversity-oriented management as our human resource strategy to underpin this vision. With our “Only 1, No. 1” products, we have made positive contributions to customers and society. To continue generating innovation, we aim to be a company with a diverse workforce, where individual employees can fully demonstrate their abilities with rewarding jobs in worker-friendly environments.

### Attract diverse human resources with diverse values

The Hitachi Metals Group will strive continuously to attract diverse human resources in terms of gender, nationality, age, and the like, including new graduates and mid-career hires. When fostering human resources, we will focus on independence and work to implement effective human resource development that is suitable for their individual characteristics. This is embodied in our Corporate Philosophy: *Wa sureba tsuyoshi*, which portrays our endeavor to work as one while improving ourselves individually in order to create the best possible company.

Effective fiscal 2019, we have shifted our company's structure to two business divisions. We will also promote the dynamic utilization, development, and allocation of human resources from a whole-company perspective

that transcends lines between business divisions. We aim to provide employees with varying opportunities that do not impede individual potential, while deploying the various skills and knowledge of each person across business divisions to generate new innovations.

For employee engagement, we conduct an annual employee awareness survey called Hitachi Insights. Based on survey results, we identify and implement necessary measures to take, such as workplace communication improvements, and use the plan, do, check, and act (PDCA) cycle to increase employee engagement.

### Rewarding work

In addition to good work content and clear workplace instructions, motivating individual employees requires proper communication between superiors and subordinates. We strive to improve communication by conducting regular interviews between superiors and subordinates based on our belief that serious and deep discussions will lead to job satisfaction. These discussions cover such matters as career choice suited to individual aptitude, employee satisfaction related to treatment and evaluation, and proper sharing of company management information.

With regard to workstyle reforms, we have made tangible progress in reducing working hours thanks to top-down initiatives over a three-year period from fiscal 2016. For true workstyle reforms, however, individual independence is a key. Going forward, we will encourage individual employees to take the initiative in enhancing work efficiency and superiors to embrace a deep commitment to improving the business. This will lead to increased productivity, which is our original purpose.

### Enabling individual employees to fully demonstrate their abilities in worker-friendly environments

Under our Corporate Creed, we aspire to be the “best enterprise.” This means being the best company not only for customers and society, but for employees as well. Under our management policy of “Safety always comes first,” we are working to create safe and healthy environments where employees can work with peace of mind every day. Moreover, good workplaces with health and safety lead to better productivity. In our Fiscal Year 2021 Medium-Term Management Plan, therefore, we will plan to make specific safety-related investments every year and also emphasize health-oriented management.

By having diverse human resources perform rewarding jobs in worker-friendly environments, we hope to be a company in which individual employees can achieve future self-fulfillment, one step at a time, and fully demonstrate their capabilities.

### Fostering management personnel

To achieve sustainable corporate growth, it is very important to adopt long-term perspectives in line with our Corporate Creed, and foster management personnel accordingly.

The Hitachi Metals Group embraces the concept of diversity-oriented management when selecting and developing management personnel. Once a year, we select and make a list of future executive candidates. We share this with the Board of Directors for discussion about ways to develop those candidates. To ensure diversity, we endeavor to include women and foreigners in our candidate lists.

Some candidates are subject to a training program for manager-level personnel. Others are sent to external training programs and given tough assignments in overseas locations and differing fields. In these ways, we strive to develop competent management personnel.

By fostering diverse management personnel with wide-ranging experiences, the Hitachi Metals Group aims to realize its “best enterprise” aspiration and achieve sustainable development.

\* For more details, see page 52 for diversity-oriented management and page 54 for safety and health.

#### Human resources: Strategic KPIs

	Initiatives	KPI	FY2018 result	FY2021 plan (target)
1	Employee engagement (Hitachi Insights)	Engagement index*1	59%	62%
2		Overall positive response rate (non-consolidated)	57%	60%
3	Diversity-oriented management	Diversity recruitment ratio*2	56%	50%
4		Ratio of women in management positions*3	1.5% (19 people)	2.0% (26 people)
5		Ratio of women in career-track positions (non-consolidated; full-time)	4.7% (99 people)	5.6% (138 people)
6	Workstyle reforms	Total annual working hours*4	2,049 hours	14 days (average annual leave to be taken)
7	Safe and healthy workplaces	Occupational accident frequency*5	0.42	0

\*1 Number of positive engagement indicators in the Hitachi Insights survey (non-consolidated)

\*2 Percentage of foreign nationals, women, and mid-career hires in planning divisions' hires (non-consolidated)

\*3 Percentage of women in managers and professionals (non-consolidated; currently working as manager or professional)

\*4 Average annual working hours of back-office workers (non-consolidated; including managers and professionals)

\*5 Occupational accident frequency = Number of casualties due to occupational accidents ÷ Total actual working hours × 1,000,000 (calendar year)





## Technology and R&D

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- 35 Examples of Products That Help Realize a Sustainable Society
- 38 Aiming to Be a “Genuinely Development-Driven Company”

## Examples of Products That Help Realize a Sustainable Society

The growing effects of climate change, reflected in rising sea levels and increasing storm and flood damage due to abnormal weather events, are prompting people around the world to take action to reduce environmental impacts. The Hitachi Metals Group focuses on developing key environmentally conscious products and providing them to customers in wide-ranging fields, such as automobiles and electric power. In these ways, we contribute to the realization of a low-carbon society.



### SUSTAINABLE DEVELOPMENT GOALS 17 GOALS TO TRANSFORM OUR WORLD

In 2015, the United Nations adopted a set of 17 Sustainable Development Goals (SDGs) as part of a universal action plan aimed at ending poverty, protecting the planet, and ensuring peace and prosperity for all people by 2030.





## Neodymium magnets: Contributing to popularization of xEVs

In 1982, our company (then called Sumitomo Special Metals) invented a neodymium magnet with a much stronger magnetic force than ordinary ferrite magnets. In general, a stronger magnetic force of the magnet means higher performance of the motor, which contributes to miniaturization and weight reduction. In light of technological advances in xEVs\*, neodymium magnets play a significant role, which are indispensable for making motors smaller and lighter, thus increasing efficiency and saving energy. The Hitachi Metals Group was the first in the world to develop and mass-produce neodymium magnets, sold under the NEOMAX® brand. Boasting the world's strongest magnetic force among permanent magnets, NEOMAX® magnets are used in various fields, including automobiles, IT, home appliances, industry, medical devices, and environment and energy. Currently, we are focusing on increasing our presence in the automotive market, which is undergoing transformation due to advances in connectivity, automated driving, and electrification. Supplying high-performance neodymium magnets for around 1.18 million vehicles annually, we contribute to higher efficiency and downsizing of xEV drive motors and generators.

\* xEV: A generic term for electric vehicles (EVs), hybrid electric vehicles (HEVs), and plug-in hybrid electric vehicles (PHEVs).

 High-performance neodymium magnets supplied by the Group annually

Approx.  
**1.18**  
million vehicles



NEOMAX® neodymium magnets




## Sustainable use of rare earth materials

Neodymium magnets are expected to find more widespread use as companies work to realize an energy-efficient society. These magnets consist mainly of neodymium, iron, and boron, a composition that is vulnerable to heat and whose magnetic properties deteriorate when the temperature exceeds around 80°C. Therefore, it is necessary to add dysprosium (Dy) and terbium (Tb), which are heavy rare earth elements.

Neodymium and heavy rare earth elements are indispensable materials for the evolution of magnets, but since they are derived from natural resources, there are risks in terms of procurement stability and costs. Because it is difficult to reduce the amount of neodymium, which is the basic composition of the magnets, the Group has been developing the NEOMAX®F Series since 2014, reducing the amount of heavy rare earth elements while maintaining heat resistance. By limiting the use of rare earth elements, we contribute to their sustainability.

### Rare earth magnet business

We produce neodymium rare earth magnets (neodymium magnets), which are indispensable for advances in miniaturization, weight reduction, and operational and energy efficiency. They are used in motors in such fields as automobiles, IT, home appliances, industry, medical devices, and environment and energy. In the automotive field, they are used in xEV drive motors and generators.

Environmental value	Contribution to SDGs			Value created
	 7.3	 11.6	 13.1	We provide high-performance rare earth magnets for xEV applications in order to improve fuel efficiency, reduce vehicle exhaust emissions, and enhance operational efficiency and miniaturization of xEV drive motors and generators, stemming from replacement of internal combustion engines with xEV motors. (Approximately 1.18 million vehicles/year equivalent) [Customer value created] *Based on the amount used and shipment volume for xEV applications Developing magnets that require less heavy rare earth resources (less heavy rare earth magnets) will reduce the use of such resources. [In-house value created]
Potential risk of business on society/environment				
Environmental destruction due to rare earth mining; poor working conditions				
Response				
Procure from companies that care for the environment and working conditions				

## Amorphous alloys: Contributing to energy efficiency of power transformers

Transmission energy gets lost as electricity travels from the power plant to factories and homes. High-voltage electricity sent from the power plant is converted to low-voltage electricity by transformers for safety reasons. However, transformers not only consume power during the conversion, but also when in standby mode.

To solve this problem, the Hitachi Metals Group developed an amorphous alloy called Metglas®. Transformers using Metglas® as the core material consume around one-third of the power of those using conventional materials, such as magnetic steel sheets. We have been supplying this alloy since 2003. Unlike ordinary metals and alloys, amorphous alloys have excellent soft magnetic properties due to their lack of crystal structure, which makes it possible to suppress power loss in standby mode. To date, the Group has provided Metglas® as the core material for around 480,000 amorphous transformers. Compared with magnetic steel sheet transformers, this translates to a reduction in CO<sub>2</sub> emissions\* of approximately 50,000 tons per year.

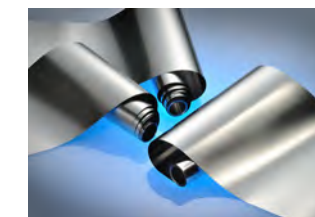
\* Based on shipment volume and difference in transformer energy loss, according to Indian standards  
For the CO<sub>2</sub> emission coefficient, we use IEA CO<sub>2</sub> emissions from fuel combustion (2017 world).

 CO<sub>2</sub> emissions compared with conventional transformers

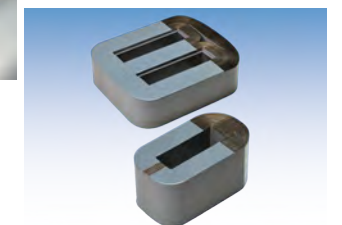
Approx.  
**50**  
thousand-ton  
reduction

## Pursuing new possibilities for materials and developing products that help reduce environmental impact

Because amorphous alloys can contribute to energy savings in various products, we anticipate their deployment in many areas other than transformers. Unlike general metals, amorphous alloys are hard yet flexible, meaning they are difficult to deform or cut. However, there are still many unknown points about this principle. Hitachi Metals participates in the Next Generation TATARA project, a joint initiative by regional universities and industry promoted by Shimane University. Under the project, we engage in research aimed at further clarifying the properties of amorphous alloys. By deepening our understanding of these materials and establishing solid theories, we believe we can create new production methods and processes and develop eco-friendly products that help reduce environmental impacts.





Metglas® amorphous alloy ribbon



High-frequency transformer core

### Soft magnetic materials business

We produce soft magnetic materials used in energy-saving transformers and noise suppression components in industrial and electronic equipment.

Environmental value	Contribution to SDGs		Value created
	 7.3	 13.1	Compared with transformers using conventional soft magnetic materials, such as grain-oriented magnetic steel sheets, the no-load loss (standby power) of those using amorphous alloys is low, at around one-third. We provide high-efficiency amorphous transformer materials that can significantly reduce power conversion loss (used in around 480,000 transformers). This translates to an annual CO <sub>2</sub> emission reduction of around 50,000 tons compared with transformers using grain-oriented magnetic steel sheets. [Customer value created]
Potential risk of business on society/environment			
—			
Response			
—			



## Aiming to Be a “Genuinely Development-Driven Company”



In April 2017, the Hitachi Metals Group opened the Global Research & Innovative Technology center (GRIT), reflecting its principle to “promote research, development, and innovation for the future, to become a genuinely development-driven company.”

In April 2018, we opened a new facility within GRIT consisting of a research building and an experimental building. Through



collaboration between GRIT and the research facilities of our business divisions, we promote cross-departmental projects and open innovation in our quest to create new levels of value.

### Main R&D achievements in fiscal 2018

In fiscal 2018, the Group made investments in R&D totaling ¥18.6 billion and achieved the following results.

#### Specialty Steel Products

#### Contributing to xEV popularization with motor components and lithium-ion battery components and materials

To improve the efficiency of motors, we have developed a motor core consisting of amorphous metals. We will forge ahead with R&D aimed at applying this technology to xEV drive motors (see page on right for details).

In addition, we developed a lithium-ion battery clad terminal, processed from aluminum and copper clad materials<sup>\*1</sup>, with the aim of improving the connection reliability of automotive lithium-ion batteries used in harsh conditions, such as high- and low-temperature environments. We expect this to help reduce battery weight and assembly time.

In addition, we started mass production of soft ferrite core materials with excellent high-frequency characteristics, to foster advances in miniaturization and energy efficiency of network devices, automobiles, and smartphone components.

#### Magnetic Materials and Applications

#### Contributing to downsizing and cost reduction of power module cooling mechanisms

Power modules are used in such fields as industrial equipment, automobiles, rolling stock, and new energy. To reduce the size and cost of power module cooling mechanisms, we developed a silicon nitride substrate with high thermal conductivity (130W/m-K) and mechanical properties. It can also handle high-temperature environments, in which silicon carbide (SiC) semiconductors are generally used.

#### Functional Components and Equipment

#### Contributing to reductions in seawater desalination costs

We have developed a ceramic adsorption filter that minimizes fouling of RO<sup>\*2</sup> membranes used in seawater desalination. This is expected to reduce the cost of producing freshwater. Going forward, we will accelerate efforts toward commercialization and expand the business in Singapore, a major center of the water treatment industry.

#### Wires, Cables, and Related Products

#### Addressing need for higher-performance rolling stock

Utilizing our unique fire safety design technology for rolling stock wires and cables, we developed a LAN cable for rolling stock that complies with the European railway fire safety standard. By adding this product to our lineup, we will meet demand for high-performance rolling stock in Europe and Asia.

<sup>\*1</sup> Clad material: A material in which two or more different metals are bonded together, giving it composite properties that cannot be obtained with a single material.

<sup>\*2</sup> RO: An abbreviation for Reverse Osmosis. Two bodies of water of different salinity are placed adjacent to each other via a membrane that allows only water molecules to permeate; if the high salinity side is pressurized, the water molecules move to the low salinity side.

### Groupwide technological development to enhance motor efficiency

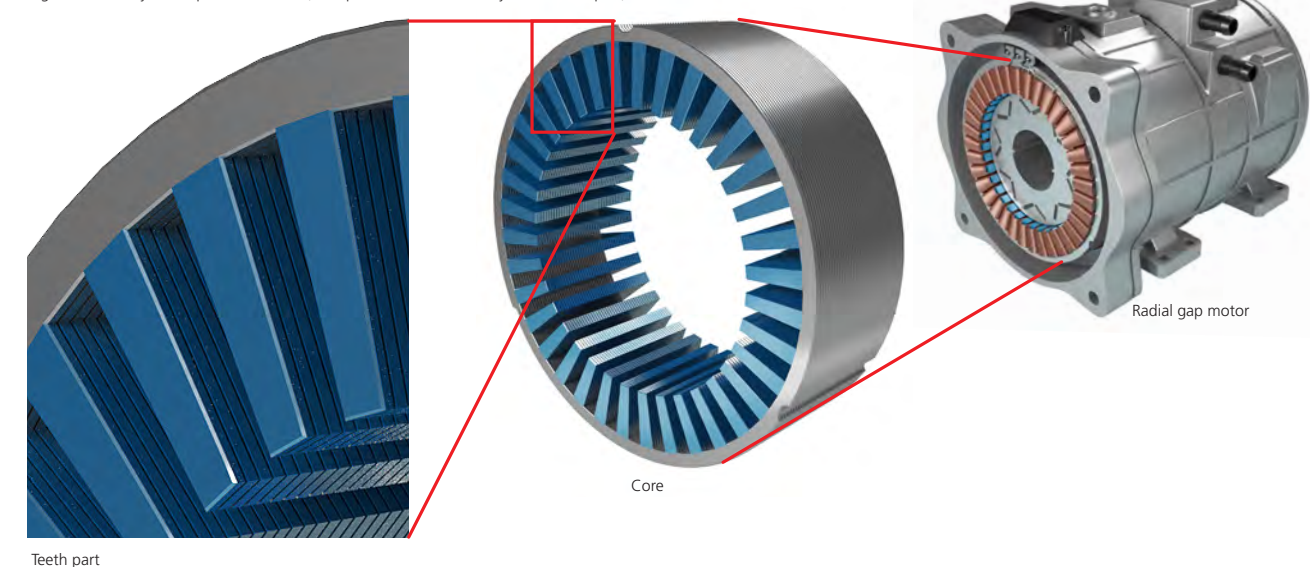
By establishing GRIT, we have put in place a system for pursuing medium- and long-term research themes across the Group. Our aim is to create new businesses and products by organically combining technologies and information to drive innovation. Here, we introduce our development of a motor core structure using amorphous metals.

#### ■ Developers gather at GRIT to create a new structure

Using our Metglas® amorphous metals, we have developed technology to improve the efficiency of motors. This is in response to calls from various sectors—including those related to automobiles, industrial infrastructure, and electronics—for motors that are smaller, lighter, and more efficient. It is the result of R&D on using amorphous metals for motor cores, because core loss from amorphous metal cores is 10% or less than for cores using magnetic steel sheets.

Due to the thinness of amorphous metal, a higher number of sheets to be processed is required. Moreover, the post-pressing assembly process is difficult and reduces the life of the press mold. Therefore, amorphous metals are more difficult than magnetic steel sheets to process, and transforming it into complex shapes comes with many challenges. Through open innovation by internal and external development teams centered on GRIT, we solved the problem by creating a structure in which amorphous metals are used only for the teeth part, rather than making the entire core from amorphous metals.

Image of the newly developed motor core (amorphous metals used only in the teeth part)



Teeth part

Core

Radial gap motor

#### ■ Prototype motor combining multiple Group technologies

We have made a prototype motor that incorporates multiple materials possessed by the Hitachi Metals Group. These include Metglas® amorphous metals (used in the motor core), HIDENSE™ ultrahigh-density bonded magnets, and enamel wires. Reflecting its high energy efficiency, this prototype motor achieved an IE5<sup>\*3</sup> rating, the highest in the world for motor energy efficiency.

The aim of making the prototype was to demonstrate the superiority of amorphous metal as a motor material. Looking ahead, we will proceed with R&D to find applications in xEV drive motors and the like, while proposing new application methods for motor materials backed by demonstration data.

<sup>\*3</sup> The highest level in the guideline for motor energy efficiency under IEC60034-30-2, currently being discussed and formulated by the International Electrotechnical Commission (IEC).



Prototype motor



## Message from the Chairperson of the Board



## Foundation



### Shinichiro Omori

Chairperson of the Board

The Hitachi Metals Group would first like to report that Koji Sato assumed the position of Representative Executive Officer, President and Chief Executive Officer in April 2019, at the start of the Fiscal Year 2021 Medium-Term Management Plan. With the change of the President and Chief Executive Officer, renewal of the executive officer system, and implementation of organizational reforms, we aim to grow as a high-performance materials company supporting sustainable societies. President Sato has deep knowledge of trends in technology and experience as the head of the Technology, Research & Development Division, as well as experience as a corporate manager, including as President of the Specialty Steel Company and President of Group companies. Deeming him the most appropriate person to carry out the Fiscal Year 2021 Medium-Term Management Plan, the Board of Directors appointed him to the position of President and Chief Executive Officer. Furthermore, in terms of organizational reforms, we transitioned from the previous four internal company system to a two business division system in order to further bolster synergies between businesses that share markets, customer needs, and elemental technologies, as well as to enhance our cross-sectional functions, and strengthen both strategy and governance. This major change in the business execution system has made the role played by the Board of Directors even more important.

Corporate governance is the foundation for realizing our Corporate Creed of being “the best enterprise,” and we recognize this as an important management issue. We have, therefore, built an organizational system in which the supervisory function of management by the Board of Directors and the business execution function by the executive officers are each performed effectively and are well balanced. The analysis of the effectiveness of the Board of Directors conducted in May 2019 concluded that the selection of agenda items for the Board of Directors was appropriate, that vigorous discussion was carried out on business strategy and management issues, that important items were discussed sufficiently in advance, and that the effectiveness of the Board of Directors as a whole was ensured. However, it was also reported that the evaluation results showed a further need for timely follow-up on the progress of measures to carry out strategy and solutions to management issues, further expansion of opportunities for Directors to acquire the information needed to perform their roles, and enhancement of the governance system for the Group and all its bases. Going forward, we will provide comprehensive backup for bold and speedy execution of measures relating to management, including business restructuring and strategic investments, by promoting efforts to increase the effectiveness of the Board of Directors and actively incorporating the wide-ranging knowledge and diverse perspectives of Outside Directors.

We will continue to disclose high-quality information to all of our stakeholders in a timely manner and reflect in our corporate activities the objective evaluation and perspectives regarding our management that we receive through constructive dialogue, in an effort to achieve sustainable growth and increase our corporate value.

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Basic Views on Corporate Governance

The underlying basis for corporate governance at the Company is to ensure transparent, sound, and efficient management meet the needs of our stakeholders, and increase corporate value. We believe increasing corporate value to be one of our most important management challenges. Accordingly, it is imperative that we create an organizational structure in which management oversight and business operations function effectively and in balance. We also believe that timely, high-quality information disclosure contributes to the improvement of corporate governance. In pursuit of this philosophy, we go

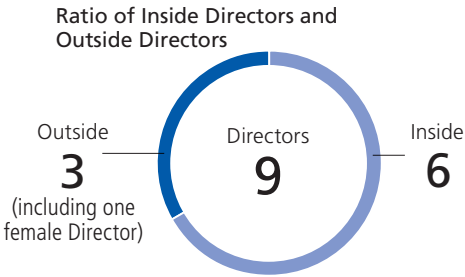
beyond simple financial disclosure, regularly publishing the details of individual business segments and medium-term management plans. We acknowledge that compliance is the linchpin of corporate governance. Nonetheless, our corporate activities go beyond mere compliance with laws and internal regulations, extending to the role we must fulfill as a member of society, based on respect for social ethics and morality. The Company established the Hitachi Metals Group Code of Conduct for actions that describe the above details as specific standards of conduct for its executives and employees.

Overview of the Governance Structure

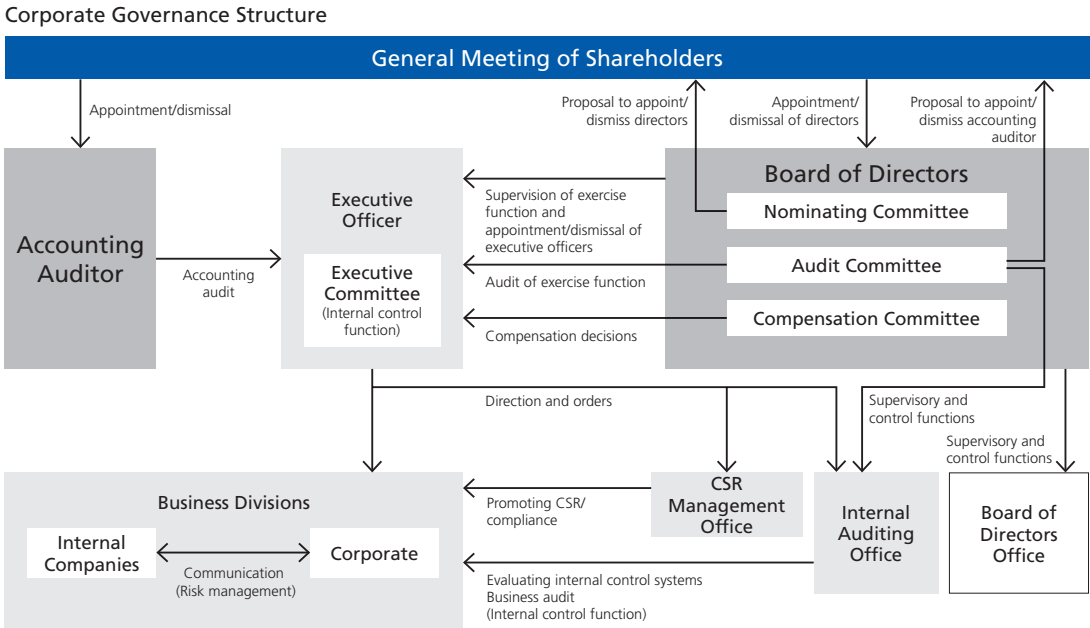
Organization System	
A Company with a nominating committee, etc.	
Directors	
Number of Directors stipulated in the Articles of Incorporation	10
Term of office of Directors stipulated in the Articles of Incorporation	One year
Chair of the Board of Directors	Chairperson of the Board (except when concurrently serving as President)
Number of Directors	Nine (including one female Director)
Outside Directors	
Number of Outside Directors	Three
Number of Outside Directors designated as Independent Directors	Three
Committees	
Composition of Committees	The Nominating Committee, Audit Committee, and Compensation Committee
Number of Committee members	Four members each on the Nominating Committee and Compensation Committee, and five members on the Audit Committee
Executive Officers	
Number of Executive Officers	14
Independent Directors	
Number of Independent Directors	Three

Measures aimed at the enhancement of corporate governance

- Transition to a “company with a committee, etc.,” as defined in the Commercial Code (June 2003)
- Increase in the number of Outside Directors serving as Independent Directors from two to three (June 2016)



Overview of Corporate Governance System, etc.



Membership composition of each committee and affiliations of chairs

Position	Name	Nominating Committee	Audit Committee	Compensation Committee
Chairperson of the Board	Shinichiro Omori	◎	○	
Deputy Chairperson of the Board	Akitoshi Hiraki			
Director	Makoto Uenoyama	○	○	○
Director	Toshiko Oka	○	○	○
Director	Koichi Fukuo	○	○	○
Director	Katsuro Sasaka			
Director	Koji Sato			◎
Director	Toyoaki Nakamura			
Director	Kenichi Nishiie		◎	

Note: ◎ Chair ○ Committee member

The Company adopts the statutory organizational structure of a Company with a Nominating Committee, etc. This is because we concluded that this structure would contribute to the bold and speedy execution of measures relating to the Groupwide management, such as business restructuring and strategic investments, and also that the transparency, soundness, and efficiency of management would be effectively improved through strengthening the decision-making and supervisory functions by Outside Directors, who are well versed in social norms and have a broader perspective, abundant experience, and in-depth knowledge, in each of the Nominating Committee, the Audit Committee, the Compensation Committee, and the Board of Directors. Under this system, nine Directors (of whom three are Outside Directors) have been appointed, and the Company has established the Board of Directors, Nominating Committee, Audit Committee, and Compensation Committee pursuant to the provisions of the Companies Act. Furthermore, the Company has established the Board of Directors Office to assist with the execution of duties by the Board of Directors and each Committee. The Board of Directors Office has persons in charge of the Board of Directors and each Committee.

The purpose of the Nominating Committee is to make decisions on matters relating to items concerning appointment and dismissal of Directors to be submitted at a General Meeting of Shareholders. The Committee is authorized to decide such

matters as well as to designate persons to be entitled to convene a Board of Directors meeting and persons to report about the status of the Committee's execution of duties to the Board of Directors from among its Committee members.

The purposes of the Audit Committee are to audit the execution of duties by Directors and Executive Officers and resolve issues such as matters relating to items concerning appointment, dismissal, and non-reappointment of the Accounting Auditor to be submitted at a General Meeting of Shareholders, in order for the Company's business to be operated lawfully and properly. The Committee is authorized to resolve such issues as well as to conduct policies for determination to dismiss or not to reappoint the Accounting Auditor or nominate persons to be entitled to convene a Board of Directors meeting from among its Committee members.

The purpose of the Compensation Committee is to determine the compensation and its details received by each Director and Executive Officer. The Committee is authorized to decide such matters as well as to determine policy on the determination of compensation and its details received by each Director and Executive Officer; also, it designates persons to be entitled to convene a Board of Directors meeting and persons to report about the status of the Committee's execution of duties to the Board of Directors from among its Committee members.



## The Audit Committee as an Audit Organization

The Audit Committee is composed of five committee members. The Audit Committee is in charge of auditing business execution by Directors or Executive Officers in accordance with laws and regulations or the Articles of Incorporation, the appropriateness of management's judgments, the adequacy of internal control systems, and accounting audit. The execution of duties by the Audit Committee is assisted by a person in charge of the Audit Committee at the Board of Directors Office. To ensure independence from Executive Officers, the person in charge of the Audit Committee does not

concurrently serve in any position at any other business operating division. The Audit Committee formulates annual auditing policies and audit implementation plans, and performs audits based on said policies and plans by hearing reports on important items and having Audit Committee members visit each facility, etc., and each subsidiary to conduct audits as regular audits. In addition, the Audit Committee conducts special audits if it finds possibility of violations of laws and regulations or the Articles of Incorporation by the Directors or the Executive Officers.

## Accounting Auditor

The Company's Accounting Auditor is Ernst & Young ShinNihon LLC, and the certified public accountants named in the table below conducted accounting audits. Under the direction of said certified public accountants, as necessary, certified public accountants, certified public accountant

assistants, and other personnel from Ernst & Young ShinNihon LLC assisted with the execution of accounting audit duties. Seven certified public accountants and 25 other personnel assisted with the Company's accounting audit duties.

Name of certified public accountant, etc.	Auditing firm of certified public accountant
Takashi Ouchida, Engagement partner	Ernst & Young ShinNihon LLC
Seiji Kuzunuki, Engagement partner	Ernst & Young ShinNihon LLC

## Matters Relating to Directors and Executive Officers

### Functions and Roles of Directors

The items to be resolved by the Board of Directors are defined by the Board of Directors Rules. They consist of items that are solely to be decided by the Board of Directors under the Companies Act (decisions regarding basic management policies, basic policies related to the maintenance of internal control systems and other policies, appointment and dismissal of Executive Officers, appointment and dismissal of the

Representative Executive Officer, etc.), as well as items concerning dividends from surplus, issuance of new shares and subscription rights to shares, the acquisition, loan, and disposal of assets in excess of a specified amount, debt guarantees, reorganization, etc. Decisions on items other than those mentioned above have been delegated to the President and Chief Executive Officer.

## Outside Directors' Functions, Roles, and Their Relationship with the Company

Outside Directors act as members of the Board of Directors and members of the Nominating Committee, Audit Committee, and Compensation Committee. They possess extensive experience and advanced knowledge, are well versed in the general norms of society, and use their broad perspectives to contribute to the enhancement of decision-making and auditing functions, and efficiency of the Company's management.

The Company considers each Outside Director to be fully independent from the Company, and has registered all of these Directors with the Tokyo Stock Exchange as Independent Directors.

The Company has business dealings with the companies for which Mr. Makoto Uenoyama and Mr. Koichi Fukuo have formerly worked. However, the transaction amounts with these companies during fiscal 2018 are substantially less than 1% of the consolidated revenues of the Company and each of those. Therefore, their former employment status is deemed to have no impact on their independence as Outside Directors.

There are no items of note regarding Outside Director Toshiko Oka.

With respect to relationships between each Outside Director and the Company, the independence of each Outside Director is judged according to the Criteria for Independence of Outside Directors, mentioned below.

The Criteria for Independence of Outside Directors are provided in Article 15, Criteria for Independence of Outside Directors of the Corporate Governance Guidelines of Hitachi Metals, Ltd. The guidelines are posted on our corporate website (<https://www.hitachi-metals.co.jp/e/ir/ir-csr.html>).

## Career and Meeting Attendance of Directors (as of June 26, 2019)

Note: Information regarding attendance at meetings held between June 2018 and May 2019 is provided.



**Shinichiro Omori**  
Chairperson of the Board

Attendance at meetings  
Board of Directors: —  
Nominating Committee: —  
Audit Committee: —  
(Appointed in June 2019)

Apr 1978 Joined Hitachi, Ltd.  
Sep 2008 General Manager of Corporate Procurement Division  
Apr 2012 Vice President and Executive Officer  
Director of Hitachi Automotive Systems, Ltd. (resigned in March 2016)  
Apr 2016 Senior Vice President and Executive Officer of Hitachi, Ltd. (resigned in March 2019)  
Director of Hitachi Appliances, Inc. (resigned in March 2017)  
Director of Hitachi Consumer Marketing, Inc. (resigned in March 2017)  
Jun 2017 Director of Hitachi Chemical Company, Ltd. (resigned in June 2018)  
Outside Director of Hitachi Capital Corporation (resigned in June 2019)  
Apr 2019 Associate of Hitachi Metals, Ltd.  
Jun 2019 Chairperson of the Board (current position)

### Reasons for appointment

The Company determined that Mr. Omori will contribute to the management of the Company as well as the strengthening of the decision-making and monitoring functions of the Board of Directors and enhancing their effectiveness, by reflecting his abundant experience as a corporate manager at Hitachi, Ltd. and its group companies as well as in-depth knowledge gained in procurement operations, cost restructuring, and governance of global companies.



**Akitoshi Hiraki**  
Deputy Chairperson of the Board

Attendance at meetings  
Board of Directors: 15/15 meetings  
Compensation Committee: 3/3 meetings

Apr 1985 Joined Hitachi Metals, Ltd.  
Jun 2008 President and Director of Hitachi Setsubi Engineering Co., Ltd. (resigned in March 2010)  
Apr 2010 Managing Officer, President of Specialty Steel Company, and Deputy General Manager of Corporate Export Regulation Office of Hitachi Metals, Ltd.  
Apr 2012 Vice President and Managing Officer, President of High-Grade Metals Company, General Manager of Specialty Steel Division, and Deputy General Manager of Corporate Export Regulation Office  
Apr 2015 Vice President and Representative Executive Officer, President of High-Grade Metals Company, and Deputy General Manager of Corporate Export Regulation Office  
Jun 2015 Vice President and Representative Executive Officer, President of High-Grade Metals Company, Deputy General Manager of Corporate Export Regulation Office, and Director  
Jan 2016 Vice President and Representative Executive Officer, General Manager of Technology, Research & Development Division, General Manager of Corporate Quality Assurance Division, and Director  
Apr 2017 Representative Executive Officer, President and Chief Executive Officer, and Director  
Apr 2019 Deputy Chairperson of the Board (current position)

### Reasons for appointment

The Company determined that Mr. Hiraki will contribute to the strengthening of the decision-making and monitoring functions of the Board of Directors and enhancing their effectiveness as a board member, by leveraging his abundant experience and in-depth knowledge gained as the head of the Company's Specialty Steel business, etc., as well as his thorough knowledge in the Group's operations gained in general management of the Company's operations as President and Chief Executive Officer of the Company.



**Makoto Uenoyama**  
Outside Director

Attendance at meetings  
Board of Directors: —  
Nominating Committee: —  
Audit Committee: —  
Compensation Committee: —  
(Appointed in June 2019)

Apr 1975 Joined Matsushita Electric Industrial Co., Ltd. (currently Panasonic Corporation)  
Apr 2006 Executive Officer (in charge of Accounting)  
Jun 2007 Director (in charge of Accounting and Finance)  
Apr 2010 Managing Director (in charge of Accounting and Finance)  
Jun 2012 Managing Executive Officer (resigned in March 2013)  
Apr 2013 Corporate Adviser (resigned in March 2015)  
Jun 2013 Outside Audit & Supervisory Board Member of SOHGO SECURITY SERVICES CO., LTD. (Standing Audit & Supervisory Board Member until June 2017) (current position)  
Jun 2019 Outside Director of Hitachi Metals, Ltd. (current position)

### Reasons for appointment

The Company determined that Mr. Uenoyama will contribute to the management of the Company as well as the strengthening of the decision-making and monitoring functions of the Board of Directors and enhancing their effectiveness, by reflecting his abundant experience and in-depth knowledge in finance and accounting areas obtained through his experience in the finance and accounting operations of Panasonic Corporation over the years as well as the experience as Director in charge of accounting and finance, from a more objective standpoint as Outside Director.



**Toshiko Oka**  
Outside Director

Attendance at meetings  
Board of Directors: 15/15 meetings  
Nominating Committee: 8/8 meetings  
Audit Committee: 14/14 meetings  
Compensation Committee: 3/3 meetings

Apr 1986 Joined Tohmatsu Touche Ross Consulting Co., Ltd. (currently ABeam Consulting Ltd.)  
Jul 2000 Joined Asahi Arthur Andersen Ltd.  
Sep 2002 Principal of Deloitte Tohmatsu Consulting Co., Ltd. (currently ABeam Consulting Ltd.) (resigned in August 2012)  
Apr 2005 President and Representative Director of ABeam M&A Consulting Ltd. (Chief Executive Officer of the company later reorganized and renamed as PricewaterhouseCoopers Deals Advisory LLC) (resigned in March 2016)  
Jun 2008 Outside Director of Neteary Group Corporation (resigned in June 2016)  
Jun 2014 Outside Audit & Supervisory Board Member of Astellas Pharma Inc. (resigned in June 2018)  
Jun 2015 Outside Audit & Supervisory Board Member of HAPPINET CORPORATION (resigned in June 2019)  
Apr 2016 Partner of PwC Advisory LLC (resigned in June 2016)  
Jun 2016 CEO of Oka & Company Ltd. (current position)  
Outside Director of Hitachi Metals, Ltd. (current position)  
Outside Director of Mitsubishi Corporation (current position)  
Jun 2018 Outside Director of Sony Corporation (current position)  
Jun 2019 Outside Director of HAPPINET CORPORATION (current position)

### Reasons for appointment

The Company determined that Ms. Oka will contribute to the management of the Company as well as the strengthening of the decision-making and monitoring functions of the Board of Directors and enhancing their effectiveness, by reflecting her abundant experience and in-depth knowledge in corporate management and accounting and finance areas obtained through her consulting experience in M&A and the creation of management strategies over the years, as well as her experience as a corporate manager of a consulting firm and as an outside director of several companies, from a more objective standpoint as Outside Director.





**Koichi Fukuo**  
Outside Director

Attendance at meetings  
Board of Directors: —  
Nominating Committee: —  
Audit Committee: —  
Compensation Committee: —  
(Appointed in June 2019)

Apr 1978 Joined Honda Motor Co., Ltd.  
Jun 2005 Operating Officer (in charge of quality and certification)  
Jun 2010 Managing Officer  
Apr 2014 Senior Managing Officer  
Nov 2014 Executive Vice President and Director of Honda R&D Co., Ltd.  
Apr 2015 President and Representative Director (resigned in March 2016)  
Jun 2015 Senior Managing Officer and Director of Honda Motor Co., Ltd. (resigned in June 2016)  
Jun 2018 Outside Director of Seven Bank, Ltd. (current position)  
Jun 2019 Outside Director of Hitachi Metals, Ltd. (current position)

**Reasons for appointment**

The Company determined that Mr. Fukuo will contribute to the management of the Company as well as the strengthening of the decision-making and monitoring functions of the Board of Directors and enhancing their effectiveness, by reflecting his abundant experience and in-depth knowledge in the automobile industry, to which our products are mainly supplied, obtained as the head of quality and certification of Honda Motor Co., Ltd. and as a corporate manager of the company and its group companies, from a more objective standpoint as Outside Director.



**Katsuro Sasaka**  
Director

Attendance at meetings  
Board of Directors:  
15/15 meetings

Apr 1980 Joined Hitachi Metals, Ltd.  
Apr 2013 General Manager of Finance Dept. of Finance Center  
Jun 2013 Deputy General Manager of Yasugi Works and President of HMY, Ltd. (resigned in March 2015)  
Apr 2015 Director and President of Hitachi Metals (China), Ltd. (resigned in March 2017)  
Apr 2017 Executive Officer, Deputy General Manager of Corporate Management Planning Division, and General Manager of Group Company Auditing Office of Hitachi Metals, Ltd. (resigned in March 2018)  
Jun 2018 Director (current position)

**Reasons for appointment**

The Company determined that Mr. Sasaka will contribute to the strengthening of the decision-making and monitoring functions of the Board of Directors and enhancing their effectiveness as a board member, by leveraging his abundant experience and in-depth knowledge in accounting, finance and other areas obtained as a senior management of the Company's finance and business planning operations as well as his thorough knowledge in the Group's operations gained as President, etc. of a subsidiary controlling business operations in China.



**Koji Sato**  
Director

Attendance at meetings  
Board of Directors: —  
Compensation Committee: —  
(Appointed in June 2019)

Apr 1987 Joined Hitachi Metals, Ltd.  
Jan 2011 President and Representative Director of Japan Aeroforge, Ltd. (resigned in June 2013)  
Oct 2014 General Manager of Metallurgical Research Laboratory of Hitachi Metals, Ltd.  
Jan 2016 General Manager of Yasugi Works  
Apr 2017 Executive Officer, President of Specialty Steel Company and Deputy General Manager of Corporate Export Regulation Office  
Apr 2018 Vice President and Executive Officer, President of Specialty Steel Company, General Manager of Technology, Research & Development Division and Deputy General Manager of Corporate Export Regulation Office  
Apr 2019 Representative Executive Officer, President and Chief Executive Officer  
Jun 2019 Representative Executive Officer, President and Chief Executive Officer, and Director (current position)

**Reasons for appointment**

The Company determined that Mr. Sato will contribute to the strengthening of the decision-making functions of the Board of Directors and enhancing their effectiveness, with his experience as the head of Specialty Steel business and Technology, Research & Development Division of the Company and his current position as President and Chief Executive Officer since April 2019 in general management of the Company's operations, by sharing the information of business execution divisions at a Board of Directors as a board member, and also by leveraging his abundant experience and in-depth knowledge obtained through aforementioned experiences.



**Toyoaki Nakamura**  
Director

Attendance at meetings  
Board of Directors:  
15/15 meetings

Apr 1975 Joined Hitachi, Ltd.  
Jan 2006 General Manager of Finance Department I  
Apr 2007 Representative Executive Officer, Senior Vice President and Executive Officer  
Jun 2007 Representative Executive Officer, Senior Vice President and Executive Officer, and Director  
Jun 2009 Representative Executive Officer, Senior Vice President and Executive Officer  
Jun 2010 Outside Director of Hitachi Metals, Ltd. (resigned in June 2012)  
Jun 2011 Director of Hitachi High-Technologies Corporation (resigned in June 2018)  
Apr 2012 Representative Executive Officer, Executive Vice President and Executive Officer of Hitachi, Ltd. (resigned in March 2016)  
Jun 2012 Outside Audit & Supervisory Board Member of Sompō Japan Insurance Inc. (currently Sompō Japan Nipponkoa Insurance Inc.) (resigned in June 2014)  
Apr 2013 Director of Hitachi Consumer Electronics Co., Ltd. (resigned in March 2014)  
Director of Hitachi Appliances, Inc. (resigned in March 2016)  
May 2013 Director of Hitachi Consumer Marketing, Inc. (resigned in March 2016)  
Jun 2015 Director of Hitachi Metals, Ltd. (Outside Director until June 2016) (current position)  
Dec 2015 Board Director, Chairperson  
Jun 2016 Director of Hitachi, Ltd. (current position)  
Chairperson of the Board of Hitachi Metals, Ltd.

**Reasons for appointment**

The Company determined that Mr. Nakamura will contribute to the management of the Company as well as the strengthening of the decision-making and monitoring functions of the Board of Directors and enhancing their effectiveness, by reflecting his abundant experience and in-depth knowledge obtained as a corporate manager at Hitachi, Ltd. and its group companies, and working to build closer ties with other Hitachi Group companies.



**Kenichi Nishiie**  
Director

Attendance at meetings  
Board of Directors: —  
Audit Committee: —  
(Appointed in June 2019)

Apr 1979 Joined Hitachi Metals, Ltd.  
Apr 2012 General Manager of Internal Auditing Office  
Apr 2013 Deputy General Manager of Magnetic Materials Company and General Manager of Planning Dept.  
Apr 2015 Representative Executive Officer, General Manager of Procurement Center and Corporate Export Regulation Office  
Jan 2016 Representative Executive Officer, General Manager of Human Resources & General Administration Division, Procurement & Value Engineering for Customers Division and Corporate Export Regulation Office  
Apr 2016 Vice President and Executive Officer, General Manager of Human Resources & General Administration Division and Procurement & Value Engineering for Customers Division  
Apr 2017 Representative Executive Officer, Senior Vice President and Executive Officer and General Manager of Corporate Management Planning Division  
Apr 2018 Representative Executive Officer, Senior Vice President and Executive Officer and General Manager of Corporate Management Planning Division and Group Company Auditing Office  
Apr 2019 Associate  
Jun 2019 Director (current position)

**Reasons for appointment**

The Company determined that Mr. Nishiie will contribute to the strengthening of the decision-making and monitoring functions of the Board of Directors and enhancing their effectiveness as a board member, by leveraging his abundant experience and in-depth knowledge in finance, accounting and other areas obtained as General Manager of the Audit Division, the head of Procurement, Human Resources & General Administration Division, and Corporate Management Planning Division of the Company, as well as his thorough knowledge in the Group's operations.

## Business Execution System

Regarding business execution, the Board of Directors delegates a great deal of decision-making authority concerning business execution to Executive Officers to achieve prompt decision-making. The Company has established the Executive Committee to ensure that the President and Chief Executive Officer makes decisions on and executes business operations in compliance with laws and regulations and the Articles of Incorporation, as well as more efficiently based on considerations from multiple angles. The Committee deliberates on certain important

management matters that impact the Company or the Group, and makes decisions regarding these matters. Also, as of April 1, 2019, the Company shifted its corporate structure from an internal company system to a business division system with the aim to further strengthen synergies between its businesses that share the same markets, customer needs and element technologies as well as to enhance cross-sectional functions and strengthen its strategic functions and governance.

## Executive Officers (As of April 1, 2019)

**Koji Sato**  
Representative Executive Officer  
President and Chief Executive Officer  
Overall Operations  
General Management

**Hiroaki Nishioka**  
Representative Executive Officer  
Vice President and Executive Officer  
In charge of Corporate Administration  
Chief Financial Officer  
General Manager of Finance Division

**Naohiko Tamiya**  
Vice President and Executive Officer  
In charge of Corporate Administration  
General Manager of Human Resources  
& General Administration Division  
Chief Compliance Officer

**Kazuya Murakami**  
Vice President and Executive Officer  
In charge of Business  
General Manager of Advanced  
Components & Materials Division  
Deputy General Manager of Corporate  
Export Regulation Office

**Hiroshi Watanabe**  
Vice President and Executive Officer  
In charge of Business  
General Manager of  
Advanced Metals Division  
Deputy General Manager of  
Corporate Export Regulation Office

**Ryouji Akada**  
Executive Officer  
In charge of Business  
Chairman and President of  
Hitachi Metals (China), Ltd.

**Norio Uemura**  
Executive Officer  
In charge of Business  
Deputy General Manager of Advanced  
Components & Materials Division  
General Manager of Power Electronics  
Materials Business Unit

**Shigekazu Suwabe**  
Executive Officer  
In charge of Business  
Deputy General Manager of Advanced  
Components & Materials Division  
General Manager of Magnetic Materials  
Business Unit

**Toru Taniguchi**  
Executive Officer  
In charge of Business  
Deputy General Manager of  
Advanced Metals Division  
General Manager of  
Automotive Casting Business Unit

**Masato Hasegawa**  
Executive Officer  
In charge of Technology and Corporate  
Administration  
General Manager of Technology, Research  
& Development Division

**Tomoyuki Hatano**  
Executive Officer  
In charge of Business  
Director & President & CEO  
of Hitachi Metals America, Ltd.

**Kenji Hirano**  
Executive Officer  
In charge of Business  
Deputy General Manager  
of Advanced Metals Division  
General Manager of Yasugi Works

**Hisaki Masuda**  
Executive Officer  
In charge of Corporate Administration  
General Manager of Corporate  
Management Planning Division

**Toru Yamamoto**  
Executive Officer  
In charge of Sales  
General Manager of Business Activity  
& Marketing Division



Executive Officers



## Analysis and Evaluation of the Effectiveness of the Board of Directors

The Company conducted a survey and individual interviews with Directors regarding the effectiveness of the Board of Directors in fiscal 2018. The main items on the survey included the composition of the Board, decision-making process, level of contributions, and operation and support systems.

At the Board of Directors meeting held in May 2019, the effectiveness of the Board of Directors was discussed and evaluated based on each Director's evaluations and opinions obtained from the survey and interviews. As a result, the Board of Directors has verified that effectiveness of the Board of Directors as a whole is ensured as agendas for the Board of Directors meetings are appropriately selected, business strategies and management issues are actively discussed, and important agendas are fully discussed in advance.

On the other hand, the Company has recognized room for further improvement in discussion on the following matters:

- 1) Timely follow-up of the progress on measures of strategy implementation and solutions to management issues,
  - 2) Further expansion of opportunities to obtain information (on businesses and personnel) necessary for Directors to fulfill their roles, and
  - 3) Enhancement of the governance system for the whole Group companies and business sites.
- We will use the above findings for operation of the Board of Directors to further enhance its effectiveness in the future.

## Main Items Discussed by the Board of Directors in Fiscal 2018

- Progress of the safety measures
- Progress report on the responses to management issues
- Fiscal Year 2021 Medium-Term Management Plan
- Determination of Executive Officers, Representative Executive Officer, President and Chief Executive Officer, etc.
- Appointment of members who comprise the Nominating Committee, Audit Committee, and Compensation Committee
- Report on the status of execution of duties of the Nominating Committee, Audit Committee, and Compensation Committee
- Response to the Corporate Governance Code
- Conducting the evaluation of the effectiveness of the Board of Directors

## ■ Compensation for Directors and Executive Officers, etc.

### (i) Details of the policy on the determination of the amounts of compensation, etc., for Directors and Executive Officers and the calculation methods thereof, and the determination method

The Compensation Committee, in accordance with the provisions of the Companies Act, sets forth the "Policies Concerning the Determination of Compensation, etc., for Directors and Executive Officers." The amounts of compensation, etc. for each Director and Executive Officer are determined by resolution of the Compensation Committee based on this policy.

The Policies Concerning the Determination of Compensation, etc., for Directors and Executive Officers state that "(a) Directors and Executive Officers assuming the management of the Company are compensated for executing management that enhances the Company's corporate value and benefits stakeholders such as shareholders by determining management policies from a long-term perspective, and formulating and executing medium-term management plans and annual business budgets; (b) To motivate Directors and Executive Officers to exercise their respective management capabilities, know-how, and skills to achieve satisfactory results, the compensation system shall reflect the Company's short-term and medium- to long-term business performance and appropriate compensation shall be paid for outstanding achievements; (c) Compensation paid by the Company consists

of base compensation and a term-end bonus; and (d) To share interests with shareholders by holding treasury stock and thereby promote sustainable growth and the enhanced corporate value of the Company over the medium to long term, Directors and Executive Officers shall, as a general rule, contribute part of their compensation to the officers' shareholding association and acquire treasury stock until such stock reaches a certain number. The acquired stock shall be held continuously during the terms of office of Directors and Executive Officers and, as a general rule, one year after retiring from their posts." The policy on base compensation is that it is to be "Determined individually in consideration of the degree of responsibility for Company management as a Director and/or Executive Officer and for the performance of duties utilizing their extensive experience, knowledge, insight, and specialized management skills, etc., acquired from past experience. To secure appropriate human resources for the positions of Director and Executive Officer, compensation levels should be comparable to those of other companies." The policy on a term-end bonus is that it is to be "Linked to the business performance of the Company."

### (ii) Total amount of compensation, etc. for each category of Directors or Executive Officers, total amount of compensation, etc. by type, and the number of Directors and Executive Officers who received compensation, etc.

Director/Executive Officer category	Total amount of compensation, etc. (millions of yen)	Total amount of compensation, etc., by type (millions of yen)		Number of Directors and Executive Officers who received compensation, etc.
		Base compensation	Term-end bonus	
Directors (excluding Outside Directors)	77	67	10	6
Executive Officers	509	375	134	13
Outside Directors and Officers	53	45	8	3

Note: Directors with concurrent post as Executive Officers are compensated as Executive Officers but not as Directors.

### (iii) The policy on the determination of proportion of payments as performance-linked compensation and the other types of compensation, etc.

Compensation for Directors and Executive Officers of the Company is comprised of a base compensation, which is a fixed compensation, and a term-end bonus, which is a performance-linked compensation. For performance-linked compensation for Executive Officers, the standard amount is set in a way that the percentage of performance-linked compensation to the total amount of compensation falls within a range of the ratios specified below according to the ranks of each Executive Officer to strengthen to the link between the business performance of the Company, considering the degree

of the responsibility of each Executive Officer for business execution. For performance-linked compensation for Directors, the standard amount is set in a way that the percentage of performance-linked compensation to the total amount of compensation falls within a range of ratios specified below in order for the Directors to fully execute the management-supervision function. Directors with a concurrent post as Executive Officers are paid a performance-linked compensation as Executive Officer, but are not paid a performance-linked compensation as Director.

Rank	Fixed compensation	Standard amount of performance-linked compensation	Total
President and Chief Executive Officer	60%	40%	100%
Senior Vice President and Executive Officer, and Vice President and Executive Officer	67%–68%	32%–33%	
Executive Officer	70%	30%	
Director	86%–89%	11%–14%	

### (iv) Indicators for performance-linked compensation and reasons for the selection of the indicators

The indicators for performance-linked compensation for fiscal 2018 are "revenues," "income before income taxes," and "cash flows from operating activities" on a consolidated basis as the Company has focused on growth and profitability in the Fiscal Year 2018 Medium-Term Management Plan.

The indicators for performance-linked compensation for fiscal 2019 are "revenues," "adjusted operating income," "return on invested capital (ROIC)," and "cash conversion cycle" on a consolidated basis as we focus on growth, profitability, and management efficiency in the Fiscal Year 2021 Medium-Term Management Plan.

### (v) Method for the determination of the amount of performance-linked compensation and target of the indicators for performance-linked compensation and actual results

The amount of a term-end bonus, which is a performance-linked compensation, to be paid to each Director and Executive Officer is calculated using the formula specified below based on the standard amount of performance-linked compensation set by rank. The Compensation Committee then discusses the results of calculation and finalizes them.

Amount of term-end bonus to be paid to each Director and Executive Officer = Standard amount of performance-linked compensation × ((Corporate performance factor\*<sup>1</sup> × Weight assigned for corporate performance factor) + (In-charge business factor\*<sup>2</sup> × Weight assigned for in-charge business factor) + (Individual target factor\*<sup>2</sup> × Weight assigned for individual target factor))

\*1 The "corporate performance factor" is the sum of the degrees of achievement of corporate performance related indicators multiplied by the weight assigned for each indicator (0.3 for revenues, 0.5 for income before income taxes, and 0.2 for cash flows from operating activities), where the degree of achievement of each corporate performance-related indicator is predetermined by the Company with a range from 0 to 2 so that the target for each indicator related to corporate performance is set as 1. The actual "corporate performance factor" for fiscal 2018 was 0.47.

\*2 Each of the "in-charge business factor" and "individual target factor" is the sum of the degrees of achievement of the targets set for each Director and Executive Officer multiplied by the weight assigned for each target, where the degree of achievement of each target is predetermined by the Company with a range from 0 to 2 so that the target for each Director and Executive Officer is set as 1.



**(vi) Name of the person with the authority to decide the compensation for Directors and Executive Officers, the details of such authority and the extent of its discretion, and an overview of the procedures of the Compensation Committee**

As the Company is a company with nominating and other committees, it sets forth the policy on the determination of compensation, etc. for each Director and Executive Officer in the Compensation Committee, with a majority of the members being independent Outside Directors, and determines the amount of individual compensation based on the policy. In

determining the compensation amounts, the Compensation Committee participates in a market survey on executive compensation each year and confirms that the compensation levels of the Company's Directors and Executive Officers are in an appropriate range compared to other companies of the similar size in Japan.

**(vii) Activities of the Compensation Committee**

During fiscal 2018, the Compensation Committee held a total of three meetings and determined a policy on the determination of compensation, etc., for Directors and Executive Officers, and details of their individual compensation

based on the policy. In terms of the meeting attendance of the Committee members, Directors who had been in service during the fiscal year under review attended all meetings of the Compensation Committee held during their terms of office.

**Relationship with the Parent Company**

In principle, the business operations and transactions of the Company are conducted on an autonomous basis and are independent of Hitachi, Ltd., the parent company, and its group companies. In the implementation of its business operations, however, and as a member of the Hitachi Group, the Company has a close collaborative relationship with Hitachi, Ltd. and its group companies through joint research and development and other initiatives. Based on the effective use of shared management resources, the Company aims to provide high-quality products and services.

As for personnel relationships with Hitachi, Ltd., one Director and one Executive Officer of that company also serve as Directors of the Company. By expressing opinions and voting at meetings of the Company's Board of Directors, Hitachi, Ltd. could influence management policies and other aspects of the Company. Nevertheless, the Company perceives that it is in a

position to make independent management judgments, because it has appointed three Outside Directors who are designated as Independent Directors, based on the stipulations of the stock exchange on which the Company is listed, so that a wide variety of opinions can be reflected in the discussions of the Company's Board of Directors. No Executive Officers of the Company who perform executive duties are also Directors or Executive Officers of Hitachi, Ltd.

The Company also conducts a range of transactions with Hitachi, Ltd. based on the Hitachi Group's pooling system. These include borrowing and lending as well as other activities. The Company remains convinced, however, that its business activities are not significantly dependent on transactions with Hitachi, Ltd. The Company has adopted a policy that regulates transactions with Hitachi, Ltd. so that they are carried out in a fair manner, based on market prices.

**Policies Concerning Holding Shares of Other Companies as Cross-Shareholdings**

In principle, the Company shall not hold the shares of other companies as cross-shareholdings. The exception is if the Company believes these holdings contribute to the Company's corporate value. The Company would comprehensively take into consideration objectives of such holdings such as maintenance and strengthening of business relations, capital tie-ups, business alliances and joint development as well as associated returns and risks. The Company has been reducing such holdings through conducting an annual review of holding objectives by the Board of Directors on the significance of

holding and the cost of capital of such individual stock from qualitative and quantitative aspects. For other policies on our strategic shareholdings, please refer to Article 7. Policies Concerning Holding Shares of Other Companies as Strategic Shareholdings in the Corporate Governance Guidelines.

As of March 31, 2019, the number of strategic shareholdings was 26. The number has decreased from 42 as of March 31, 2015, when the corporate governance code had yet to be implemented.

**Internal Controls**

**Internal Audit Organization**

The Company has the Internal Auditing Office (with 10 dedicated staff members) that is in charge of internal audits. The Internal Auditing Office formulates annual audit policies and audit implementation plans for internal audits on the Group. Based on these policies and plans, the office conducts on-site audits on the status of execution of the Company's offices and subsidiaries in Japan and overseas and business management over the course of three years in principle and also collaborates with the Audit Committee and the Accounting Auditor to promote tripartite cooperation in tripartite audit function. In addition to these audits, a special audit may be conducted upon special request, etc. of the

President and Chief Executive Officer. The Internal Auditing Office also reports to the President and Chief Executive Officer and the Audit Committee its audit implementation plans in advance, and reports the audit results mostly once in a month. In addition, the Internal Auditing Office holds an audit report meeting mostly once in a month to the person in charge of business at the respective business division and each department of the corporate division, and instructs those departments to implement improvements. If necessary, it also carries out on-site audits in collaboration with divisions in charge of the environment, safety, and systems within the Company.

**Coordination in Internal Audits, Audits by the Audit Committee and Accounting Audits, and the Relationship of These Audits with the Internal Audit Division**

The Audit Committee (a) receives explanations about audit implementation plans from the Accounting Auditor and makes a discussion on and adjustments to the details as needed, (b) receives reports on audit results and engages in an exchange of opinions with the Accounting Auditor, and (c) receives reports from the Accounting Auditor in cases where, as for the performance of duties by Executive Officers, they find any significant evidence of wrongful act or violation of related laws and regulations, or the Articles of Incorporation in the course of performing their duties. The Audit Committee also receives reports on audit implementation plans and periodic reports from the Internal Audit division. In addition, to promote coordination with audits performed by the Audit Committee, the Audit Committee may instruct the Internal Audit division to (a) conduct a special audit for any division that the Audit Committee deems necessary and (b) set key audit items for audits performed by the Internal Audit division. As specified by the Board of Directors, for matters required for the Audit Committee to execute its duties, the Internal Auditing Office of the Internal Audit division shall assist the Audit Committee in executing its duties in accordance with the Committee's instructions. Furthermore, the Internal Auditing Office is also in charge of assessment of internal control and reports the status to the Audit Committee. Moreover, besides the Internal Audit division, the corporate divisions, etc. in charge of finance, compliance, risks, and other areas also play certain roles in internal control and report the status of performance of their duties to the Audit Committee.

The Company regards "promotion of tripartite audit function" as a paramount theme for the audit and supervision functions. The Audit Committee, the Accounting Auditor, and the Internal

Audit division mutually share information on issues detected by each of them, and the Company promotes a "mutual check and balance system and mutual evaluation," taking a step further from a one-way evaluation from the Company to the Accounting Auditor based on the evaluation standards for Accounting Auditors. Notably, the Company considers the function of detecting risks by the Accounting Auditor as an external agency is particularly important in the entire risk detecting process of the Group. To strengthen the said function, the mutual evaluation is implemented between the Accounting Auditor and the Company's finance division or the Internal Audit division or the Audit Committee, respectively. Specifically, based on the evaluation standards for accounting auditors defined by the Audit Committee, the Audit Committee performs a comprehensive evaluation considering the following major factors evaluated by the Company: the Accounting Auditor's communications with the Audit Committee, the senior management, the Internal Audit division and others; audit quality control system; audit plans; audit team; audit reports and quarterly review reports; and consistency between audit plans and audit hours as a basis of determining the amount of auditing compensation. The Accounting Auditor, on the other hand, evaluates basic operations of the finance division, the Internal Audit division, and the Audit Committee of the Company, handling of audit requirements, cooperation, risk recognition, activity status, resources and other factors, and reports the results to the relevant counterparties. The Company utilizes the above feedback to strengthen the Company's functions. In addition, the Company has started the mutual evaluation system between the finance divisions of the Company's facilities or subsidiaries and the Accounting Auditor.

**Risk Management**

With respect to risk management, each Executive Officer identifies and analyzes business risks including changes in political, economic, and social situations, currency fluctuations, rapid technological innovations, as well as changes in customer needs, examines measures against such risks, and reviews these measures whenever necessary through discussions at the Board of Directors, the Audit Committee, the Executive Committee, and other meeting bodies. In addition, each of the Group's sites has built a system to promptly share information that has become known regarding risks relating to compliance, antisocial forces, finance, procurement, the environment, disasters, quality, information security, export control, legal affairs, etc., with each business division. Meanwhile, each corporate business division has prepared internal rules, guidelines, etc.; conducts education and enlightenment activities, preliminary checks, audits on business operations, etc.; and cooperates with the relevant business divisions to avoid, prevent, and manage risks. Furthermore, with regard to business continuity plans (BCPs), the Company has not only prepared the plans but also implements business continuity management (BCM) that periodically and continually improves BCPs in response to changes in the business structure or risks.

In fiscal 2018, for identifying and improving the issues associated with the application of the ongoing BCP, the Company was dedicated to preparing for large-scale BCP training in collaboration with the business sites of the Group in

Japan, and conducted the training in April 2019. The Company has constantly conducted training to respond to its safety confirmation system for cases of disaster.

The main risks that could possibly impact the management performance and financial status of the Hitachi Metals Group are as follows:

- Risks involving economic circumstances in the market, related to product demand
- Risks involving fluctuations in raw material prices
- Risks involving financing
- Risks involving fluctuations in exchange rates
- Risks involving fluctuations in securities prices
- Risks involving business expansion outside Japan
- Risks involving competitive advantage and the development and commercialization of new technologies and products
- Risks involving intellectual property rights
- Risks involving environmental regulations, etc.
- Risks involving product flaws and defects
- Risks involving legal and official regulations
- Risks involving earthquakes and other natural disasters, etc.
- Risks involving information security
- Risks involving pension payment liabilities
- Risks involving relations with the parent company
- Risks involving M&A
- Risks involving securing appropriate human resources



## Promotion of Diverse Human Resources

Under the Fiscal Year 2021 Medium-Term Management Plan, with a vision of “building people, building innovation, building the future,” the Hitachi Metals Group positions the thorough pursuit of diversity management as its important management strategy and is working on various measures to realize our Corporate Creed of “contributing to society by being the best enterprise.”



### Human Resources as the Source of Competitiveness

The Hitachi Metals Group, which is moving ahead with global business expansion, recognizes human resources as the source of competitiveness. Based on this recognition, we will realize our Corporate Philosophy of “*Wa sureba tsuyoshi*”<sup>\*</sup> by becoming a company where diverse human resources gather, test their opinions against each other, and work with enthusiasm and pride.

We have established three themes for our human

resources strategy, “securing diverse human resources with diverse values,” “job satisfaction,” and “a comfortable work environment,” while setting four KPIs, “stimulating employees,” “promoting diversity management,” “promoting workstyle reform,” and “realizing safe and healthy workplaces.”

<sup>\*</sup> Under our corporate philosophy of “*Wa sureba tsuyoshi*,” our Group is One Force for Change.

### Human Resources Development Programs

Our communications symbol, “Materials Mag!c,” incorporates the determination of each and every employee to be a key driver of growth. The Hitachi Metals Group is striving to enhance and strengthen its human resource development

programs linking OJT and OFF-JT, so that employees can develop their expertise enabling them to actively seek out challenges and take actions to achieve success or solve problems, and to become shining examples for the Company.

### Nurturing the next generation of human resources

We identify at an early stage the human resources who will take responsibility for management in the next generation and enhance training programs for them. We complete cross-

divisional personnel rotations and tough assignments, as well as training such as OFF-JT including external training.

### Global recruitment and development of human resources

As our business rapidly globalizes, we are accelerating efforts at global regional headquarters in Europe, the U.S., China, and the rest of Asia, to employ and cultivate human resources who will be future executive candidates. We are also pushing ahead with the early cultivation of future executive candidates who

can play active roles globally, through overseas business training and global training for employees in Japan, active hiring of foreign nationals, including international students, and promotion of locally-hired staff at Group companies outside Japan into positions of responsibility.

### Promoting Diversity Management

In order to create a corporate culture based on diversity, it is vital to cultivate a structure and environment in which all human resources can broaden their potential and play active roles. We are working to strengthen our human resource base by securing diverse employees, assigning them strategically, and encouraging their active participation. We have also established the Hitachi Metals Group Diversity Promotion Council, headed by the President, in order to promote diversity

management by sharing policies and issues related to activities throughout the Group.

Furthermore, we have appointed one female Outside Director, and regularly receive her advice on diversity. In particular, we are making efforts to promote the participation and advancement of women in the workplace, based on the following policies.

### Policy on Promoting the Participation and Advancement of Women in the Workplace

#### 1. Ratio of women among newly hired graduates (career-track positions)

Achieved targets Technical positions: 10% or more

Administrative positions: 40% or more

#### 2. Support for retention

- Career support to eliminate concerns
- Awareness-raising for those in management-level positions
- Support for balancing work with housework and childcare, including Hitachi Group training
- Promotion of diverse work styles through workstyle reform

#### 3. Promotion measures

- Achieved the target ratio for women in management-level positions: 1.2% in fiscal 2017, 1.5% in fiscal 2018
- Carried out individual development plans and training for selected employees

#### Main initiatives

- Survey of actual conditions for women in career-track positions (hearing)
- Held a networking event for women in career-track positions (Hitachi Metals Women's Forum)
- Diversity training for officers (lectures)
- Survey and analysis of participation by women in the Hitachi Group
- Dispatched employees to various external training and seminars, including Hitachi Group career training and seminars for support before maternity leave and upon returning to work
- Held seminars for those in management-level positions who have female subordinates
- Introduced examples of initiatives in company newsletter

Furthermore, we support exchanges among our diverse employees and the realization of diverse careers through human resource exchanges both inside and outside of the Hitachi Group and the proactive hiring of experienced personnel, in addition to the utilization of the “My Challenge” internal free agent system, which allows employees who have a desire to expand their potential to transfer across divisions or job categories, and the introduction of leave to allow employees to accompany spouses on overseas assignments.

### Selected for the MSCI Japan Empowering Women Index (WIN)

Since July 2017, the Company has been included as a component stock on an ESG investment index, the “MSCI Japan Empowering Women Index (WIN)”<sup>\*</sup>, which we consider

to be a high evaluation of our gender diversity.

<sup>\*</sup>An index comprising companies from various industries selected for attaining high scores on gender diversity.

### “Workstyle Reform”

The Hitachi Metals Group believes that it is indispensable to create an environment where diverse employees can pursue highly productive work styles and approaches to their jobs, while sharing different values and ideas, and realizing a sense of fulfillment and personal growth in their work. In order to accomplish this, in fiscal 2016, we launched a “workstyle

reform” project. Positioning the first year, fiscal 2016, as the “awareness-raising” phase, followed by fiscal 2017 as the “implementation” phase, and fiscal 2018 as the “instilling” phase, we carried out activities to accomplish our set target of reducing the total annual actual working hours to less than 2,000 by fiscal 2018.

### “Workstyle Reform” Efforts in Fiscal 2018

In fiscal 2018, the “instilling” phase, we made efforts to improve operational efficiency and promote and establish work with no restrictions on time or location by pursuing ICT measures, and implemented activities aimed at realizing substantial workstyle reform so that all employees can have real job satisfaction and feel truly comfortable at work. In fiscal 2018, total annual actual working hours were 2,049, which unfortunately fell short of our target. However, total working hours decreased significantly compared to fiscal 2016, and highly productive work styles are being instilled through workstyle reform.

#### Outline of Fiscal 2018 “Workstyle Reform” Activities

- Improved operational efficiency  
Enhanced ICT infrastructure such as file sharing systems and communications tools
- Promoted and established work styles with no restrictions on time or location  
Put in place measures and established an environment to realize highly productive work styles by relaxing restrictions on work hours and locations
- Changed approach to taking vacation  
Considered standardizing days off at headquarters and production factories, and standardized days off at most business offices starting in fiscal 2019
- Collaboration between business offices and Group companies  
Shared information related to operational improvements such as using RPA and shifting to paperless operations

#### Composition of Employees (Non-consolidated)

	FY2014	FY2015	FY2016	FY2017	FY2018
Number of employees	6,306	5,966	5,858	6,315	7,067
Male	5,660	5,339	5,241	5,654	6,277
Female	646	627	617	661	790
Ratio of female employees	10.2	10.5	10.5	10.5	11.1
Average age (years)	43.0	43.5	43.9	43.6	43.2
Average service (years)	20.0	20.6	21.0	21.0	18.4
Number of female managers	10	11	12	16	19
Employment ratio of people with disabilities <sup>*</sup>	2.24	2.34	2.40	2.31	2.21

<sup>\*</sup>Including special subsidiaries



# Health and Safety

Based on the view that “prioritizing safety and health above all else,” the Hitachi Metals Group is pushing ahead the creation of safe workplaces at its manufacturing sites both in Japan and abroad, by instilling a culture of safety, creating safe organizations, and improving facilities to ensure fundamental safety. Additionally, we made the “Health Management Declaration” in June 2019, as we boost our creation of healthy workplaces throughout the Group.

## Instilling a Culture of Safety

In the Group’s aim to instill a culture of safety, we have held the “Safety Town Hall Meeting” continuously since December 2018, where we communicate the policies and views on safety from the President and get feedback from the Group workplaces. We plan to hold approximately 50 meetings throughout our manufacturing sites globally in fiscal 2019. We have been advancing the “2S-3F” (Sort Out, Set In Order, Fixed Location, Fixed Quantity, and Fixed Item) activities at our manufacturing worksites, and, going forward, we will work to instill a culture of safety by expanding the scope of our 2S-3F activities to safety activities.



## Increasing Sensitivity to Danger through Monozukuri Practical Safety Training

We have installed equipment that gives employees a simulated experience of being caught in equipment, crushed by equipment, and electrically shocked at locations including our Kyushu Works and Okegawa Works, as well as the Suita Works of the Group company Hitachi Metals Neomaterial, Ltd., with the goal of making employees more sensitive to danger. We have launched a project to enhance our *monozukuri* practical safety training, and are moving forward plans for a “*monozukuri* practical safety training facility” to instill practical safety training throughout the Group, as well as to set the foundation for building a culture of safety. We will increase awareness of safety among employees, having all Company employees undergo practical safety training.



**Safety Simulation Experience Learning Center, Suita Works, Hitachi Metals Neomaterial, Ltd.**  
Equipment installed to increase awareness of safety among all employees



**Learning system that simulates being caught by rotating equipment**  
This system provides a firsthand experience of what it is like if fabric or strings are wrapped up in the rotating axis of machinery. Even a motor equivalent to a household electric fan can generate powerful pulling force when slowed down.



**Learning system that simulates the impact force from falling objects**  
This system demonstrates how a 25-kilogram weight dropped from a height of one meter generates enough impact force to crush an empty drink can. This increases safety awareness when transporting steel ingots.

## Creating Safe Organizations

In April 2019, we newly created the Safety & Health Management Department, staffing up human resources in the safety division of the Human Resources & General Administration Division. The Health and Safety Promotion Department prepared the “Guidelines for Safe Organizations” defining such matters as the organizations and certified employees required at each business office in accordance with its head count and size. The Guidelines have been implemented since April. We are aiming to create organizations at each business office in accordance with the Guidelines by the end of fiscal 2019.

## Health and Safety Audits

In addition to confirming activities regarding the Hitachi Metals Group’s key health and safety measures, as well as compliance with the Company’s rules and related laws and regulations, we provide health and safety training to supervisors. In fiscal 2018, we confirmed the initiatives of key health and safety measures in the health and safety promotion plan and compliance with chemical-related laws and regulations through health and safety audits of business offices, and provided health and safety training to supervisors, including training on measures to prevent human error based on accident trends.

## Improving Facilities to Ensure Fundamental Safety

Our Fiscal Year 2021 Medium-Term Management Plan calls for investment of ¥2 billion per year on new safety-related construction with the aim of carrying out measures for improving facilities to ensure fundamental safety. In fiscal

2019, we are prioritizing initiatives throughout the Group for safety measures against being caught in spinning machinery or crushed by machinery, while at the same time implementing safety measures given high priority by risk assessments.

## Health Management

The Group cares for the physical and mental health of its employees. For example, we conduct stress checks on all employees and take measures based on the results. We are also focused on creating a more dynamic working environment by eliminating overwork through workstyle reform.

We made the “Health Management Declaration” in June 2019. We regard our employees’ health management as a management issue and reinforce health management measures Groupwide, advancing initiatives such as prevention of lifestyle diseases and supporting efforts to quit smoking.

## Health Management Declaration

The Corporate Creed of Hitachi Metals, Ltd. is to contribute to society by being the “best enterprise.”

The “best enterprise” is a company that “every employee is motivated to work at.” In order to be a company where employees dynamically harness their abilities with smiling faces every day and are able to perceive their own growth, it is first essential that each employee be healthy.

Under the management policy that “Prioritizing safety and health above all else,” we hereby declare that we will promote activities focused on employees’ health, together with safety activities.

June 2019  
Koji Sato  
Representative Executive Officer,  
President and Chief Executive Officer  
Hitachi Metals, Ltd.

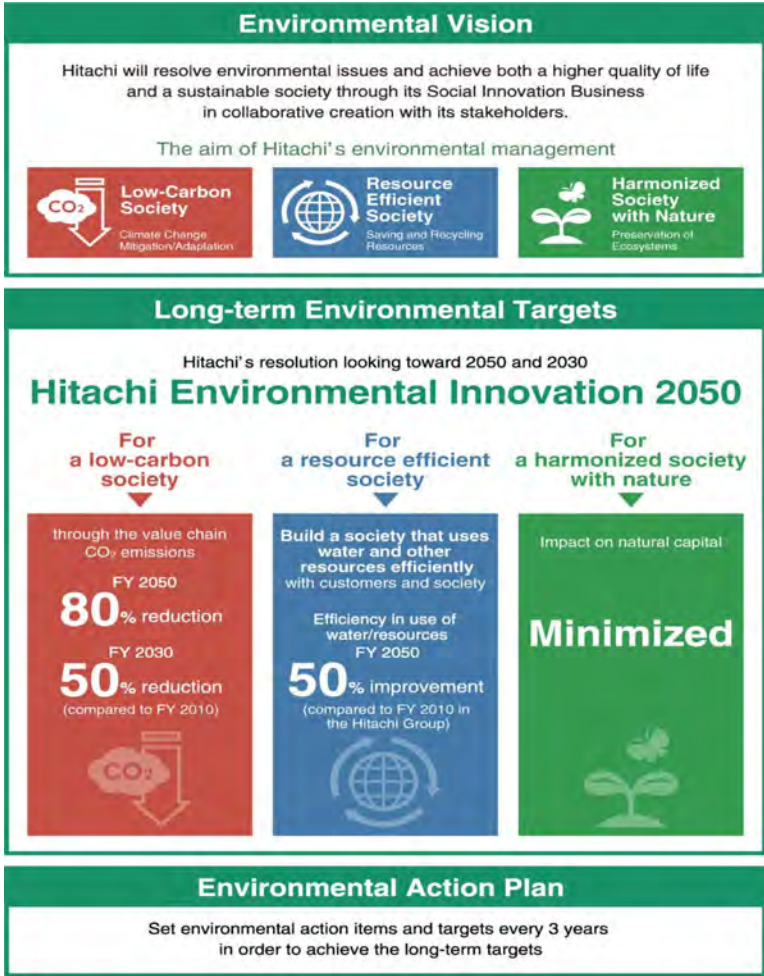


1

Environmental Vision/Basic Environmental Policies

The Hitachi Metals Group promotes a low-carbon society, resource efficient society, and harmonized society with nature as the three key pillars of the Hitachi Group's Environmental Vision. We aim to realize both higher quality lifestyles and a sustainable society by resolving environmental issues through the social innovation business in collaboration with our stakeholders. In addition, we will fulfill our required role to achieve Hitachi's long-term environmental targets called Hitachi Environmental Innovation 2050.

The Hitachi Group's Environmental Vision



Hitachi Metals Group Basic Environmental Protection Policies

**Philosophy** Hitachi Metals' Corporate Creed is to "contribute to society by being the best enterprise." In line with this, we regard it as crucial to ensure that humanity's shared environmental resources can be passed down to future generations in the best possible condition. Accordingly, throughout our operations we treat environmental considerations as an issue of the highest importance and strive actively to promote environmental protection efforts on both the global and local community levels.

- Slogans**
- With a deep awareness that environmental protection is a major issue for all humanity, fulfill social responsibilities by striving to establish a sustainable society in harmony with the environment regarding it as one of the essential aspects of corporate activity.
  - Contribute to society by developing highly reliable technologies and products in response to needs for environmental protection and the limited natural resources.

2

Hitachi Metals Group Action Plan

The Hitachi Metals Group advances activities based on three-year medium-term environmental plans. We largely achieved the targets of our Medium-Term Environmental Plan for fiscal 2016 to fiscal 2018. Our new Medium-Term Environmental

Plan for fiscal 2019 to fiscal 2021 includes some revisions relating to a low-carbon society, resource-efficient society, and harmonized society with nature.

Results of Fiscal 2018 Initiatives and Fiscal 2021 Plans

FY2018 Measures (Planned)	FY2018 Measures (Results)	Measures Planned for FY2021
• Conduct environmental education at the Head Office and each company (ongoing)	• Conduct environmental e-learning (100% of employees) and environmental auditor development training (once)	• Conduct environmental e-learning (100% of employees) and environmental auditor development training (once)
• Increase the sales ratio of key environmentally conscious products (21% or more)	• Increase the sales ratio of key environmentally conscious products (21%)	• Increase the sales ratio of key environmentally conscious products (25%)
• Reduce energy consumption ratio per production unit (13.0% compared to base year FY2005)	• Reduce energy consumption ratio per production unit (6.6% compared to base year FY2005)	• Reduce CO <sub>2</sub> emissions per unit (7% compared to base year FY2010)
• Improvement ratio of waste and valuables generated per production unit (8.0% compared to base year FY2005)	• Improvement ratio of waste and valuables generated per production unit (12.0% compared to base year FY2005)	• Improvement ratio of waste generation per production unit (14% compared to base year FY2010)
• Increase the recycling rate (74.0%)	• Increase the recycling rate (78.2%)	• Improve waste landfill rate (12%)
• Improvement ratio of water usage per production unit (14% compared to base year FY2006)	• Improvement ratio of water usage per production unit (28% compared to base year FY2006)	• Improvement ratio of water usage per production unit (26% compared to base year FY2010)
• Implement activities to conserve ecosystems (1,600/year)	• Implement activities to conserve ecosystems (1,601/year)	• Contribute to preservation of ecosystem (cumulative total of 12 projects to be implemented)

3

Environmental Consideration in Products and Services

The "Business Conduct Guidelines" in the Hitachi Metals Group Basic Environmental Policies call for the promotion of global *monozukuri* that takes environmental impact into account throughout the product life cycle. In line with this, the Hitachi Metals Group carries out activities aimed at reducing environmental impact at each stage, including product R&D and design, production, distribution, sale, use, and disposal.

In particular, for our next-generation flagship products, we are pushing forward the development of new products with a focus on the environment and energy sectors. What is more, for the development and design of new products, we promote environmentally friendly product development based on the "Hitachi Group Eco-Design Management Guidelines" (revised version), which consider product life cycles.

R&D Case Studies

Sector	Environmental key words
Energy	Renewable energy
	Highly efficient power generation
	Energy-saving/electricity storing/electricity transforming/smart grids
	Material recycling
Automobiles	Exhaust gas
	Reduced weight and low fuel consumption
	Hybrid and electric vehicles
	Material recycling
Rolling stock	More efficient and lighter weight
Electronics	More efficient, compact, and lighter weight
	Energy-saving (household appliances, semiconductors, LCD panels)
	Reducing substances for environmental effect
Industry/Infrastructure	Long-life products
	High heat resistance and high corrosion resistance
Medical	Energy-saving and high precision



## Increasing sales of key environmentally conscious products

We select “key environmentally conscious products” from among products expected to grow in sales, which make a significant contribution to resolving environmental issues such as climate change and effective use of resources.

In fiscal 2018, we achieved our target sales ratio of 21% for key environmentally conscious products. While sales of some key environmentally conscious products have grown, sales of others have decreased, due to factors including discontinuation of the business. Accordingly, the sales ratio increased slightly compared with the previous fiscal year. We will continue to help resolve the environmental issues facing society by expanding sales of key environmentally conscious products based on our management strategy.

### Introducing products contributing to reduced environmental loads

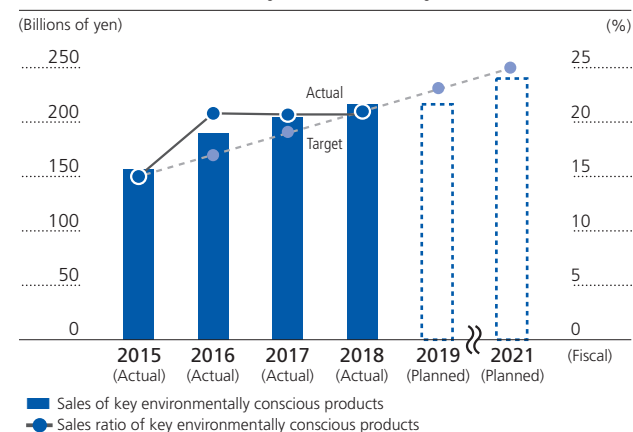


**DAC-i™**  
Next-generation general-purpose steel for die-cast molds with high toughness and high strength at elevated temperatures through innovations in component design and processes using 10,000-ton forging press.

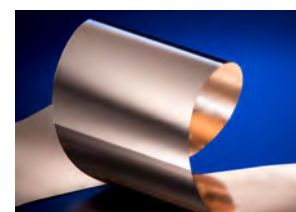


**Rare earth magnets for xEVs**  
They are used in the drive motors of electric vehicles and hybrid electric vehicles. We have established a technology to reduce the use of heavy rare earth elements (scarce rare metals), which are used to improve heat resistance. We reduce the use of elements with a limited supply, as well as help improve motor performance and make motors more compact by improving heat resistance and magnetic force.

### Sales and Sales Ratio of Key Environmentally Conscious Products



■ Sales of key environmentally conscious products  
● Sales ratio of key environmentally conscious products



**Clad materials for batteries**  
Achieved optimal composite characteristics for a battery electrode material, including electric resistance, weldability, and material strength, by combining dissimilar metals such as copper, nickel, aluminum, and stainless steel.



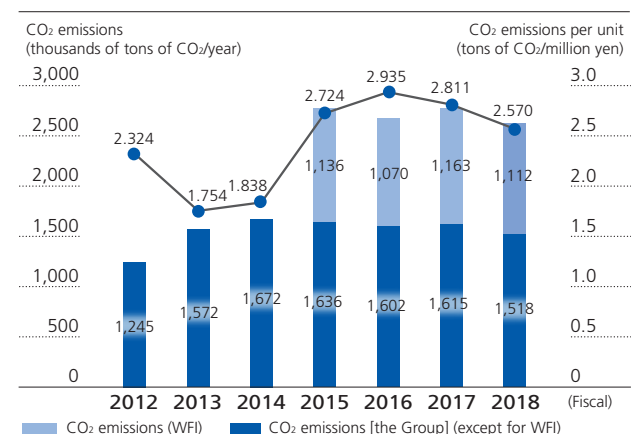
**Magnet wires for xEV inverter-fed motors**  
Lifetime of inverter-fed motors, greatly improve reliability.

## 4 Initiatives for a Low Carbon Society

In fiscal 2018, CO<sub>2</sub> emissions from the Hitachi Metals Group's business activities decreased by 148 thousand tons (5.3%) from the previous fiscal year, to 2,630 thousand tons. In terms of CO<sub>2</sub> emissions per sales unit compared to revenues, we improved by approximately 8.6% from the previous fiscal year, from 2.811 tons of CO<sub>2</sub>/million yen to 2.570 tons of CO<sub>2</sub>/million yen, due in part to a year-on-year increase of 3.6% in sales. Factors behind the reduction of CO<sub>2</sub> emissions and improvement in per unit include the effects of energy-saving activities, increased sales, and fuel conversion.

The Hitachi Metals Group carries out energy-saving activities linked to *monozukuri* in order to reduce CO<sub>2</sub> emissions, including shortening processes, improving efficiency, improving yields, promoting the introduction of energy-saving equipment, and fuel conversion. We will promote the initiatives aiming to improve CO<sub>2</sub> emissions per unit as set forth in our Medium-Term Environmental Action Plan for fiscal 2019 to fiscal 2021.

### Trends in CO<sub>2</sub> Emissions and CO<sub>2</sub> Emissions Per Unit



■ CO<sub>2</sub> emissions (WFI) ■ CO<sub>2</sub> emissions [the Group] (except for WFI)  
● CO<sub>2</sub> emissions per unit (tons of CO<sub>2</sub>/million yen)

\*Shows CO<sub>2</sub> emissions converted from energy usage

## Energy Saving Initiatives by Waupaca Foundry, Inc.

Waupaca Foundry, Inc. (“Waupaca,” located in Wisconsin, USA) spends about ¥19.8 billion per year on energy, and it is essential to reduce its energy usage through efforts to continually improve its environmental sustainability. Waupaca thus worked on initiatives including conversion to energy-efficient LED lighting and compressors in its factories, offices, and other work spaces, use of waste heat for indoor heating in winter, installation of a system enabling real-time monitoring of energy use, and reduction of coke usage through the use of alternative carbon materials. Through these measures, Waupaca reduced its costs by about ¥63 million in fiscal 2017.

Waupaca is currently advancing measures including a 25% reduction in energy usage (baseline fiscal 2009, compared to BAU\*<sup>1</sup>) and introducing the best available pollution-prevention technologies, in order to reduce its environmental impact by 2020.

\*1. Comparison against “business as usual” case where no measures are taken



Energy Management System Certification  
(Energy management under ISO 14001)

## 5 Effective Use of Resources toward a Resource-Efficient Society

### (1) Effective Use of Resources (Waste)

The Hitachi Metals Group is working to create a resource-efficient society through in-house reuse and recycling through intermediate processing, in order to achieve the “thorough circulation of resources throughout the life cycle of goods and services” in the 4th Fundamental Plan for Establishing a Sound Material-Cycle Society.

In fiscal 2018, the resource recycling rate rose slightly from the previous fiscal year, to 78.2%, in part because more materials are difficult to recycle into resources in Japan.

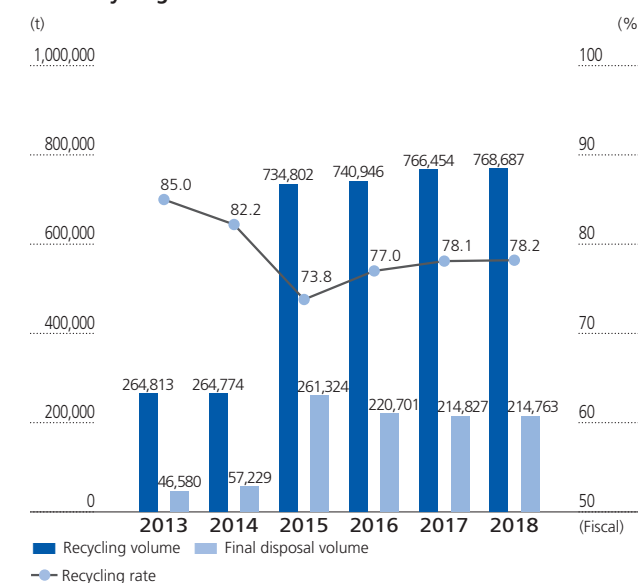
Going forward, we plan to raise the bar overall through initiatives at overseas offices, where we believe that many recyclable items remain.

Furthermore, in fiscal 2018 we achieved zero emissions\*<sup>2</sup> at 14 business offices.

In order to advance initiatives to both reduce waste generation and to recycle resources under our Medium-Term Environmental Plan for fiscal 2019 to fiscal 2021, we will promote activities by setting target values for waste generation per production unit and landfill rates as management indicators.

\*2. As of fiscal 2011, the definition of “zero emissions” is a final disposal rate under 0.5%.

### Trends in Recycling Volume, Final Disposal Volume, and Recycling Rate





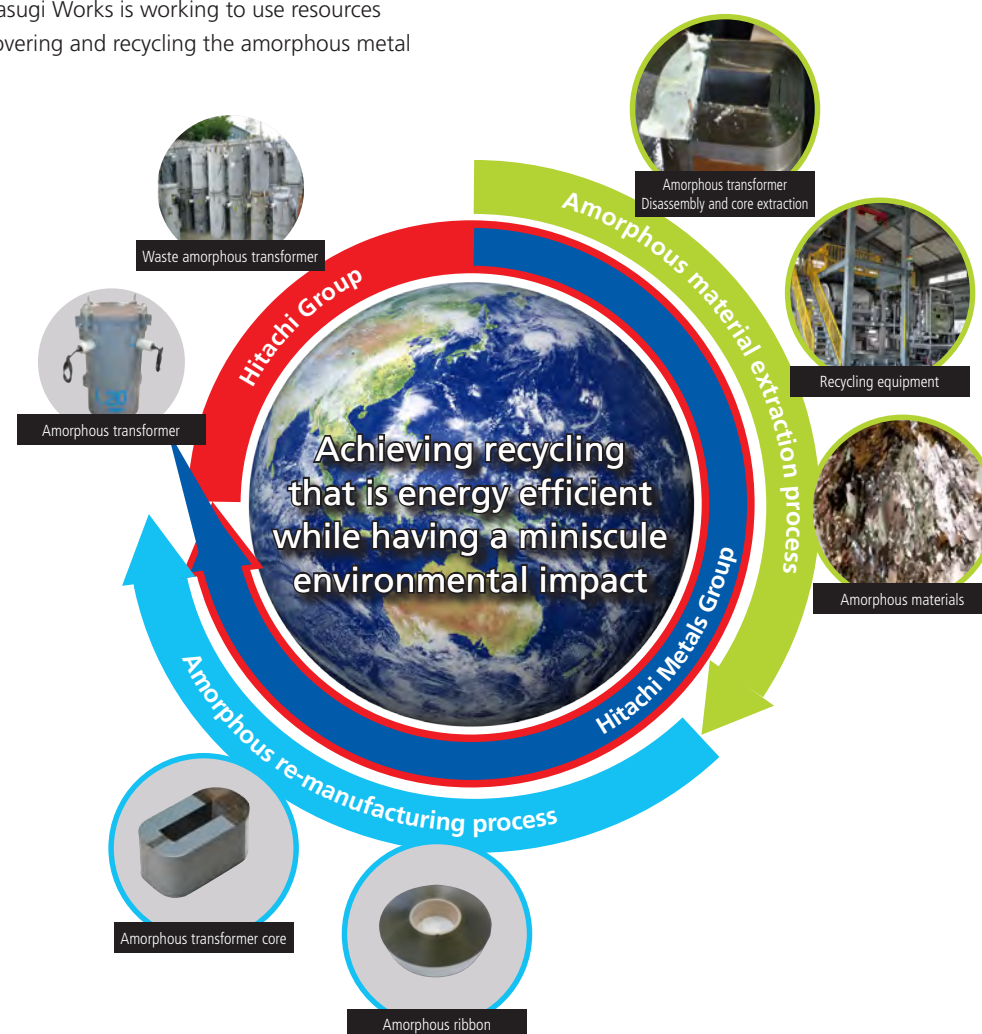
## Initiatives to Recycle Amorphous Metal Materials

The amorphous metal manufactured by the Company contributes significantly to energy saving, delivering excellent soft magnetic properties with high permeability and low loss, while having high saturation magnetic flux density, and having just about one-fifth the no-load loss (iron loss) of conventional soft magnetic materials like silicon steel sheets.

Our Metglas Yasugi Works is working to use resources efficiently by recovering and recycling the amorphous metal

scraps generated by the Hitachi Group's transformer manufacturing process and amorphous cores extracted from used transformers.

As a result of this initiative, approximately 120 tons of waste amorphous was used to manufacture amorphous metal materials in fiscal 2018.



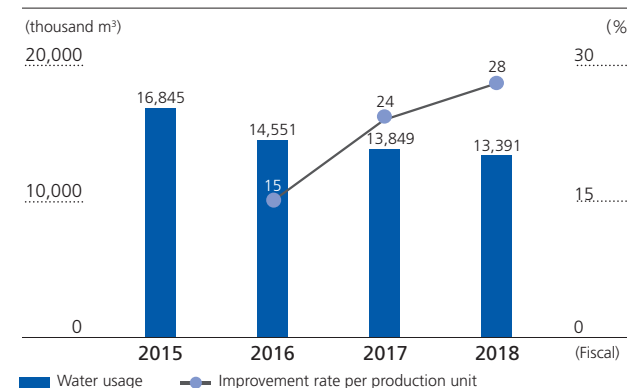
## (2) Effective Use of Water Resources

Since fiscal 2016, the Hitachi Metals Group has been advancing activities using the improvement rate of water usage per production unit\*<sup>3</sup> as an indicator, in order to promote the effective use of water resources. Although activities to raise awareness of water conservation were the initial focus, we subsequently ameliorated our water usage in production processes, and when we upgrade equipment, we introduce equipment with high water efficiency. In fiscal 2018, the improvement rate per production unit reached 28%, while we also reduced our water usage by 458 thousand m<sup>3</sup> from the previous fiscal year, to 13,391 thousand m<sup>3</sup>. Our Medium-Term Environmental Plan for fiscal 2021 similarly establishes the improvement rate of water usage per production unit\*<sup>4</sup> as an indicator, and we will push forward even more effective use of water.

\*<sup>3</sup> Calculated based on per production unit in fiscal 2015

\*<sup>4</sup> Calculated based on per production unit in fiscal 2010

### Trends in Improvement Rate of Water Usage per Production Unit



\* We have used the improvement rate of water usage per production unit as a management indicator since fiscal 2016.

## Reducing Water Usage through Introduction of Closed-Loop Cooling Water Systems (Waupaca)

Waupaca Plant 1 produces a wide range of castings, totaling more than 3,000 different kinds of products including automotive parts.

Foundries use large amounts of water to cool operating machinery and cupolas used in melting processes. Waupaca Plant 1 introduced closed-loop cooling water systems, which resulted in a reduction in water usage in fiscal 2018 by approximately 120 million gallons compared to fiscal 2015. While the company formerly used cooling water one time before discharging it as wastewater, the closed-loop cooling water systems repeatedly use non-contact cooling water, greatly improving water usage efficiency. Dramatic effects are expected from the closed-loop cooling water systems, which might be able to reduce water withdrawal by 80% or more, and under certain conditions can reduce wastewater from non-contact cooling water to nearly zero.

Waupaca is advancing activities aimed at reducing companywide water withdrawal by 80% from fiscal 2010 levels. In fiscal 2018, it reduced water withdrawal by 65.5% from fiscal 2010 levels.



Closed-loop cooling water systems

## 7 Harmonized Society with Nature: Consideration for the Preservation of Ecosystem

The Hitachi Metals Group promotes ecosystem preservation measures that include tree planting and forest conservation activities, cleanup activities in areas surrounding factories, and environmental education.

In fiscal 2018, we carried out 1,601 projects, compared to our target of 1,600.

### (A) Examples of major tree planting and forest conservation activities

HMY, Ltd. participated in the Harmony Forest corporate participation forestation program in Shimane Prefecture, planting sawtooth oak trees to reduce CO<sub>2</sub>.

### (B) Ecosystem preservation activities

Our Moka Works participated in a group cleanup activity at Shiroyama Park to protect ecosystems by removing trash. We will continue to work to protect ecosystems in our local communities.



Participation in Harmony Forest activities  
Activities to reduce CO<sub>2</sub> in the corporate participation forestation program in Shimane Prefecture (HMY, Ltd.)



Participation in Shiroyama Park group cleanup activity  
(Moka Works of Hitachi Metals, Ltd.)



## CSR-Conscious Procurement

**The Hitachi Metals Group procures materials from suppliers in countries and regions around the world. Conscious of social responsibility and its impact, we have formulated our procurement policy with the aim of practicing fair and impartial procurement activities and, with the cooperation of many suppliers, engage in procurement that considers CSR.**

### Issuance of Hitachi Metals Group Supply Chain CSR Procurement Guideline

Hitachi Metals revised the Hitachi Metals Group Supply Chain CSR Procurement Guideline in May 2017 and published the revised version on its website. The Guideline encompasses a wide range of CSR concepts recognized as a company's social responsibility, including respect for human rights, consideration of the environment, fair trading and ethics, occupational health and safety, product quality and safety, information security, and social contributions. We distribute our CSR Procurement Guideline and checklist to major suppliers (excluding Hitachi Group companies) that account for 80% of the transaction amounts by business offices and affiliates in Japan, and confirm the compliance of each supplier. When a clear violation is discovered, a rule is put into

place requiring correction. When starting a new business relationship, we request compliance with the Guideline, and, at the same time, we conduct corporate surveys on bribery risks based on the Hitachi Metals Global Compliance Program (HMGCP) to reinforce supplier reviews.



Hitachi Metals Group  
Supply Chain CSR Procurement  
Guideline  
The 2nd Edition, May 2017  
Hitachi Metals, Ltd.  
Procurement & VEC Division,  
CSR Management Office

### Response to Globalization

The Hitachi Metals Group strives to establish a global procurement network across Europe, North America, and Asia, while expanding its procurement base. We are working to support the optimization of procurement activities overall and reinforcement of *monozukuri*, while enhancing CSR risk management and increasing concentration and consolidation of purchasing across the Group. We have also set up Global Procurement Offices (GPOs) in four locations—Europe, the United States, Asia, and China—to seek excellent suppliers in order to carry out transparent procurement activities from optimal suppliers worldwide. In fiscal 2018, the Head Office held a discussion with the GPOs and established common procurement standards for overseas Group companies. Starting in fiscal 2019, we plan to

have our GPOs audit the operations of each overseas Group company once every three years, in accordance with these standards, and thereby strengthen governance.

Additionally, in order to make our supply chain transparent in addressing conflict mineral issues, the Hitachi Metals Group identifies mineral producing countries and smelters, using the Conflict Minerals Reporting Template (CMRT), which has become an industry standard. We strive to carry out responsible procurement activities, requiring our suppliers to procure from conflict-free smelters (CFSs)\* that are certified to not use conflict minerals.

\* CFS (Conflict-Free Smelter): A smelter that is certified not to be involved in regional conflicts by the Responsible Minerals Initiative (RMI), established by RBA/GeSI.

### Compliance

Believing that thorough obedience to laws, regulations, and social proprieties in our transactions with suppliers is essential, we call together our procurement specialists at business offices on a regular basis for education regarding laws and regulations. In fiscal 2018, we held a workshop for all procurers at all business offices and Group companies (27

sites) in Japan, which brought together the findings of past internal audits. We also had auditors dispatched from the Head Office and other business offices perform mutual audits to further improve our management level through practical auditing, and confirmed the status of corrective actions. We are continuing these audits in fiscal 2019 onward as well.

### Green Procurement

Hitachi Metals issued the “Green Procurement Guidelines” in 1998, in order to share our views on environmental consideration with our suppliers, including prevention of global warming, recycling resources, and conservation of biodiversity and ecosystems. Since then, we have revised these guidelines repeatedly in response to the latest laws and regulations and chemical regulations. Version 9.0, which was

issued in 2018, includes revisions to banned substances due to changes in EU regulations, and we notified our suppliers thereof. We work to comply with laws and regulations, respond to customer demands, and reduce environmental impact (conserving resources, saving energy, recycling, and appropriate management of chemical substances contained in products) by constantly sharing the latest information.

### Procurement BCP Initiatives

We engage in procurement BCP activities as preparation against risks that could halt our business, including earthquakes, wind and flood damage, and other natural disasters, as well as new strains of influenza, fires, and power

outages. We are working to minimize procurement risk by diversifying our sources of procurement, while asking our key suppliers to have their own BCP measures in place.

## Respect for Human Rights

**The Hitachi Metals Group stipulates respect for human rights in the Hitachi Metals Group Code of Conduct and the supplementary Hitachi Metals Group Human Rights Policy. Our basic stance is to respect and work to refrain from infringing on the rights of all persons involved in our business operations.**

### The Hitachi Metals Group Human Rights Policy in Practice

We formulated the Hitachi Metals Group Human Rights Policy in December 2013. This policy recognizes the human rights stated in the International Declaration of Human Rights and in the ILO (International Labour Organization) Declaration on Fundamental Principles and Rights at Work as the minimum levels of those rights. It clearly states that the Hitachi Metals

Group pursues measures to observe the international principles of human rights. Specifically, we will implement human rights due diligence and appropriate education on the basis of the UN Guiding Principles on Business and Human Rights, together with strictly observing the laws of the regions and countries in which we do business.

### Initiatives on Human Rights Due Diligence

Human rights due diligence refers to defining and assessing impacts on human rights, taking action to prevent and redress negative impacts, and continually validating the effects of that action. The Hitachi Metals Group will assess the actual and potential impact on human rights resulting from the business activities of the Company, our value chain, and develop countermeasures based on ranking human rights risks in terms of “seriousness” and the “likelihood of occurring.”

We participate in human rights due diligence centered on Hitachi, Ltd. We study priorities and countermeasures, including assessments by the procurement division regarding the impact on human rights in our supply chain, and assessments by the human resources division regarding the impact on human rights of employees.

### Human Rights Educational Activities and Harassment Prevention Efforts

We regularly use e-learning to conduct human rights education and training for each level of employee to systematically raise awareness of human rights (with 5,892 employees, on a consolidated basis, receiving human rights-related training in fiscal 2018). In addition, we established various harassment hotlines to incorporate the Hitachi Metals Group Human Rights Policy into all of our activities.

As our business activities expand rapidly on a global basis, we will enhance human rights awareness and support measures to prevent abuses of human rights based on differences of religion or nationality, the presence or absence of disabilities, gender, or other factors.



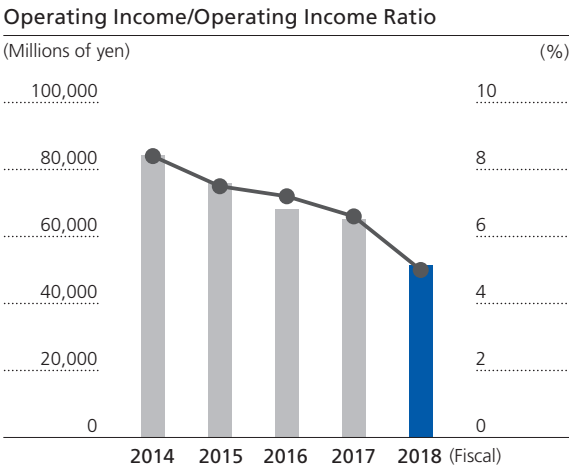
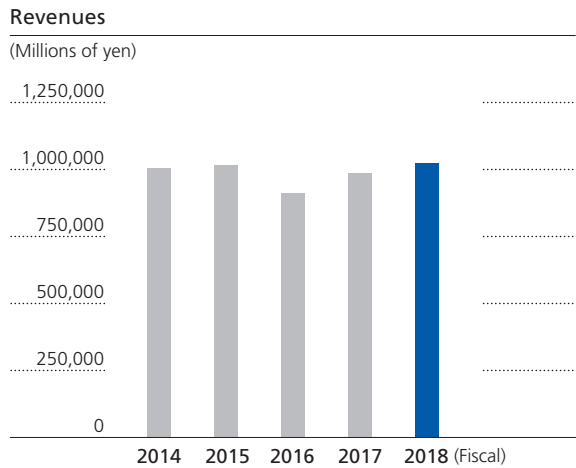
Financial/Non-Financial Highlights

	1USD=¥110.99					1EUR=¥124.56	
	Millions of yen					Thousands of U.S. dollars	Thousands of Euros
Fiscal	2018	2017	2016	2015	2014	2018	
For the period							
Operating results:							
Revenues	¥ 1,023,421	¥ 988,303	¥ 910,486	¥1,017,584	¥1,004,373	\$9,220,840	€8,216,289
Cost of sales	851,029	803,607	731,153	819,433	793,517	7,667,619	6,832,282
Selling, general and administrative expenses	120,965	119,566	113,350	122,090	126,446	1,089,873	971,138
Adjusted operating income	51,427	65,130	65,983	76,061	84,410	463,348	412,869
Other income	10,667	5,401	14,070	36,416	21,303	96,108	85,637
Other expenses	19,652	24,205	11,786	12,523	21,306	177,061	157,771
Operating income	42,442	46,326	68,267	99,954	84,407	382,395	340,735
Income before income taxes	43,039	46,985	66,016	96,233	86,391	387,774	345,528
Net income attributable to owners of the parent company	31,370	42,210	50,593	69,056	70,569	282,638	251,846
Cash flows:							
Cash flows from operating activities	66,582	39,133	89,391	115,742	108,983	599,892	534,538
Free cash flows	(29,665)	(35,947)	53,527	83,595	(4,767)	(267,276)	(238,158)
Increase(decrease) in cash and cash equivalents	(13,814)	(84,499)	19,111	41,271	(7,443)	(124,462)	(110,902)
Capital expenditure	95,389	91,786	63,843	59,602	51,474	859,438	765,808
Depreciation and amortization	50,901	46,138	43,039	42,927	39,917	458,609	408,646
Research and development	18,604	17,749	17,971	19,121	20,903	167,619	149,358
At the end of the period:							
Total assets	¥1,099,252	¥1,058,832	¥1,040,390	¥1,033,311	¥1,083,450	\$9,904,063	€8,825,080
Interest-bearing debt	202,098	160,844	194,457	220,376	255,350	1,820,867	1,622,495
Equity	595,211	570,192	548,746	504,675	476,176	5,362,744	4,778,508
Number of shares outstanding (thousands of shares)	427,569	427,572	427,576	427,579	427,601	—	—

	Yen					U.S. dollars	Euros
Earnings per share*1	¥ 73.37	¥ 98.72	¥ 118.32	¥ 161.50	¥ 165.02	\$ 0.66	€ 0.59
Dividends per share	34.00	26.00	26.00	26.00	23.00	0.31	0.27
Net assets per share*2	1,375.16	1,316.08	1,254.89	1,159.70	1,090.64	12.39	11.04

\*1 Basic earnings per share  
\*2 Equity per share attributable to owners of the parent company

	Millions of yen					Thousands of U.S. dollars	Thousands of Euros
	2018	2017	2016	2015	2014	2018	
Reference information:							
Total market value of stocks	¥549,855	¥537,886	¥667,874	¥496,420	¥788,924	\$4,954,094	€4,414,378
Enterprise value (EV)	710,855	643,818	722,920	596,496	965,245	6,404,675	5,706,928
EBITDA	96,116	94,864	111,299	141,644	128,212	865,988	771,644
EBITDA margin (%)	9.4	9.6	12.2	13.9	12.8	—	—
EV/EBITDA ratio (times)	7.40	6.79	6.50	4.21	7.53	—	—

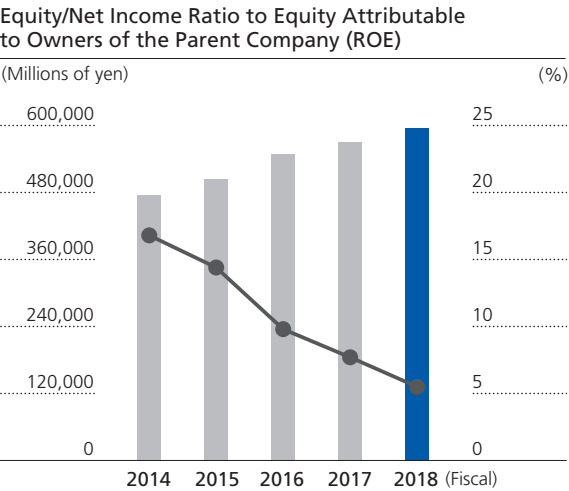


■ Operating income ● Operating income ratio  
Note: Adjusted operating income is provided.

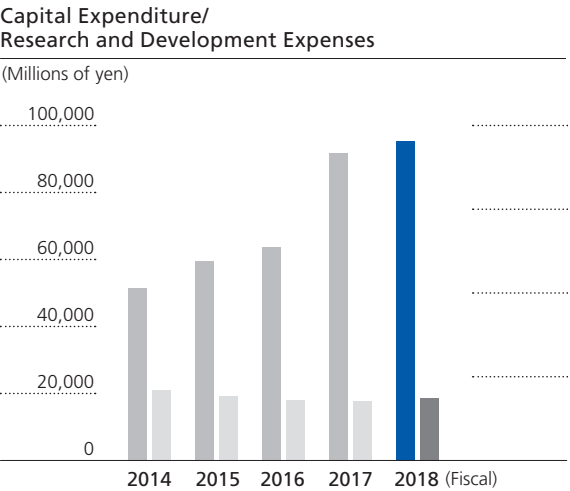
Fiscal	2018	2017	2016	2015	2014
Key financial indicators:					
Operating income ratio (%)	4.1	4.7	7.5	9.8	8.4
Operating cash flow margin (%)	6.5	4.0	9.8	11.4	10.9
ROS (%)	3.1	4.3	5.6	6.8	7.0
ROA (%)	4.0	4.5	6.4	9.1	8.9
ROIC (%)	4.1	5.8	7.0	9.6	11.1
ROE (%)	5.5	7.7	9.8	14.4	16.8
Total assets turnover (times)	0.93	0.93	0.88	0.98	0.93
Ratio of equity attributable to owners of the parent company (%)	53.5	53.1	51.6	48.0	43.0
D/E ratio (times)	0.34	0.29	0.36	0.44	0.55
Ratio of operating cash flow to debt (times)	3.04	4.11	2.18	1.90	2.34

Fiscal	2018	2017	2016	2015	2014
Non-financial information:					
Revenue of key environmentally conscious products (million yen)	213,980	204,236	189,573	156,213	—
Sales ratio of key environmentally conscious products (%)	20.9	20.7	20.8	15.0	—
Energy consumption converted into crude oil (kl/year)	1,109,813	1,121,565	1,077,309	1,091,936	705,808
Revenue energy consumption ratio per production unit (kl/million yen)	1.08	1.14	1.18	1.07	0.78
CO <sub>2</sub> emissions (thousands of tons of CO <sub>2</sub> /year)	2,630	2,778	2,672	2,771	1,672
Revenue CO <sub>2</sub> emissions per production unit (thousands of tons of CO <sub>2</sub> /million yen)	0.0026	0.0028	0.0029	0.0027	0.0018
Number of employees	30,304	30,390	28,754	29,157	30,278

Notes: 1. The Company has adopted the International Financial Reporting Standards (IFRS) for the Consolidated Financial Statements in the Annual Securities Report since the fiscal year ended March 31, 2015.  
2. The translation of Japanese yen amounts into U.S. dollars and euros for the year ended March 31, 2019, has been made at the rates of ¥110.99=\$1 and ¥124.56=€1, the exchange rates as of March 31, 2019.  
3. Diluted earnings per share is not provided as Hitachi Metals, Ltd. had no dilutive common stock outstanding.  
4. Interest-bearing debt represents the total of short-term debt, long-term debt and corporate bonds.  
5. Earnings per share is calculated by dividing net income attributable to owners of the parent company (net income) by the average number of shares issued during the term, and equity per share attributable to owners of the parent company is calculated by dividing equity, which is total equity minus non-controlling interests/minority interests, by the number of shares outstanding at the end of the period.  
6. Enterprise value (EV) represents the sum of total market value of stocks and net interest-bearing debt.  
7. Earnings before interest, taxes, depreciation and amortization (EBITDA) refers to income before income taxes before deducting interest charges, depreciation and amortization.  
8. EBITDA margin refers to EBITDA divided by revenues.  
9. Return on sales (ROS) refers to net income attributable to shareholders of the parent company divided by revenues.  
10. Return on assets (ROA) is computed as the income before income taxes divided by the average total assets (the average of the beginning and ending balance of the year).  
11. Return on invested capital (ROIC) is computed as the net income attributable to owners of the parent company divided by the sum of the average total interest-bearing debt (the average of the beginning and ending balance of the year) and the average total equity attributable to owners of the parent company (the average of the beginning and ending balance of the year).  
12. Return on equity (ROE) is computed as the net income attributable to owners of the parent company divided by the average total equity excluding non-controlling interests/minority interests (the average of the beginning and ending balance of the year).  
13. In Japan, the power company CO<sub>2</sub> emissions coefficient is based on the “power supplier emissions coefficient” announced by the Ministry of the Environment; outside Japan, it is based on the 2008 IEA “country-specific conversion coefficient.”



■ Equity ● Net income ratio to equity attributable to owners of the parent company (ROE)



■ CAPEX ■ R&D



## 1 Financial Policy

Hitachi Metals, Ltd. (the “Company”) makes growth investments and delivers appropriate returns of profits to shareholders over a long-term period to generate sustainable long-term growth. Management maintains a financial policy that aims to ensure a healthy and firm financial platform.

The Company thus builds on the reach of its diverse and distinctive businesses across various industries to invest strategically and flexibly, and to enhance investment and financial efficiency as well as profitability. At the same time, the Company accords top priority to accelerating the cash generation cycle to ensure a balanced financial position.

## 2 Shareholder Returns Policy

The Company’s basic dividend policy is to determine profit distributions to shareholders and internal reserves by comprehensively assessing the business environment, future business developments, and business performance. Management’s primary commitment is to generate robust growth over a medium- to long-term period, by strengthening international competitiveness and enhancing the corporate value of the Company, to deliver appropriate returns of profits to shareholders over a long-term period in a business environment with evolving customer needs, technology, and globalization.

The internal reserves are to be used for the development and commercialization of new materials, incubation of new businesses, and expansion and streamlining of competitive product lines by examining future business developments. The Company purchases treasury stock as appropriate to implement an agile capital policy in accordance with its needs, financial condition, stock price levels, and other factors.

Using this policy as a base, in fiscal 2018, the Company declared annual dividends of ¥34.00 per share (interim dividends of ¥17.00 per share and year-end dividends of ¥17.00 per share), taking into account business performance for the current fiscal year, future business developments and prospects, and shareholders’ expectations for dividends in an integrated manner.

Moreover, management currently plans to pay annual dividends of ¥34.00 per share (interim dividends of ¥17.00 per share and year-end dividends of ¥17.00 per share) in fiscal 2019.

In the years ahead, the Company will endeavor to enhance earnings and profitability while deploying financial strategies to boost capital efficiency, thereby increasing shareholder value.

## 3 Funding

In principle, the Company covers funding for growth investments with operating cash flows generated during the normal course of business and liquid funds. For other financing on a larger scale, the Company implements reliable and flexible methods to minimize opportunity losses for growth, including accessing financial and capital markets.

In the fiscal year ended March 31, 2019, the Company issued unsecured corporate bonds of ¥40 billion in December 2018, and the funds raised were primarily used for capital expenditures and repayments of borrowings to strengthen the platform for further growth.

## 4 Liquidity

Liquidity is a key component of the Company’s overall financial management policy. For short-term obligations that have maturities of 12 months or less, the Company maintains sufficient liquidity to flexibly address unforeseen circumstances.

As of March 31, 2019, total liquid funds of the Company stood at ¥41.1 billion.

## 5 Interest-Bearing Debt

As of March 31, 2019, interest-bearing debt stood at ¥202.1 billion, an increase of ¥41.3 billion from the previous year. Short-term interest-bearing debt was ¥83.1 billion and long-term interest-bearing debt was ¥119.0 billion. The debt-to-equity ratio rose by 0.05 percentage point from the previous year to 0.34 percentage point as of March 31, 2019.

## 6 Ratings

The Company recognizes that maintaining a high, stable credit rating is essential for its management goal of maintaining adequate liquidity and flexibility in its financing policies and to reduce financing costs. Each year, the Company acquires a credit rating for long-term corporate bonds from Rating and Investment Information, Inc., a major credit agency in Japan. As of March 31, 2019, the Company received the rating “A+” for its long-term corporate bonds and unsecured corporate bonds.

## 7 Cash Flows

The Company aims to generate cash by increasing operating income, enhancing the profit rate, and reducing working capital.

With respect to net working capital (accounts receivable, inventories, accounts payable, and advances received), the Company has set the “working capital turnover period” as a performance indicator for enhancing capital efficiency, and the Company is striving to shorten it.

The Company pays particular attention to managing and reducing inventories. To that end, the Company clarified responsibilities for each inventory category. While manufacturing departments and procurement divisions control materials, manufacturing departments and business divisions oversee manufactured products, including work-in-process and finished products. Domestic and overseas sales companies collaborate with business divisions to look after transit inventories. Thus, the Company maintains a structure to optimally control and reduce inventories in consideration of future trends over the medium to long term. The Group strives to further cut back on inventories by properly and promptly managing inventories, based on accurate consolidated revenue forecasts, with the aim of reducing the number of working capital turnover days.

The Company adopted a Group cash pooling system to help manage its own working capital and that of its subsidiaries. In principle, consolidated subsidiaries in Japan procure funds through this system, rather than taking on external debt. By consolidating surplus funds and debts across the Group, the Company has better positioned itself to become more financially efficient. Group companies in the U.S. and China also use this cash pooling system, through which funds are centrally managed to enhance financial efficiency.

## 8 Investment Efficiency

The Company invests flexibly in key businesses to drive sustainable growth. Activities include mergers and acquisitions, upgrading and streamlining of plants and equipment, increasing production capacity, establishing new bases, and investments in employee welfare benefits. In this context, the Company differentiates between regular and strategic investments by taking investment decisions, returns, and other factors into account.

The Company places emphasis on cash flow in formulating strategic investment proposals, making decisions by using the present value (i.e., net present value) based on the discounted cash flow method, rate of return on investment capital, and payback period.



Stock Information

Corporate Data/Stock Price

Stock Status

(As of March 31, 2019)

Total number of shares issued	428,904,352
Total number of shares authorized	500,000,000
Number of shareholders	28,053 (including holders of shares less than one unit)

Shareholder Composition

(As of March 31, 2019)

Segment	Number of shareholders	Number of shares held (hundreds of shares)	Percentage of shares held
Financial institutions	60	626,601	14.63
Financial instruments business operators	39	22,245	0.52
Other domestic corporations	531	2,343,836	54.72
Foreign nationals	503	943,579	22.03
Individuals and others	23,981	347,230	8.10

Notes: 1. Not including shares representing less than one unit.  
2. Treasury shares (13,344 hundred shares) are included in "Individuals and others."

Major Shareholders

(As of March 31, 2019)

Shareholders	Number of shares held (thousands of shares)	Percentage of shares held
Hitachi, Ltd.	226,233	52.91
The Master Trust Bank of Japan, Ltd. (Trust account)	14,362	3.36
Japan Trustee Services Bank, Ltd. (Trust account)	11,011	2.58
Japan Trustee Services Bank, Ltd. (Trust account 9)	7,610	1.78
JPMorgan Chase Bank 385635	5,640	1.32
State Street Bank and Trust Company 505103	4,788	1.12
Goldman Sachs & Co., Regular Account	4,189	0.98
Japan Trustee Services Bank, Ltd. (Trust account 5)	4,179	0.98
Japan Trustee Services Bank, Ltd. (Trust account 7)	3,879	0.91
BNYM AS AGT/CLTS 10 PERCENT	3,481	0.81

Listed Stock Exchange

(As of March 31, 2019)

Tokyo (First Section, Code 5486)
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Credit Rating

(As of July 2018)

Rating and Investment Information, Inc. (R&I)	Long-term Debt A+
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Shareholders’ Memo

- Fiscal year-end: March 31
- Record date for dividend: March 31 and September 30
- Method of public notices: Electronic public notice
- Number of shares per one unit: 100 shares
- Administrator of shareholder registry: Tokyo Securities Transfer Agent Co., Ltd. (Head Office)  
NMF Takebashi Building 6F,  
3-11 Kanda Nishikicho, Chiyoda-ku, Tokyo, Japan

Corporate Data

Company name	Hitachi Metals, Ltd.
Head Office address	Shinagawa Season Terrace, 2-70, Konan 1-chome, Minato-ku Tokyo 108-8224, Japan
	Tel.: +81-3-6774-3001, Toll-free: 0800-500-5055 (in Japan)
Established	1956
Listed stock exchange	Tokyo (First Section)
Securities code	5486
URL	https://www.hitachi-metals.co.jp/e/

Stock Price Chart



	2014	2015	2016	2017	2018
Total Shareholder Return	127.2%	82.4%	111.4%	92.5%	96.7%
(Comparative index: TOPIX Total Return Index)	(130.7%)	(116.5%)	(133.7%)	(154.9%)	(147.1%)

Disclaimer regarding forward-looking statements

This report contains forward-looking statements about the Company and the Group, such as business plans, predictions, strategies, assumptions, and results forecasts. All such statements are based on analyses and judgments using information available when this report was prepared, and thus may include risks and uncertainties due to changing economic circumstances, market conditions, and the like. Please note the possibility that actual results may differ from the Company's forecasts. This report was compiled based on information deemed reliable by the Company. Accordingly, such information's accuracy and integrity cannot be guaranteed.



