Business Strategies
High-Grade Metals Company

Execute action plan with the key term "speed up"

Takehisa Seo
Executive Officer
President of High-Grade Metals Company

The three-year period covered by our new Medium-Term Management Plan, ending in fiscal 2018, will reveal the true value of efforts to date with respect to major investments, M&As, and the like. In fiscal 2016, we will significantly increase the pace at which we execute our action plan, with "speed up" as the key term. First of all, we will more swiftly reap the rewards of our efforts—in such areas as major investments and the reinforcement of overseas sales locations. Regarding sales, we will shift to an aggressive approach to capture new global demand and maximize total marginal income. As for strengthening *monozukuri*, we will increase productivity and product competitiveness.

By embracing the challenges of the Fiscal 2018 Medium-Term Management Plan, as well as the Group's 2025 vision beyond that, the High-Grade Metals Company will aim to use its strength in *monozukuri*, a source of pride in Japan, to make innovations on the world stage.

FY2015 Results

Revenues	¥256.7 billion	Adjusted operating margin	10.5%
Adjusted operating income	¥27.0 billion	Overseas sales ratio	44%

Achievements of the Fiscal 2015 Medium-Term Management Plan

Started remodeling our business portfolio to reduce our dependence on electronic materials and components

Expanded the aircraft and energy segment business domains	• Acquired MMC Superalloy Corporation shares (boosting holdings from zero to 51%) and consolidated the company. (Consolidated in July 2014) • Hitachi Metals MMC Superalloy, Ltd. made a major investment in an 840-ton large ring mill. (Began operation in November 2015)
Made large-scale investments in upstream operations (all of specialty steel)	• Invested in a 24-ton vacuum induction melting (VIM) and casting furnace, the largest in the world. (Began operation in March 2015) • Invested in a 10,000-ton class free forging press, high speed radial forging machine. (Scheduled for completion and launch of operation in FY2017)
Established a structure for expanding global sales (tool steel)	• Reconfigured the brand due to expand global sales. (October 2015) • Began mass production of SLD-i™, a new type of cold-rolled die steel produced with a new melting equipment. (April 2016) • Expanded distribution network in North America with the acquisition of Diehl Tool Steel. (November 2015)
Reinforced the business base for cemented carbide tools	• Transferred shares held in Hitachi Tool Engineering, Ltd. (100% → 49%). (April 2015)

Note: In fiscal 2016, we shifted the Soft Magnetic Components and Materials business, previously part of the Magnetic Materials and Applications segment, to the High-Grade Metal Products and Materials segment. Also, R&D expenses will be shifted from head office to the High-Grade Metals Company. Therefore, figures on this page for fiscal 2015 have been retrospectively revised to reflect this change.

FY2018 Medium-Term Management Plan

Achieve growth globally by focusing on high-grade products

Basic policy

- Reap the benefits of major investment and strengthening overseas sales locations
- Grow through M&A (achieve consolidated synergies)

FY2018 Medium-Term Management Plan: Goals

	FY2018 Goals (Projected exchange rate: 1USD=¥115)	Change vs. FY2015
Revenues	¥310.0 billion	+21%
Adjusted operating income	¥41.0 billion	+¥14.0 billion
Adjusted operating margin	13.2%	+2.7 ppt
Overseas sales ratio	47%	+3 ppt

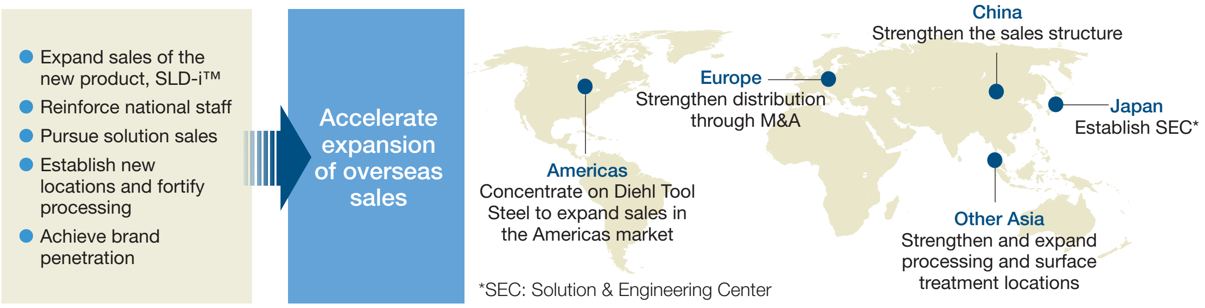
Strategies for Practicing Value Creation

Tool Steel: Work to Expand Global Sales

In the tool steel business, we will promote global sales expansion. The key point here is to bolster sales of SLD-i™, a new type of cold-rolled die steel that we started mass producing in April 2016. SLD-i™ is a revolutionary material used in cold-rolled molds. It has the same composition as standard steel but, thanks to our original manufacturing method, it is more resistant to dimensional changes from heat treatment and the passing of time, and also features improved abrasion resistance.

In region-specific strategies, we will establish a distribution location in the Americas through an M&A while strengthening and expanding our processing and surface treatment locations in Asia. By reinforcing and upgrading our overseas production and sales locations, we will raise the added value of Yasugi Specialty Steel and strengthen its appeal as an international brand.

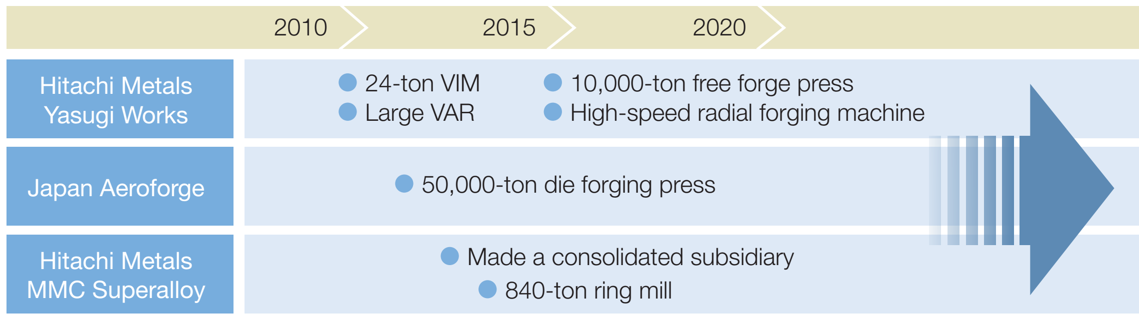
We will also promote a solutions business. In recent years, the High-Grade Metals Company has deployed its surface modification technologies and CAE analysis technologies to engage in joint development with domestic manufacturers and European auto manufacturers. Going forward, we will expedite this process to attract new orders.



Aircraft and Energy: Expand Businesses Through Synergies Among the Three Companies

In the aircraft and energy businesses, we have embraced the challenge of becoming one of the top four aircraft materials manufacturers in the world. At our Yasugi Works, in addition to a 24-ton vacuum induction melting and casting (VIM) furnace already in commission, we have made major investments, including in a 10,000-ton free forging press and a high-speed radial forging machine. At Hitachi Metals MMC Superalloy, Ltd., we have started operating a large 840-ton ring mill for manufacturing ring-shaped components. In addition to these successful investments, we have formed an alliance with Japan Aeroforge, Ltd, which has a 50,000-ton forging press—the world's largest. Under the alliance, we are setting up a supply system that can handle large components. In fiscal 2015, we acquired certification from customers for our engine shaft materials and made good progress in acquiring certifications that are essential in the aircraft and energy businesses, and we will expedite this effort in the future. Going forward, we will create synergies among the three companies while making continuous capital investments and introducing CAE and other analysis technologies to accelerate the development of R&D and manufacturing technology.

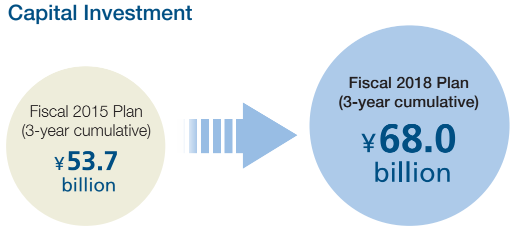
Our revenue targets for the aircraft and energy businesses are ¥37 billion in fiscal 2018 and over ¥60 billion in fiscal 2025, almost double the fiscal 2018 target.



Investment Plans

We will make priority investments in pre-processing, a key source of our competitiveness. Following the installation of our new casting equipment in 2016, we started mass production of SLD-i™, a new type of cold-rolled die steel, in April of the same year. With respect to the newly established 10,000-ton free forging press and increasing the size of the high-speed radial forging machine, we will invest with the aim of starting operations in 2017. To strengthen our overseas sales network, moreover, we will pursue M&As while expanding and reinforcing our processing locations in the Americas and Asia.

Capital Investment



Global Strategy

To promote its global strategy, the High-Grade Metals Company has rebuilt the Yasugi Specialty Steel brand of its specialty steel business and incorporated its desired mission and willpower into a Brand Statement. We will enhance the value of the brand by providing solutions to customers, and communicating the values and innovativeness of the brand as well as the value and potential that it offers to customers worldwide so that they will choose us as their "first partner."

Brand Statement

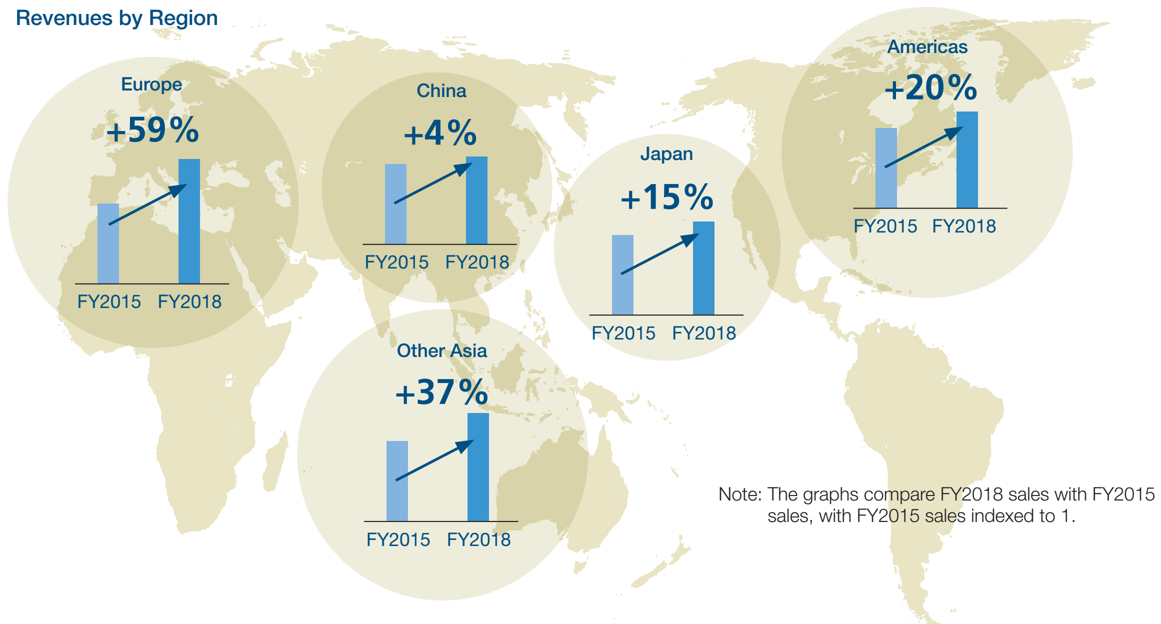
YASUGI SPECIALTY STEEL
OUR HERITAGE, YOUR ADVANTAGE

By OUR HERITAGE, we mean the unique manufacturing wisdom and technology that Yasugi Specialty Steel has inherited over many generations, and that is the basis on which we will develop into the future.

By YOUR ADVANTAGE, we mean our determination to use our technologies, products, and solutions to bring value, innovation, and growth to our customers all over the world.

Under the Fiscal 2018 Medium-Term Management Plan, we will work to increase sales of Yasugi Specialty Steel in Asia while reinforcing our systems for bolstering sales in Europe and the Americas to deliver renewed global growth. We plan to increase the overseas sales ratio from 44% in fiscal 2015 to 47% in fiscal 2018.

Revenues by Region



Note: The graphs compare FY2018 sales with FY2015 sales, with FY2015 sales indexed to 1.

Magnetic Materials Company

Become a leading magnet company that helps develop an ecologically minded society through innovations in *monozukuri*

Ryoji Akada
Executive Officer,
President of Magnetic Materials Company

We supply high-performance rare earth magnets and ferrite magnets used in the motors of equipment that require compactness and energy efficiency—such as industrial robots and electrical appliances—mainly to the automotive segment.

We expect that hybrid electric vehicles (HEVs) and electric vehicles (EVs) will become increasingly popular due to heightened environmental awareness engendered by regulations on CO_2 emissions and fuel efficiency in various countries and regions, with demand for high-performance magnets to increase sharply as a result.

To effectively address such demand, we will strengthen global production locations and build innovative production lines under the Fiscal 2018 Medium-Term Management Plan.

FY2015 Results

Revenues	¥105.3 billion	Adjusted operating margin	6.6%
Adjusted operating income	¥6.9 billion	Overseas sales ratio	59%

Achievements of the Fiscal 2015 Medium-Term Management Plan

Established structure to globally expand sales of rare earth magnets

Established a production location in China	● Concluded a joint venture agreement with Beijing Zhong Ke San Huan Hi-Tech Co., Ltd. (June 2015)
Increased production capacity at locations in Japan	● Increased production capacity for rare earth magnets used in HEV (by over 10%). (2H of FY2014)
Reinforced the business base for ferrite magnets	● Developed ferrite magnets with the most distinctive qualities in the world (NMF™-15 series). (July 2014) ● Expanded production capacity at the plant in South Korea (by over 20%). (2H of FY2014)

Note: In fiscal 2016, we shifted the Soft Magnetic Components and Materials business, previously part of the Magnetic Materials and Applications segment, to the High-Grade Metal Products and Materials segment. Also, R&D expenses will be shifted from head office to the High-Grade Metals Company. Therefore, figures on this page for fiscal 2015 have been retrospectively revised to reflect this change.

FY2018 Medium-Term Management Plan

Innovate *monozukuri* to pave the way for growth

Basic policy

- Strengthen global production sites
- Build innovative production lines

FY2018 Medium-Term Management Plan: Goals

	FY2018 Goals (Projected exchange rate: 1USD=¥115)	Change vs. FY2015
Revenues	¥132.0 billion	+25%
Adjusted operating income	¥17.0 billion	+¥10.1 billion
Adjusted operating margin	12.9%	+6.3 ppt
Overseas sales ratio	67%	+8 ppt

Strengthen Global Production Sites

In our rare earth magnet business, we established a joint venture with Zhong Ke San Huan, China's largest magnet manufacturer, in Jiangsu Province to build an integrated structure handling raw material procurement, production and sales. In entering China, our aim is to ensure stable procurement of rare earth-related materials and broaden our business scale in the global market. In fiscal 2018, we are targeting revenue of ¥10 billion for the joint venture.

Establish a joint venture in China

Build an integrated structure from procurement of raw materials to production and sales

Company name:	Hitachi Metals San Huan Magnetic Materials (Nantong) Co., Ltd.
Location:	Nantong, Jiangsu Province, China
Capital:	RMB 450 million (Hitachi Metals: 51%; Zhong Ke San Huan: 49%)
Production capacity:	1,000 tons/year (FY2017) ⇒ 2,000 tons/year
Sales goal:	¥10 billion (FY2018)

Establish a new joint venture and start manufacturing quickly in China

Build Innovative Production Lines

In the automotive market, we expect demand for high-performance rare earth magnets to increase further amid tightening environmental regulations and calls for improved fuel efficiency. To ensure a reliable supply of high-quality magnet products under these conditions, we will automate our manufacturing and quality inspection lines and build innovative production lines incorporating IoT.

In the rare earth magnet business, we will work to optimize the overall material flow by introducing innovative production lines—including highly competitive heavy rare earth diffusion technology—as well as recycling processes using proprietary technologies.

- High-performance automated line
- Real data management using IoT (Proper inventory management, automatic control of manufacturing conditions)

→

- Improve production efficiency
  - Shorter lead times
  - Stable production

- Competitive heavy rare earth diffusion technology
- Recycling process utilizing proprietary technology

→

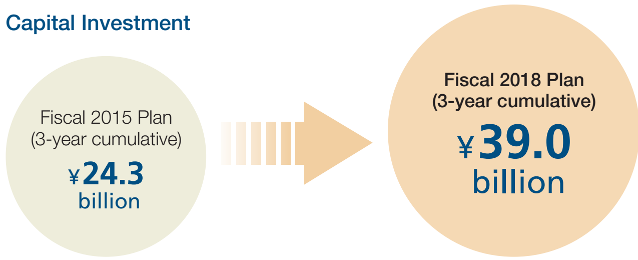
- Improved material flow

In the ferrite magnet business, we will introduce innovative production lines to enhance production efficiency in Japan. At the same time, we will roll out these technologies at our overseas production locations and address customers' needs with respect to high product quality, shape specifications, and the like.

Investment Plans

Under the Fiscal 2018 Medium-Term Management Plan, we plan to invest a total of ¥39 billion over the next three years to get the joint venture on stream, build innovative production lines, and advance our business globally.

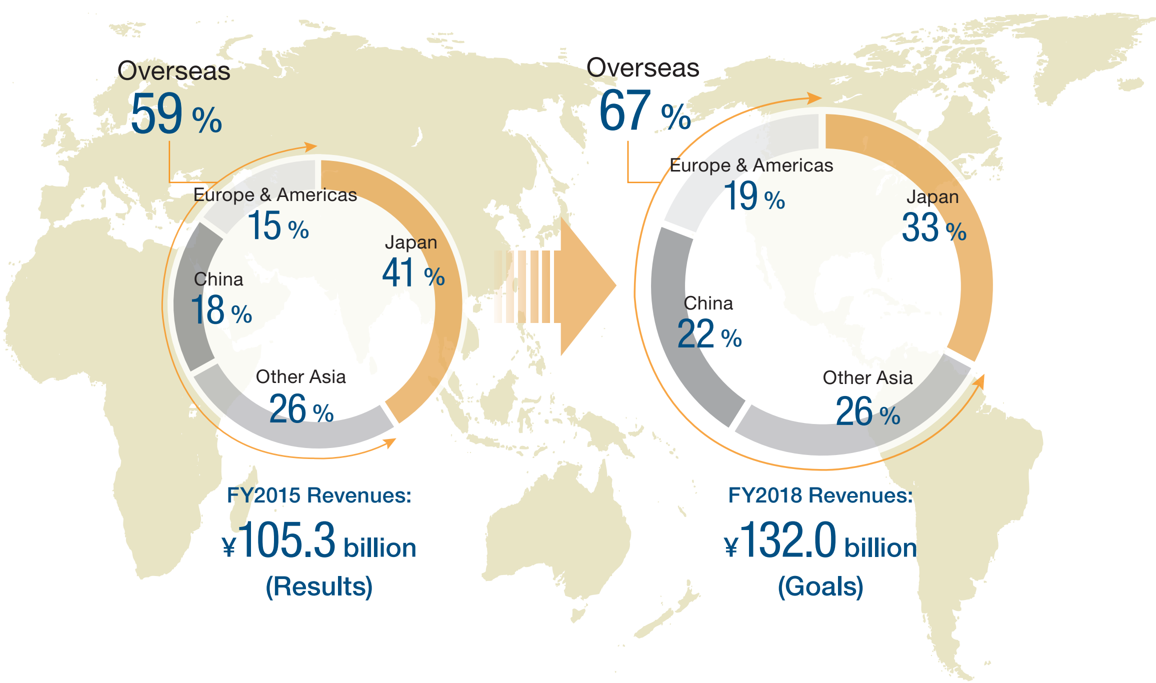
Capital Investment



Global Strategy

Regarding our regional strategies, although domestic demand will remain mostly unchanged, we look forward to growing demand in China, Europe, and the Americas. We will increase the overseas sales ratio to 67% by fiscal 2018 and realize growth.

Revenues by Region



High-Grade Functional Components Company

Deploy our strengths to create new levels of value and deliver sustainable global growth

Masato Hasegawa
Executive Officer,
President of High-Grade Functional Components Company

The High-Grade Functional Components Company uses its various strengths—including abundant materials technologies and overwhelming production volume—to create new levels of value and deliver sustainable global growth.

In fiscal 2014, U.S.-based Waupaca Foundry, Inc. became a member of the Hitachi Metals Group, which consequently became one of the world's largest manufacturers of casting components in terms of production capacity. However, our strengths are not limited to the scale of our business. We also provide value for customers in other ways, including materials capabilities to address the need for high heat resistance and mechanical strength, our design capabilities and production technologies for advances in thinness and weight reduction, and our relentless pursuit of improved production efficiency.

Under the Fiscal 2018 Medium-Term Management Plan, our basic policy is to strengthen our *monozukuri* foundation for achieving global growth. Guided by this policy, we will use technological innovation to strengthen product competitiveness while addressing growing demand and tapping new markets to create new levels of value.

FY2015 Results

Revenues	¥365.1 billion	Adjusted operating margin	7.2%
Adjusted operating income	¥26.1 billion	Overseas sales ratio	80%

Achievements of the Fiscal 2015 Medium-Term Management Plan

Strengthened global competitiveness and restructured portfolio of the automotive casting components business

Improved competitiveness of the automotive casting component business on a global basis	• Acquired Waupaca Foundry, Inc. shares (boosting holdings from zero to100%) and consolidated the company (November 2014) • Merged Waupaca Foundry, Inc. and Hitachi Metals Automotive Components. (April 2016) • Increased production capacity of heat-resistant cast steel for turbo (by over 60%). (Scheduled to begin operation in the 2H of FY2016)
Restructured business portfolio	• Sold all of our shares in Hitachi Metals Techno, Ltd. (March 2015)

Note: In fiscal 2016, R&D expenses will be shifted from head office to the High-Grade Functional Components Company. Figures on this page for fiscal 2015 have been adjusted to reflect the aforementioned change.

FY2018 Medium-Term Management Plan

We aim for global growth by strengthening the foundation of *monozukuri* and creating new value.

Basic policy

- Cast iron business: Tap new markets and strengthen product competitiveness through technological innovation
- HERCUNITE™ business: Strengthen business targeting growing turbo engine market
- Piping components business: Expedite globalization and promote cost restructuring

FY2018 Medium-Term Management Plan: Goals

	FY2018 Goals (Projected exchange rate: 1USD=¥115)	Change vs. FY2015
Revenues	¥375.0 billion	+3%
Adjusted operating income	¥37.5 billion	+¥11.4 billion
Adjusted operating margin	10.0%	+2.8 ppt
Overseas sales ratio	84%	+4 ppt

Cast Iron Business

With the inclusion of Waupaca Foundry, Inc. in the Group, our business domains expanded from high-grade ductile cast iron to gray iron. We are already reaping the benefits of synergies across both companies. For example, we have started cross-selling via the sales networks of the two brands, and we have built a joint purchasing system. Going forward, we will target further synergistic benefits.

Under the Fiscal 2018 Medium-Term Management Plan, in the Americas, we will address the needs of auto manufacturers entering Latin America while expanding sales to makers of commercial trucks, construction equipment, and agricultural machinery. In Asia, we will exploit growing demand in the Indian and Southeast Asian markets. We will also develop innovative *monozukuri* and other technologies to strengthen product competitiveness.

As a leading company in the cast iron business, we will create new levels of value and thus contribute to social advancement.

Americas	**Response to the movement of the auto manufacturers into the Central and South American markets** ● Step up sales activities directed at auto manufacturers moving into the Central & South American markets ● Explore new supply structures for Central & South America **Expand sales for commercial trucks, construction equipment, and agricultural machinery** ● Expand production capacity for large components (for commercial trucks, construction equipment, and agricultural machinery) by introducing a horizontal casting line (30% increase in FY2018 revenues compared to FY2015) **Add even higher value to products** ● Improve quality and manufacturing efficiency by dedicating a plant exclusively to ductile cast iron and gray iron
Asia	**Expand sales in growth markets (India and Southeast Asia)** ● Utilize locations in Japan, South Korea, and India **Develop leads into new markets** ● Mine the agricultural and industrial machinery markets
Europe	**Develop leads into the European market** ● Engage in sales activities that utilize Japanese and U.S. planning and presentation skills and European locations ● Explore new supply structures for Europe

HERCUNITE™ Business

In the heat-resistant cast steel business, we will respond to the predicted growth of the turbo engine market by strengthening and expanding our HERCUNITE™ business. Specifically, we will increase the number of production lines of our core Kyushu Works by more than 60%. The expanded production lines will come on stream in the latter half of fiscal 2016 and be fully operational in fiscal 2017.

In recent years, turbo engines have become more complex in form, as reflected in the emergence of twin scroll systems, for example. Responding swiftly to such changes, we have developed our own technologies that other companies cannot imitate. In addition to these strengths, we have reduced raw material costs and introduced IoT technologies to deliver higher levels of product quality and performance. We will further reinforce our position as a top supplier, targeting a 30% share of the world market by fiscal 2025.

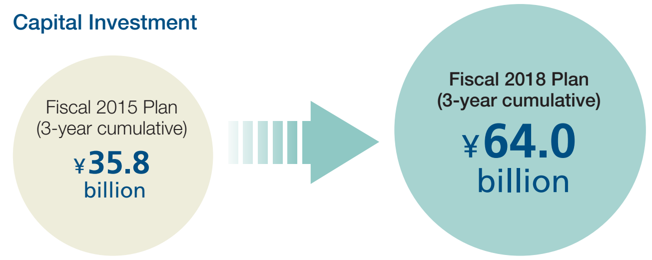
Kyushu Works: Increase production capacity by more than 60%

Increase production capacity	● Increase capacity of the casting line and processing line
Optimize production technology (Achieve differentiation through technology that is difficult to duplicate)	● Streamline casting by automating pouring of casting steel ● Achieve a high degree of efficiency in cutting hard-to-cut materials

Investment Plans

In the cast iron business, we will strengthen and expand production lines for large casting components, establish dedicated factories for ductile cast iron and gray iron, and introduce high-efficiency casting equipment. In the heat-resistant cast steel business, we will significantly increase the production capacity of our Kyushu Works. We will also make investments to streamline and enhance the productivity of our aluminum wheel and piping components businesses. We plan to invest ¥64.0 billion in these areas over the next three years.

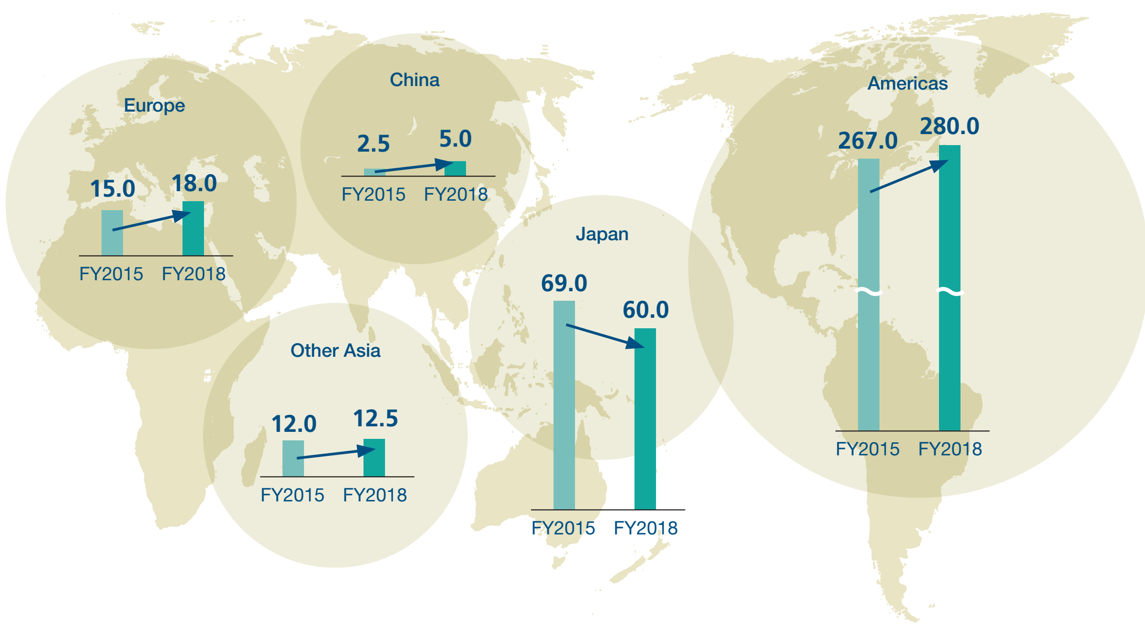
Capital Investment



Global Strategy

Expecting the Japanese automobile market to contract, we will focus on growth at the global level. Leveraging growth in the Americas, where the scale of our business is overwhelming, we will target business expansion in Europe, China, and Asia.

Revenues by Region
(Billions of yen)



Cable Materials Company

Expand businesses in growth segments and strengthen the competitiveness of existing businesses

Kazuya Murakami
Executive Officer,
President of Cable Materials Company

The Cable Materials Company is pursuing growth strategies according to its basic policy, "Reform to aim for high profitability: Let's achieve true global growth!" In fiscal 2015, our overseas sales ratio was 32%, but we feel there is significant room for further overseas growth, and our target for fiscal 2018 is 38%. We have also set high profit growth targets for fiscal 2018, with an adjusted operating income target of ¥26.0 billion and an adjusted operating margin of 9%, which we will raise to 10% over time to strengthen our profit structure.

To achieve these targets, we will remodel our business portfolio. Specifically, we will focus on segments earmarked for future growth: rolling stock, medical devices, and automotive electronic components. In existing businesses, we will strengthen *monozukuri* through innovations in manufacturing processes as we continue our quest to reinforce the competitiveness of the entire Cable Materials Company.

FY2015 Results

Revenues	¥288.2 billion	Adjusted operating margin	5.2%
Adjusted operating income	¥15.0 billion	Overseas sales ratio	32%

Achievements of the Fiscal 2015 Medium-Term Management Plan

Restructured portfolio of the cable business

Achieved structural reform	• Sold shares in J-Power Systems Corporation (high-voltage cables), cutting holdings from 50% to zero. (April 2014) • Reduced equity stake in Sumiden Hitachi Cable Ltd. (low-voltage cables) from 50% to 34%. (November 2014) • Sold the compound semiconductor business. (April 2015) • Decreased stake in Shanghai Hitachi Metals Cable Materials Co., Ltd. (wire coils) from 100% to 10%. (November 2015)
Reinforced the business base	• Decided to invest in continuous casting and rolling line equipment. (Scheduled to begin operation in April 2018)
Expanded business in growth segments	• Medical: Acquired the HTP-Meds Group, a manufacturer of medical tubing in North America. (February 2016) • Electronic components: Configured global production structure for EPB harnesses and sensors. (October 2015)

Note: In fiscal 2016, R&D expenses will be shifted from head office to the High-Grade Functional Components Company. Figures on this page for fiscal 2015 have been adjusted to reflect the aforementioned change.

FY2018 Medium-Term Management Plan

**Reform to aim for high profitability:
Let's achieve true global growth!**

Basic policy

- Implement a global growth strategy
- Strengthen the profit structure by restructuring the business portfolio
- Strengthen *monozukuri* through innovations in manufacturing processes

FY2018 Medium-Term Management Plan: Goals

	FY2018 Goals (Projected exchange rate: 1US=¥115)	Change vs. FY2015
Revenues	¥290.0 billion	+1%
Adjusted operating income	¥26.0 billion	+¥11.0 billion
Adjusted operating margin	9.0%	+3.8 ppt
Overseas sales ratio	38%	+6 ppt

Rolling Stock: Expand Business in the Chinese and European Markets

The Hitachi Metals Group has a long track record in rolling stock for Japan's *Shinkansen* (bullet train) lines, and we are leveraging this strength to enter China. The Chinese government has huge investment plans for high-speed railway lines. Over the five-year period from 2016 through 2020, it plans to invest a total of RMB 3.8 trillion, with high-speed railway lines to be extended from 20,000 (current length) to 30,000 kilometers. In response, the Cable Materials Company will strengthen its solutions business in China and increase the production capacity of its cable manufacturing location in Suzhou. We will also strengthen competitiveness by introducing new products that address the needs of customers demanding cables which use thin, lightweight products with long life spans, and aim to expand our market share in China.

In Europe, we newly established a rolling stock harness assembly location in the Czech Republic, and we are now positioned to swiftly address the needs of our European customers. From this location, we will start supplying products to the Hitachi Group's rolling stock factory in the United Kingdom, and also target European manufacturers of rolling stock.

Medical Devices: Enter Medical Treatment Segment and Expand Business Domains

To expedite growth in the medical devices segment, earmarked for major future expansion, we acquired the U.S.-based HTP-Meds Group, a manufacturer of catheters and other medical tubing, in February 2016. U.S. companies account for more than half of the world market for catheters, and establishing a foothold in the region is an important step toward tackling the global market. On both the sales and product fronts, we will target growth by fostering synergies with the HTP-Meds Group, which has a superior advantage thanks to its own forming and processing technologies and is also known for its ability to develop products rapidly. By adding our cable technologies and strength in materials, we will pursue various initiatives, including developing new medical devices based on a fusion of diagnosis and treatment.

Generate synergies with HTP-Meds (U.S. subsidiary)

	Customer Base	Technology Base
Hitachi Metals	• Major global device manufacturer • Japanese device manufacturer	• Cabling technology and transmission technology • Material development capabilities • Mass production capability
HTP-Meds	• Global dedicated medical manufacturer • U.S. dedicated medical manufacturer • Possesses certifications and approvals in medical segment	• Forming and processing technology for medical tubing • Ability to develop products rapidly

Mine Customers in the Medical Segment

Hitachi Metals	HTP-Meds
Big 3 Japanese medical customers	Acquire commercial rights for medical customers in Americas

New Product Development (Fusion of Diagnosis and Treatment)

Diagnostic Cables × Medical Tubing

Strengthen Development of Automotive Electronic Components and Global Locations

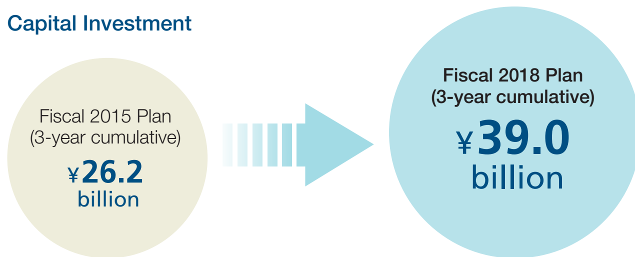
In the automotive electronic components segment, we will strengthen our supply structure in growth markets and expand business domains by creating new products. Previously, our core manufacturing location for this segment was in Thailand, but in response to growing demand in the Americas, we began increasing the number of production lines at our location in Mexico in the latter half of fiscal 2015. We will use this as a springboard for business expansion in the Americas.

We are also developing new products, including harnesses for electric parking brakes with wheel speed sensors. In addition, we will continue developing technologies to meet demand for fuel efficiency and safety, and we will integrate these technologies to create future innovations.

Investment Plans

We will make planned investments to strengthen our profit structure by restructuring our business portfolio. With world growth segments in mind, we will invest in growth markets while considering M&As. In foundation businesses, as well, we will introduce innovative production lines and otherwise invest in process innovations. We plan to invest ¥39.0 billion in these areas over the next three years.

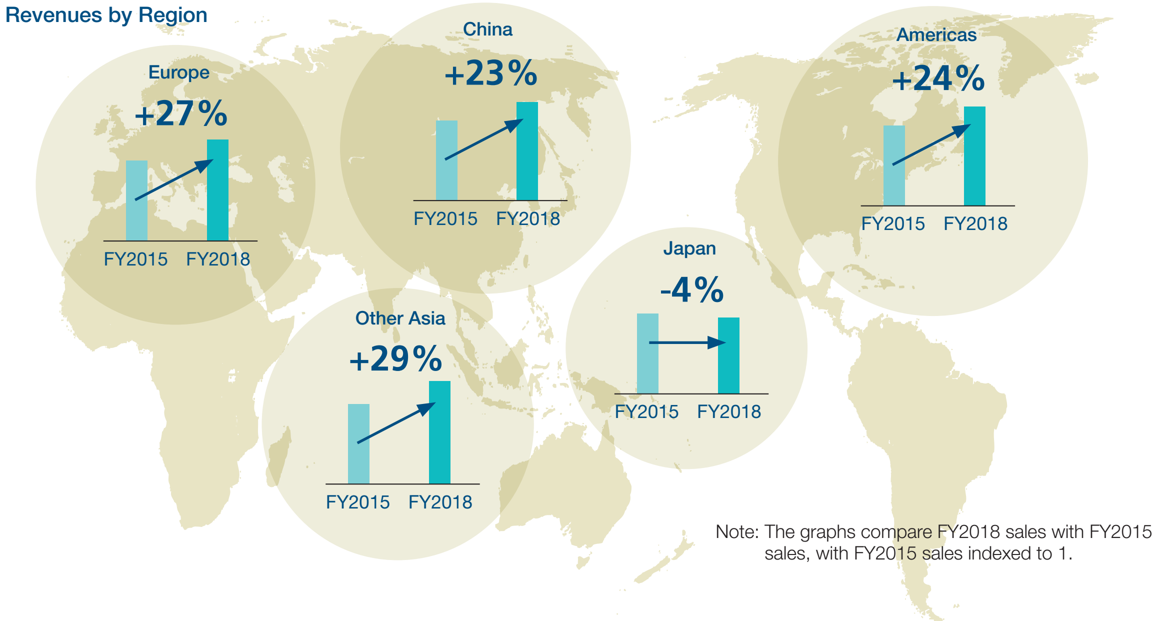
Capital Investment



Global Strategy

Monitoring the world market, we will take up the challenge of capturing large global accounts from major companies. To drive future growth, we will focus on automobiles and medical devices in the Americas, rolling stock and medical devices in China, rolling stock in Europe, and the automotive electronics segment in Asia.

Revenues by Region



Note: The graphs compare FY2018 sales with FY2015 sales, with FY2015 sales indexed to 1.