

Business Strategy of the Advanced Components & Materials Division

Hitachi Metals IR Day 2019

May 30, 2019

Kazuya Murakami

Vice President and Executive Officer

General Manager, Advanced Components & Materials Division

Hitachi Metals, Ltd.

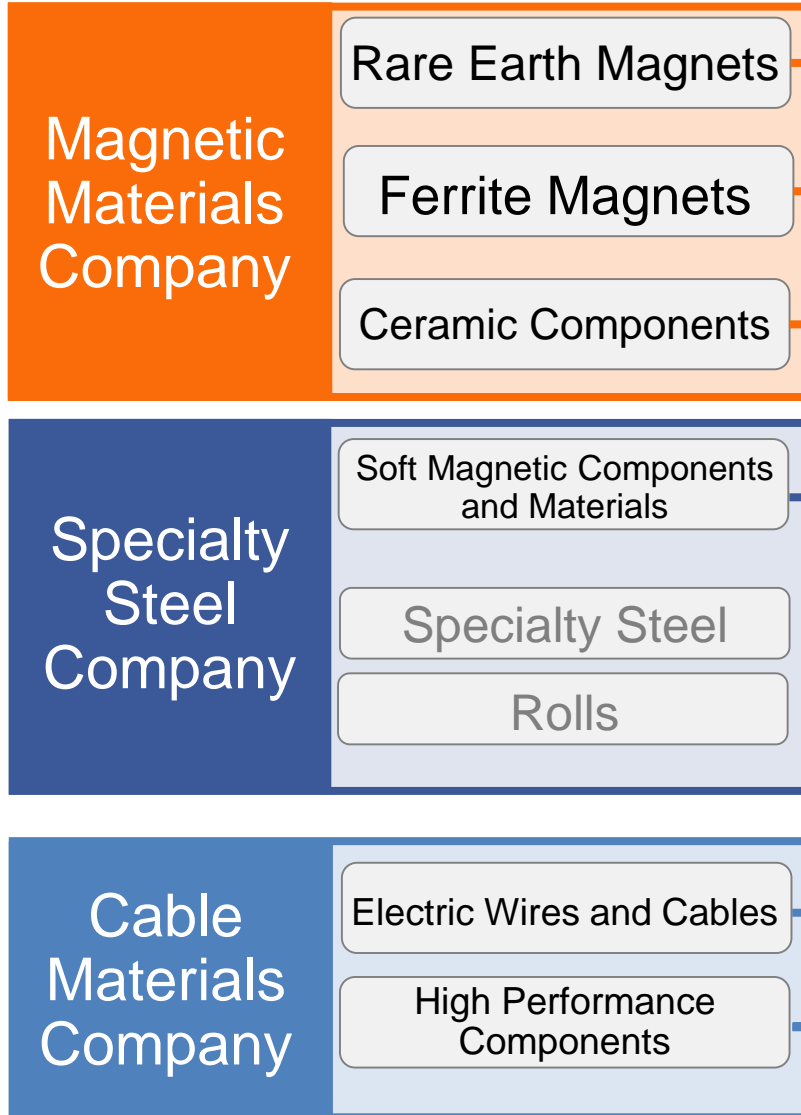
Business Strategy of the Advanced Components & Materials Division

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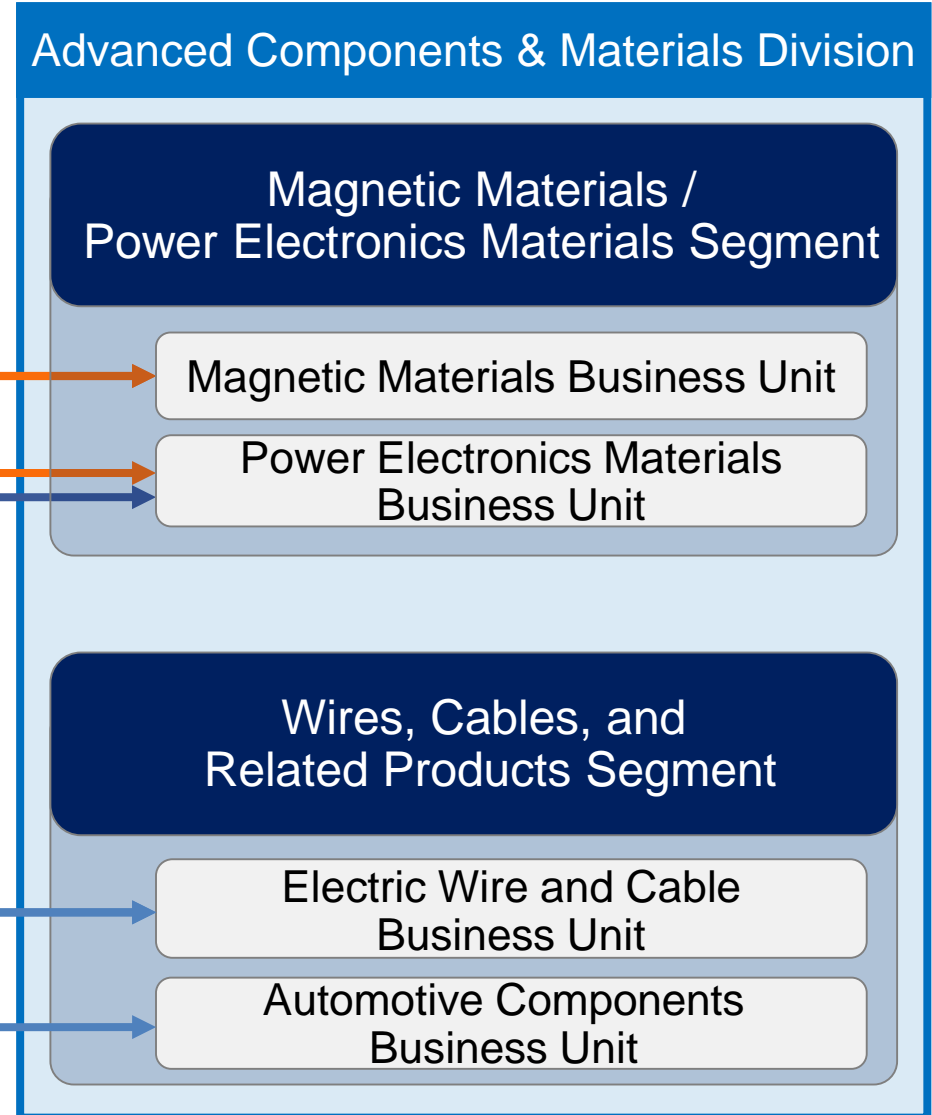
1. Business Overview of the Advanced Components & Materials Division
2. Basic Policy of the FY2021 Medium-term Management Plan
3. Action Plan
4. Summary

1-1. Advanced Components & Materials Division Business Overview (1)

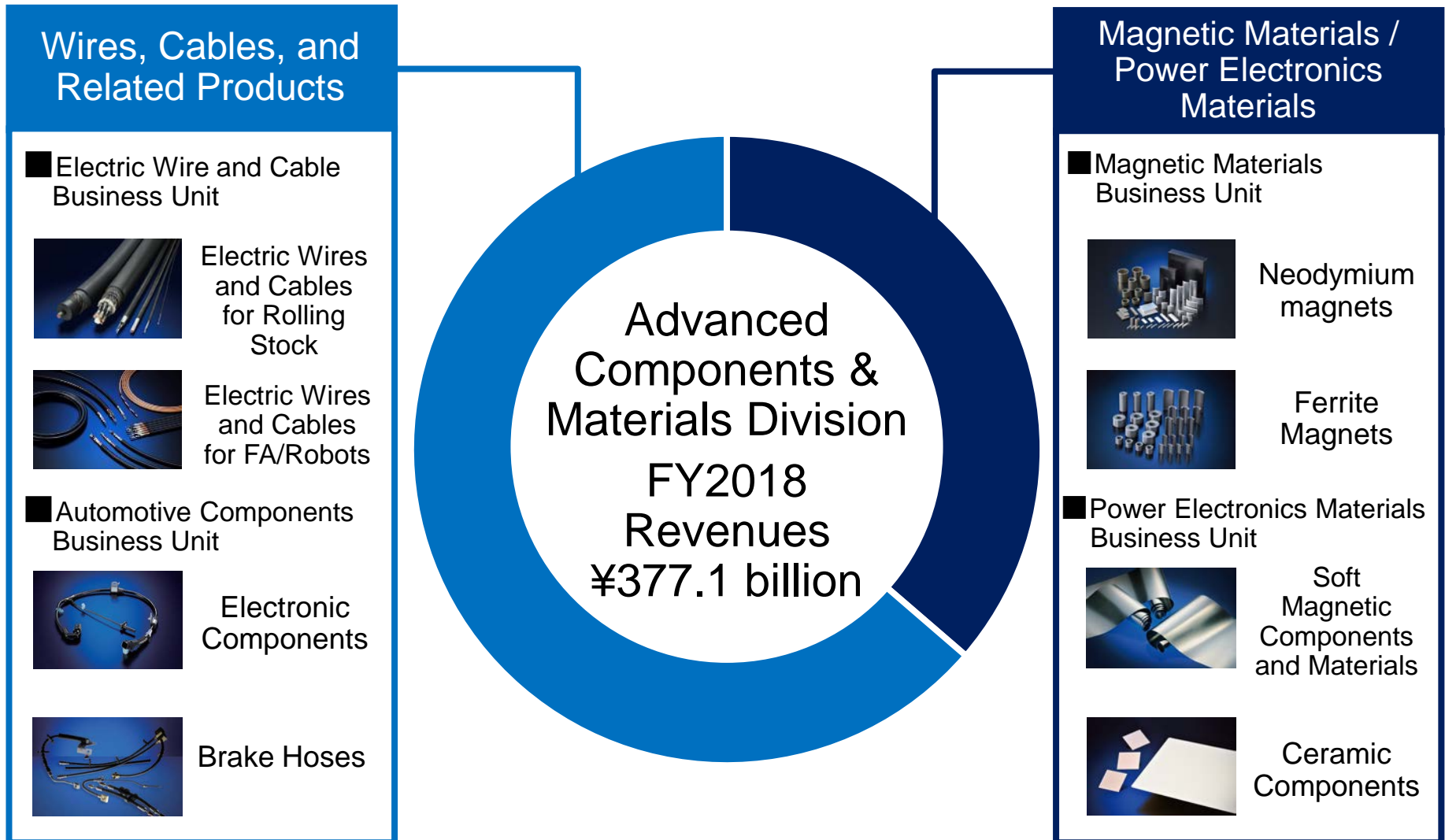
■ Before organizational restructuring



■ After organizational restructuring



1-2. Advanced Components & Materials Division Business Overview (2)



1-3. FY2018 Medium-term Management Plan

Overview of Efforts

Organic growth (from capital investment & R&D)	Magnetic Materials / Power Electronics Materials Segment	Introduced innovative production lines for magnetic materials (Total investment amount: approx. ¥18.0 billion)
		Established Hitachi Metals San Huan Magnetic Materials (Nantong) Co., Ltd.
		Increased the production capacity of FINEMET® nanocrystalline magnetic materials
	Wires, Cables, and Related Products Segment	Introduced new continuous casting & rolling line (Investment amount: approx. ¥5.0 billion)
Increased the production capacity of five growth areas (rolling stock, medical devices, electronic components, magnet wires, and FA)		
Continuous portfolio remodeling	Wires, Cables, and Related Products Segment	Transferred the information system business
		Sold the lead frame business
Growth through M&A	Magnetic Materials / Power Electronics Materials Segment	Acquired Santoku Corporation
	Wires, Cables, and Related Products Segment	Made the U.S. medical-related HTP-Meds a subsidiary and started the operation of new mass-production works

Reaping the benefits of large-scale capital investments is a challenge.

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Basic Policy of the Advanced Components & Materials Division

Expand the growth areas by “reaping the benefits of investments, concentrating resources and creating synergy”

FY2021 Targets

¥ billions		FY2018 Actual		FY2019 Forecast		FY2021 Targets		vs. FY2018
Profit margin in brackets		US\$1 = ¥111 €1 = ¥128 1 yuan = ¥16.5		US\$1 = ¥110		US\$1 = ¥105		
Magnetic Materials / Power Electronics Materials	Revenues		137.0		140.0		175.0	+28%
	Adjusted operating income ^{*2}	[2.9%]	4.0	[4.3%]	6.0	[12.6%]	22.0	+18.0
	ROIC ^{*3}		3.9%		2.6%		8.2%	+4.3%
Wires, Cables, and Related Products	Revenues		240.1		230.0		245.0	+2%
	Adjusted operating income	[5.2%]	12.5	[4.8%]	11.0	[7.8%]	19.0	+6.5
	ROIC		8.2%		6.1%		11.3%	+3.1%
Total ^{*1}	Revenues		377.1		370.0		420.0	+11%
	Adjusted operating income	[4.4%]	16.5	[4.6%]	17.0	[9.8%]	41.0	+24.5
	ROIC		5.5%		3.9%		9.3%	+3.8%

*1 Simple sum before eliminating intersegment revenues

*2 Adjusted operating income = Revenues – Sales cost – Selling, general & administrative expenses

*3 ROIC by segment = IFRS operating income * (1 – Tax rate of 30%) / (Average of beginning- and end-year working capital + Average of beginning- and end-year fixed assets)

Megatrends

Urbanization

- Intercity movement of people and goods becomes active.
- High interest in safety and security

Falling birthrate and aging population

- Decrease in workforce, and robotization / automation
- Low-cost and human body-friendly medical treatments

Increasing environmental issues

- Energy saving (growth of EV use and expansion of railway system)
- Acceleration of the wide-spread use of new energy

Technological evolution

- Growth of IoT and big data
- Evolution of sensing technology and connected society

Growth Areas

Automobiles



Power Electronics

Electric Wires & Cables

Magnets

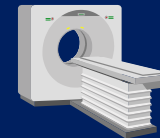
FA/Robots



Magnets

Electric Wires & Cables

Medical Devices



Electric Wires & Cables

Power Electronics

Rolling Stock



Electric Wires & Cables

Power Electronics

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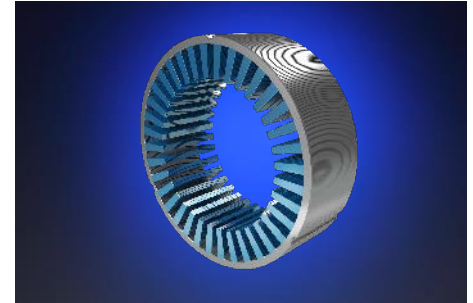
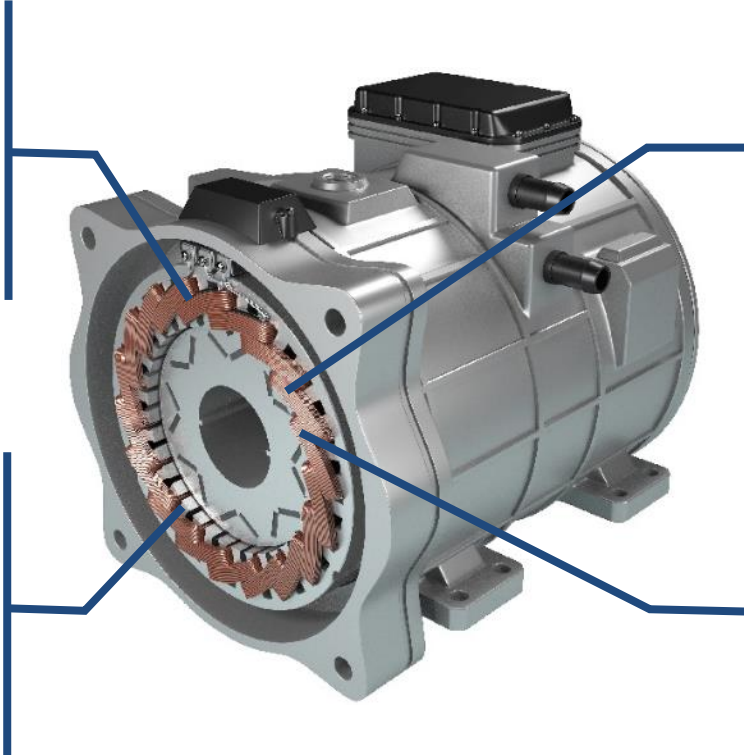
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Seek Synergy between Magnetic Materials, Power Electronics Materials, and Wires, Cables, and Related Products



Feed Assy*



Amorphous metals



Magnet wires



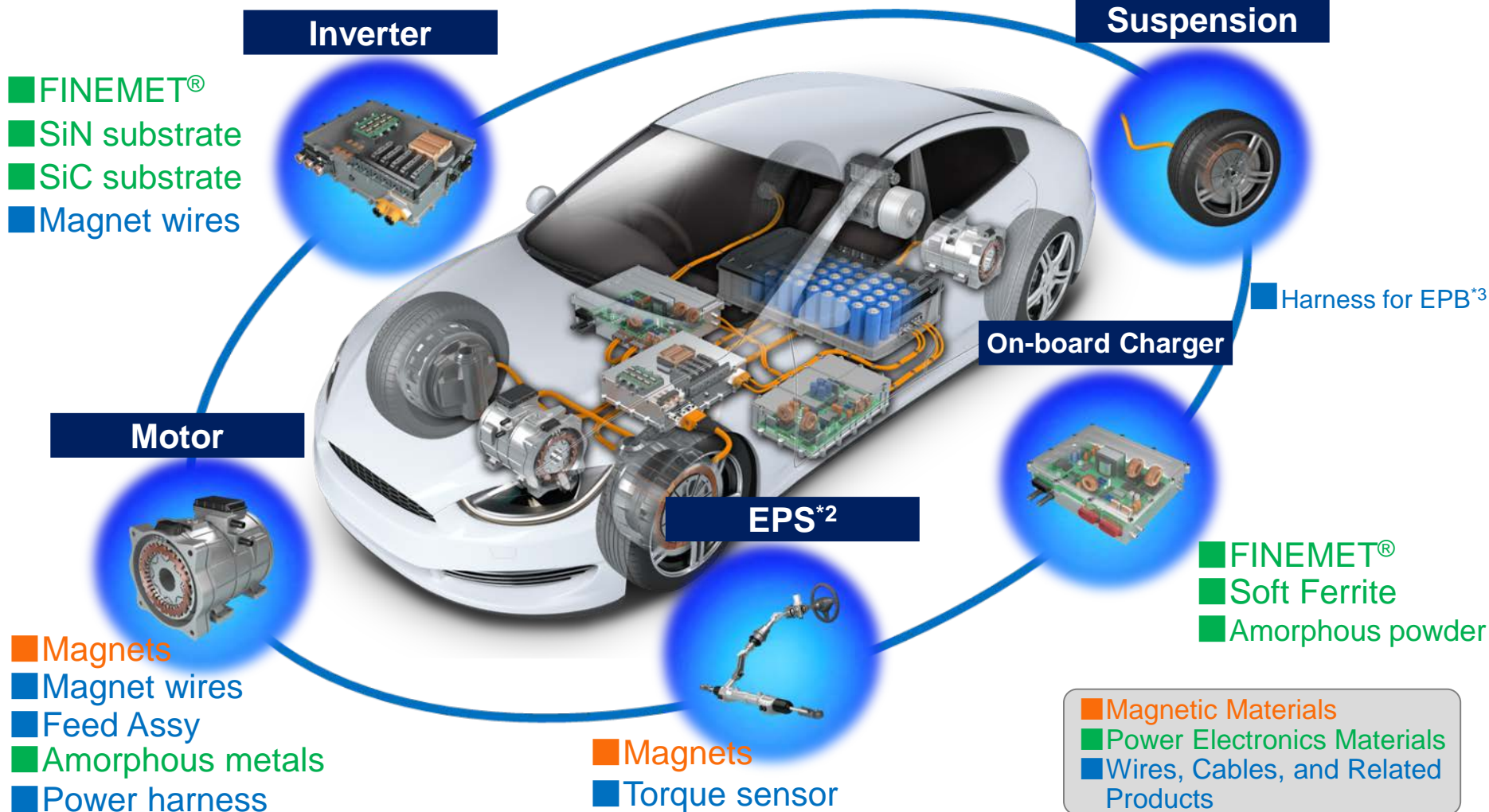
Magnets

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

* Wiring parts for EV motors

3-2. Automotive Area (2)

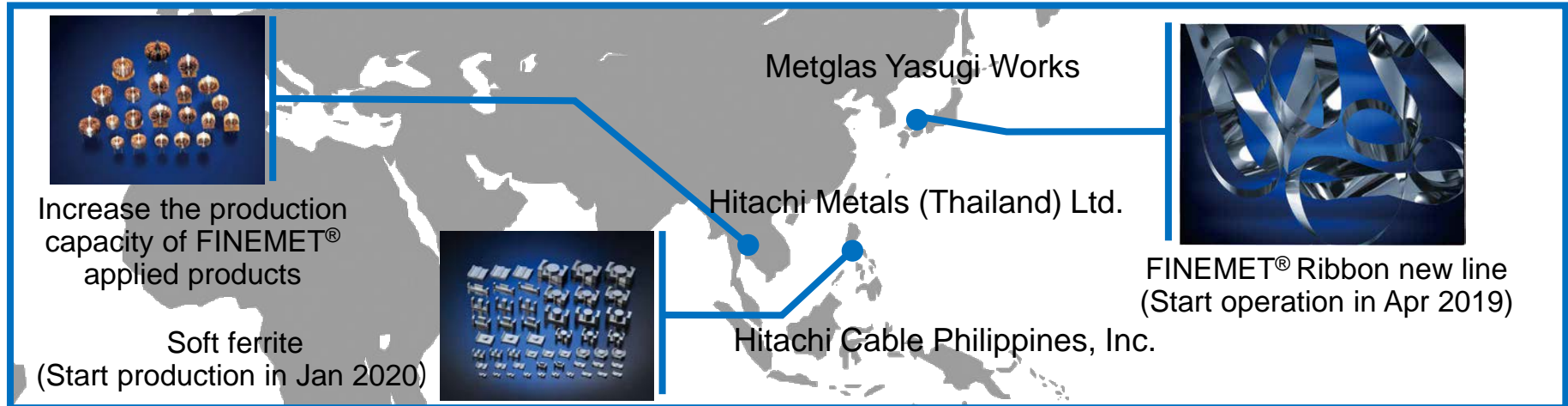
Advanced Components & Materials Contributing to Fast-growing Electrification and xEVs*1



*1: xEV refers to Electric Vehicle (EV), Hybrid Electric Vehicle (HEV), and Plug-in Hybrid Electric Vehicle (PHEV).
 *2: Electric Power Steering *3: Electrical Parking Brake

Expand the soft magnetic components and materials business

FINEMET® Ribbon	<ul style="list-style-type: none"> • Start the operation of new line of Metglas Yasugi Works (Four times capacity of the existing line)
FINEMET® Applied Product	<ul style="list-style-type: none"> • Increase the production capacity at production sites in Thailand
Soft Ferrite	<ul style="list-style-type: none"> • Launch production at production site in Philippines (Start mass production in Jan 2020)



FY2021 Sales Target for Soft Magnetic Components and Materials: 1.4 times (vs. FY2018)

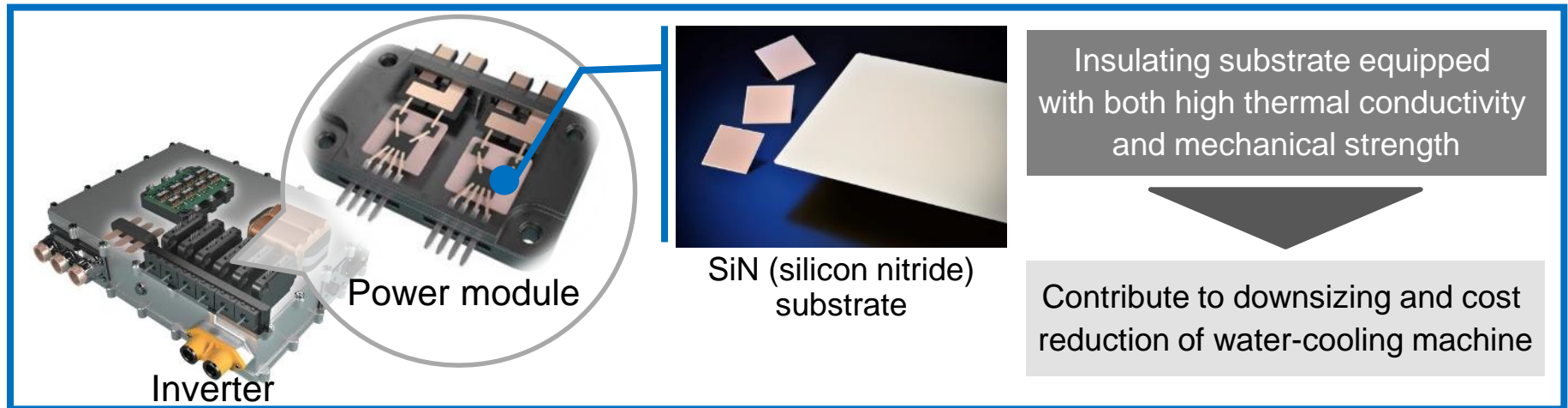
Expand the Ceramic Components business

SiN substrate

- Start the mass production of high thermal conductive components (130 W/m-K) (2Q FY2019)
- Increase production capacity in Japan

SiC substrate

- Expand the SiC substrate business by deepening abrasive technology



FY2021 Sales Target for Ceramic Components:
2.2 times (vs. FY2018)

■ Enhance new product development

Amorphous Motor

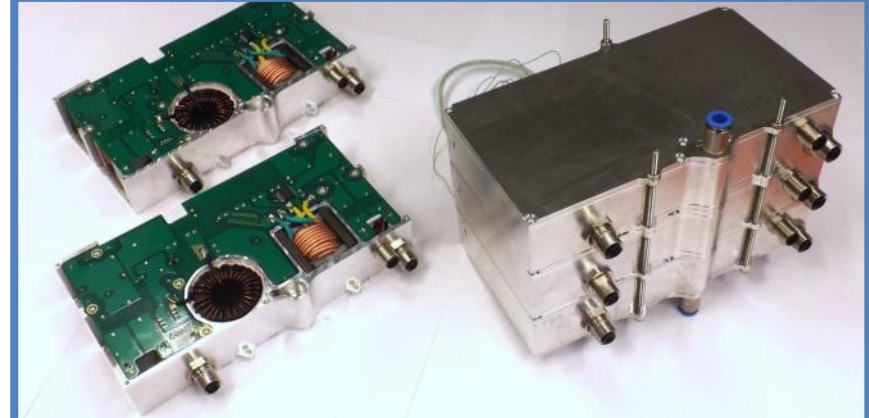


Develop motor core using low iron-loss amorphous metals

News Release October 24, 2018

Target the motor core components market for growing xEVs.

On-board Charger (OBC)



Develop high-efficient OBC using our soft magnetic components and materials, jointly with Fraunhofer IISB

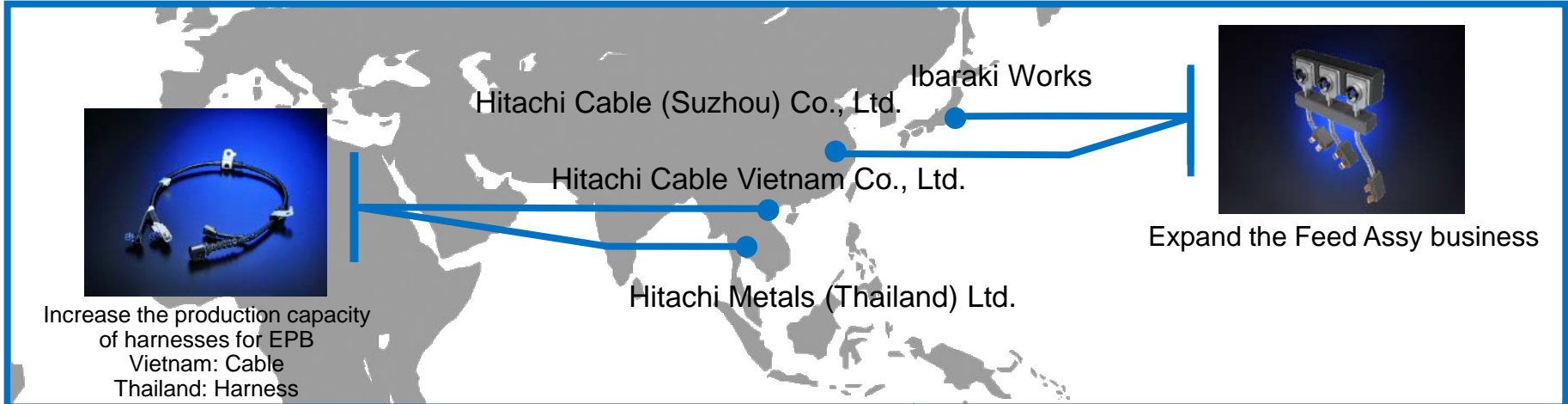
News Release April 16, 2019

Expand the business of soft magnetic components and materials for OBC

Strengthen the global production system

Automotive Electronic Components

- Increase the production capacity of harnesses for EPB at the production sites in Thailand and Vietnam (start operation in 2020)
- Expand the Feed Assy business at the production sites in Japan and China
- Accelerate the development of new sensors



FY2025 Sales Target for Automotive Electronic Components:
1.7 times (vs. FY2018)

3-7-1. Automotive Area: Magnet Wires and Magnetic Materials

Magnet Wires



- Promote the adoption of HiFC™
- Start the mass production of new high-speed lines at the production sites in Japan and Thailand.
- Expand the sales of differentiated products (high PDIV* wires and surge-resistant wires)

Magnetic Materials

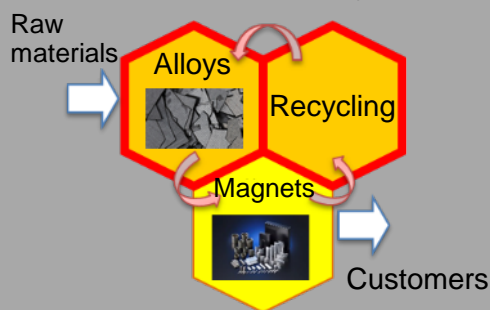


- Promote the certification of new lines
- Expand the lineup of less-heavy rare-earth magnets

3-7-2. Magnetic Materials Business: Overview of Efforts (FY2018 Medium-term Management Plan)

Integrated the control of raw materials process

Established an integrated production system by making Santoku a subsidiary



Produced 100% of magnet alloys in-house

Limited the use of heavy rare-earth

Expanded the lineup of less-heavy rare earth magnets
(Incorporated in automotive, industrial and home electric areas)



Reduced the resource risk

Increased the production capacity

Invested in new lines in the Kumagaya region



Neodymium magnets
(Started operation in Apr 2018)



Ferrite magnets
(Started operation in Feb 2018)

Production capacity: 1.3 times

Initial target for capacity utilization was not reached and profitability decreased.

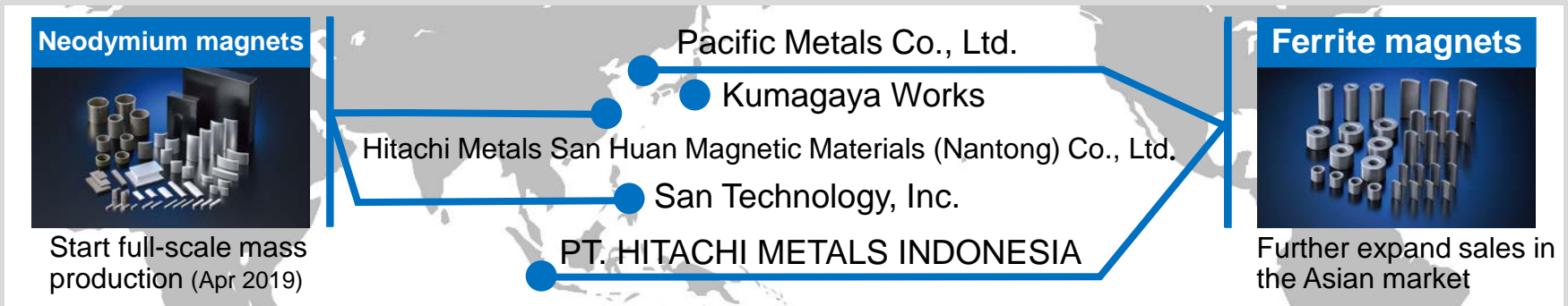
■ Improve the profitability of the Magnetic Materials Business

Increase the production capacity of new line

- Improve the capacity utilization
- Realize a structure with a smaller number of personnel

Optimize the global production system

- Improve profitability and expand new orders by enhancing cost competitiveness at overseas sites.

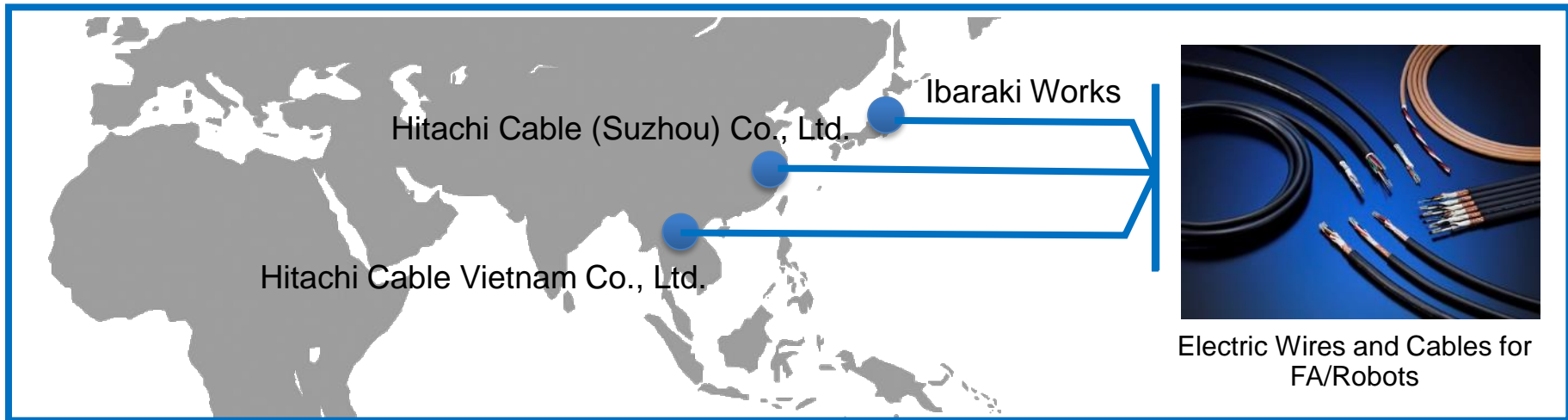


FY2021 Adjusted Operating Margin for Magnetic Materials: 10%

■ Increase market share through differentiation

FA/Robots

- Increase market share through technology featuring thinner and lighter design and longer-life performance
- Agile investment decision-making responding to market changes (Japan, China, and Vietnam)



**FY2021 Sales Target for Electric Wires and Cables
for FA/Robots: ¥10.0 billion**

■ Develop and Expand the Sales of New Products

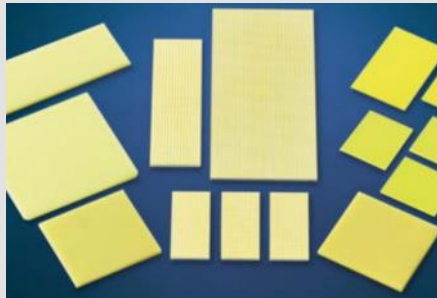
Medical Devices

[Power Electronics Materials]

- Develop and expand the share of scintillator material that supports higher-performance CT scanner

[Wires, Cables, and Related Products]

- Expand the sales of combination product of catheter and cable
- Mass production and machine automation of new probe cable products



Scintillator material



Probe cable



Catheter tube



Combination product of catheter and cable

FY2021 Sales Target for the Medical Area: 1.3 times

(vs. FY2018)

Expand Sales in Overseas Markets

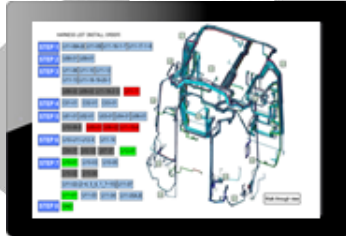
Rolling Stock

- Expand market share in the growing Chinese high-speed railway market.
- Expand sales in the European market by suggesting a solution through cable navigation

Hitachi Cable Europe, s.r.o.

Ibaraki Works

Hitachi Cable (Suzhou) Co., Ltd.



Cable navigation



Cables for rolling stock



Terminal for special high-tension cable

FY2021 Sales Target for the Rolling Stock Area: ¥14.0 billion

■ Concentrate investment in the growth areas

Power Electronics Materials

- Enhance the global production system for soft magnetic components and materials
- Increase the production capacity of ceramic products

Automotive Components

- Increase the production capacity of harnesses for EPB at the production sites in Thailand and Vietnam

Capital Expenditure for FY2019 to FY2021: ¥69.0 billion
(76% vs. the previous Medium-term Management Plan)

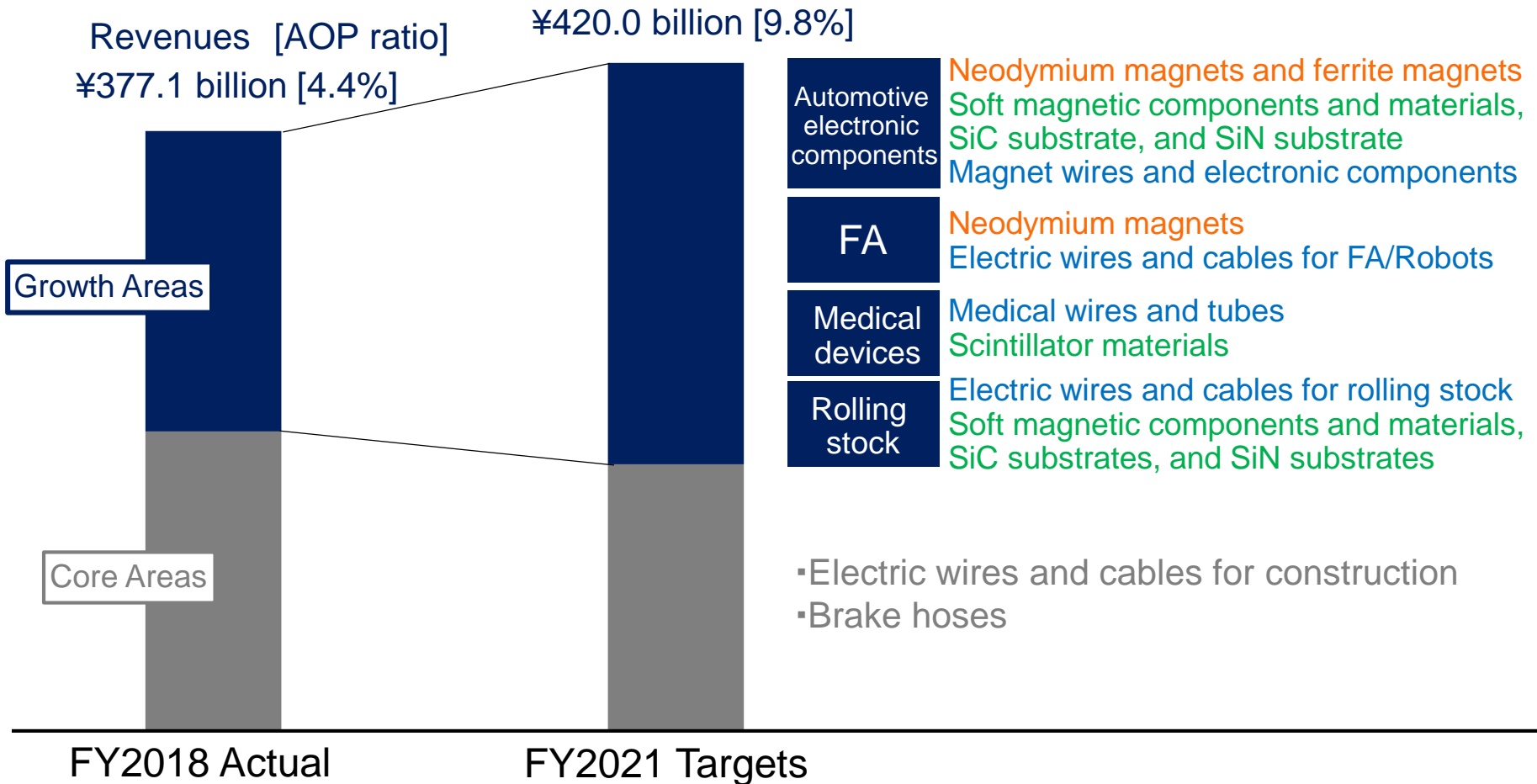
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4-1. Expand the Growth Areas

Restructuring a profitable portfolio by accomplishing “Only 1, No.1”



■ Basic Policy of the Advanced Components & Materials Division

Expand the growth areas by “reaping the benefits of investments, concentrating resources, and creating synergy”

FY2021 Targets for Advanced Components & Materials Division

Revenues:	¥420.0 billion
Adjusted Operating income:	¥41.0 billion (9.8%)
ROIC:	9.3%

This document contains forward-looking statements, such as results forecasts, management plans and dividend forecasts, that are not historical facts.

All such forward-looking statements are based upon all available information and upon assumptions and projections that were deemed reasonable at the time the Company prepared this document.

Changes to the underlying assumptions or circumstances could cause the actual results to differ substantially. The factors causing such differences include, but are not limited to, the following:

- Risks associated with market conditions related to product demand
- Risks associated with changes in raw material prices
- Risks associated with financing activities
- Risks associated with changes in foreign exchange rates
- Risks associated with changes in the value of securities
- Risks associated with the global expansion of businesses
- Risks associated with competitiveness and development and commercialization of new technologies and products
- Risks associated with intellectual property rights
- Risks associated with environmental regulations
- Risks associated with product defects
- Risks associated with laws and regulations, and official regulations
- Risks associated with earthquakes and other natural disasters
- Risks associated with information security
- Risks associated with retirement benefit obligations
- Risks associated with relationship with the parent company
- Risks associated with M&A
- Risks associated with securing talent



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