

Hitachi Metals Corporate Policies

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October 25, 2017

1-1. FY2017 Results Forecast: Main Managerial Indicators

(¥billions) Profit margin in brackets	FY2016 Business Performance US\$1=¥108	1H, FY2017 Business Performance US\$1 = ¥111	FY2017 Forecast Assuming US\$1 = ¥110
Revenues	910.5	482.4	950.0
Adjusted operating income	[7.2%] 66.0	[6.7%] 32.2	[8.4%] 80.0
EBIT	68.5	29.1	66.0
Income before income taxes	66.0	28.0	63.0
Net income*1	50.6	19.6	45.0
ROE*2	9.4%	—	8.1%
ROA*3	4.9%	—	4.3%

- Increase in demand for key products (molds and tool steel, materials for industrial equipment, magnetic materials, etc.)
- Recovery in alloys for electronic products, robust sales of new products
- Solid efforts in price adjustments, strengthening of price strategy

*1 Net income attributable to owners of parent

*2 Return on equity attributable to owners of the parent company ratio (ROE) = Net income attributable to owners of the parent company / Term-end equity attributable to owners of the parent company x 100

*3 Return on total assets (ROA) = Net income attributable to owners of the parent company / term-end total assets x 100

1-2. Revenues & Adjusted Operating Income by Segment

(¥billions)		FY2016 Business Performance (US\$1=¥108)	1H, FY2017 Business Performance (US\$1=¥111)	FY2017 Forecast (US\$1=¥110)
Specialty Steel Products	Revenues	243.2	141.0	290.0
	Adjusted operating income	23.5	13.5	30.0
	Adjusted operating margin	9.7%	9.6%	10.3%
Magnetic Materials and Applications	Revenues	99.8	52.1	110.0
	Adjusted operating income	9.3	4.8	11.5
	Adjusted operating margin	9.3%	9.2%	10.5%
Functional Components and Equipment	Revenues	333.5	178.4	340.0
	Adjusted operating income	17.5	6.2	21.5
	Adjusted operating margin	5.2%	3.5%	6.3%
Wires, Cables, and Related Products	Revenues	232.9	110.5	210.0
	Adjusted operating income	14.7	6.9	17.0
	Adjusted operating margin	6.3%	6.2%	8.1%
Other & Adjustments	Revenues	1.1	0.4	0
	Adjusted operating income	1.0	0.8	0
Total	Revenues	910.5	482.4	950.0
	Adjusted operating income	66.0	32.2	80.0
	Adjusted operating margin	7.2%	6.7%	8.4%

As of July 1, 2017, the segment classification to which SH Copper Products Co., Ltd., a consolidated subsidiary, and another company belonged, was changed from "Wires, Cables, and Related Products" to "Specialty Steel Products," and figures after the segment change are indicated.

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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**

Key Policies of the FY2018 Medium-term Management Plan

- 1. Accelerate the creation and execution of growth strategies.**
- 2. Achieve a robust business structure and highly efficient business management.**
- 3. Strive to establish a business base that is sustainable over the long-term.**

Our vision

Expand the business globally while improving profitability



Continuous
portfolio remodeling

Organic growth
(from capital
investment & R&D)

Growth
through M&A

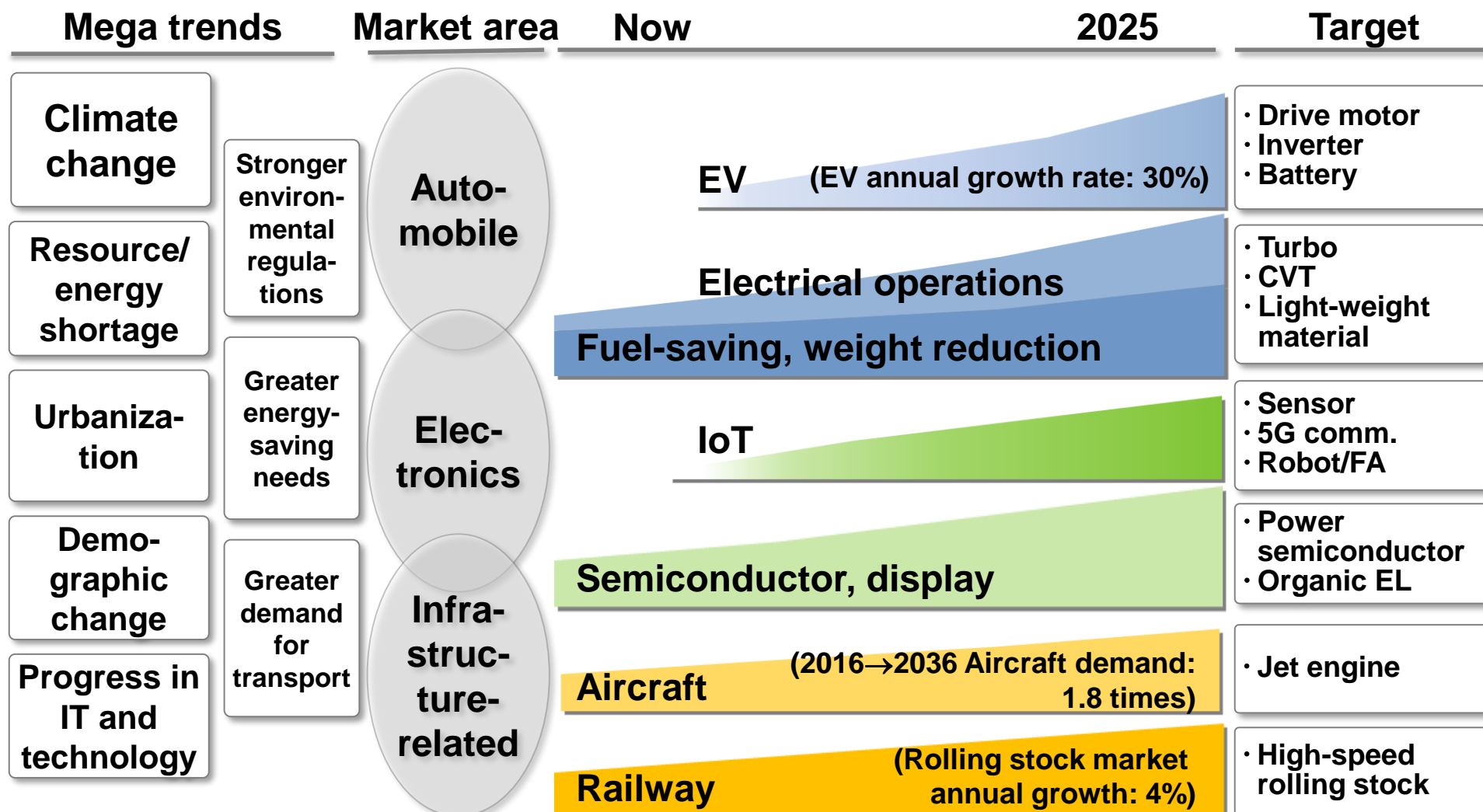
Strengthen the business base

**Management driven by both the growth strategy
and a stronger business base**

Made strategic investments aimed at expanding global business domains and strengthening the business base.

Organic growth (from capital investment & R&D)	<ul style="list-style-type: none"> Established Corporate Research Lab, “GRIT” (Investment: approx. ¥10 billion) (Opened in April 2017)
	<ul style="list-style-type: none"> Established Hitachi Metals Advanced Machining, Ltd. (April 2017)
	<ul style="list-style-type: none"> Expanded production capacity for precision casting turbine wheels (Investment: more than ¥3 billion) (Begins operation in FY2019)
	<ul style="list-style-type: none"> Increased production capacity for piston ring materials in Japan and China (Investment: approx. ¥2.5 billion) (Begins operation in 2H, FY2017)
	<ul style="list-style-type: none"> Integrated SH Copper Products and Hitachi Metals Neomaterial (April 2018)
	<ul style="list-style-type: none"> Expanded production capacity for clad metals at Tsuchiura Works (Investment: approx. ¥7.5 billion) (Begins operation in 2H, FY2018)
Continuous portfolio remodeling	<ul style="list-style-type: none"> Reorganized piping components business (October 2017)
Growth through M&A	<ul style="list-style-type: none"> Consolidated Hitachi Metals MMC Superalloy as wholly-owned subsidiary → Merged (April 2018)
Strengthen the business base	<ul style="list-style-type: none"> Improved inventory turnover rate and defect rate through the <i>Monozukuri</i> Innovation.

Solve social issues and create new value



* EV: Including term for hybrid electric vehicles (HEV) and plug-in hybrid electric vehicles (PHEV).

* Market trend is Hitachi Metals' estimate, based on various materials.

Three innovations under corporate initiatives

Monozukuri
innovation



Sales innovation



R&D innovation



Aggressive investment in human resources and goods
(FY2017 capital expenditure: ¥90 billion)

Mass production of
quality products

Harvesting gains from
increased production

Creation of new
businesses

**Achieve adjusted operating income
over ¥100 billion through organic growth (FY2018)**

Hitachi Metals Corporate Policies


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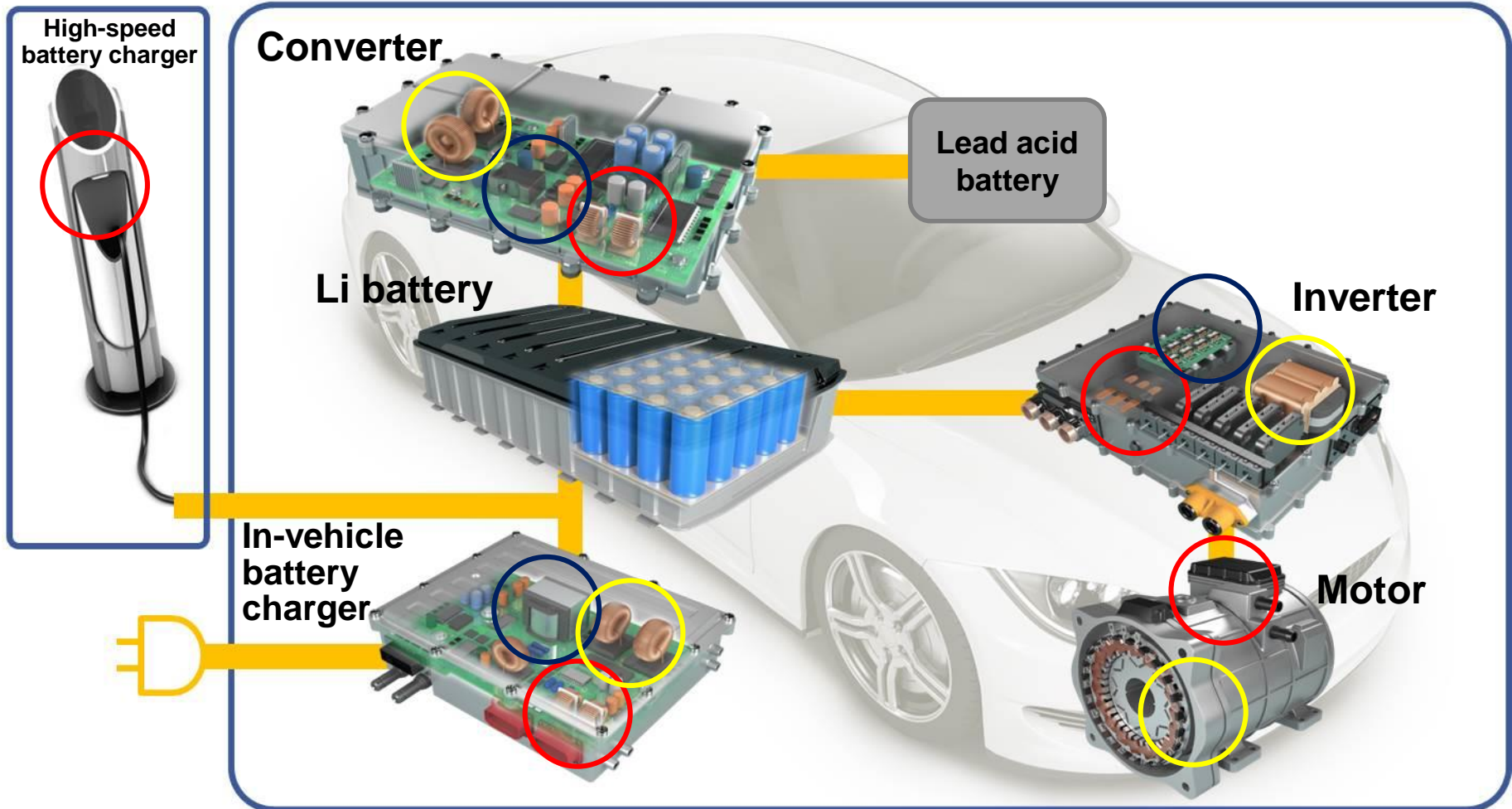
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Soft magnetic components installed in EVs

 FINEMET® products

 Soft ferrite products

 Amorphous metal products



Become a core supplier in the EV industry

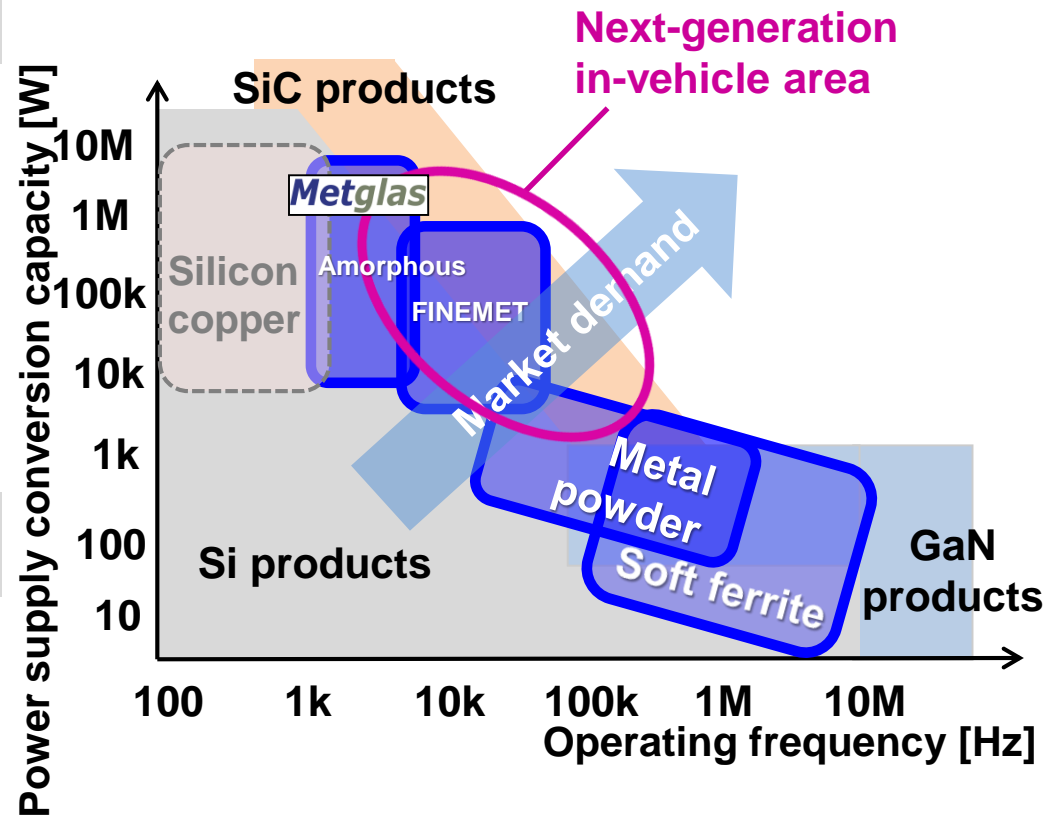
Accommodate high-frequency and large current

- An extensive materials portfolio
- Accommodate next-generation power devices

Contributes to size reduction and energy-saving of in-vehicle electronic components

Enhance production system

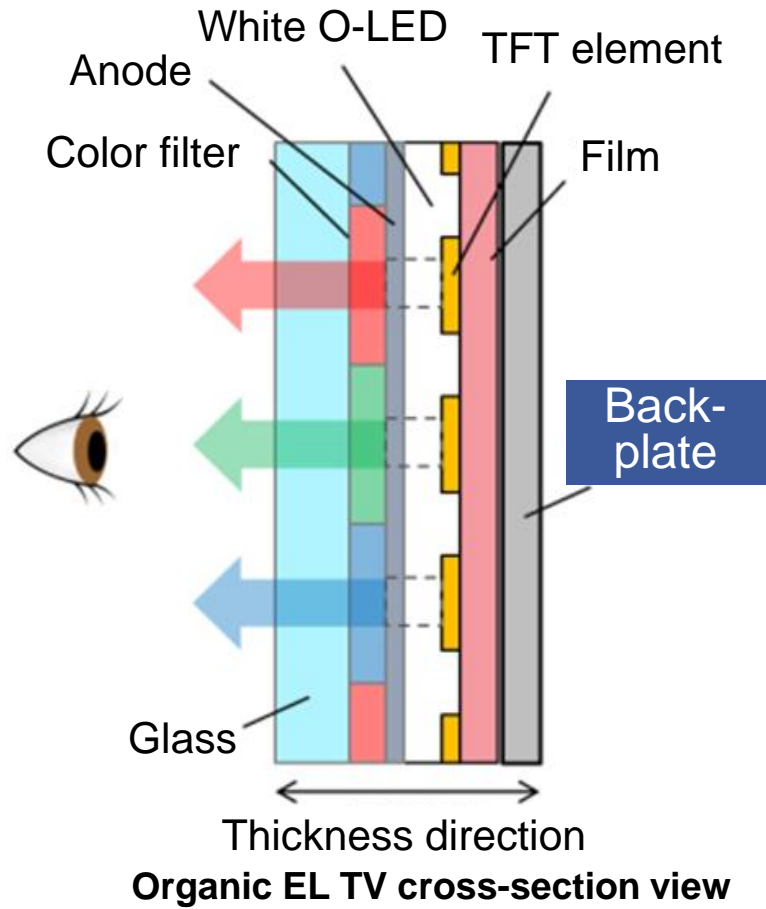
- Consolidate R&D functions in Tottori plant (March 2017)
- Enhance production capacity in Japan and Thailand (To be completed in end of FY2018)



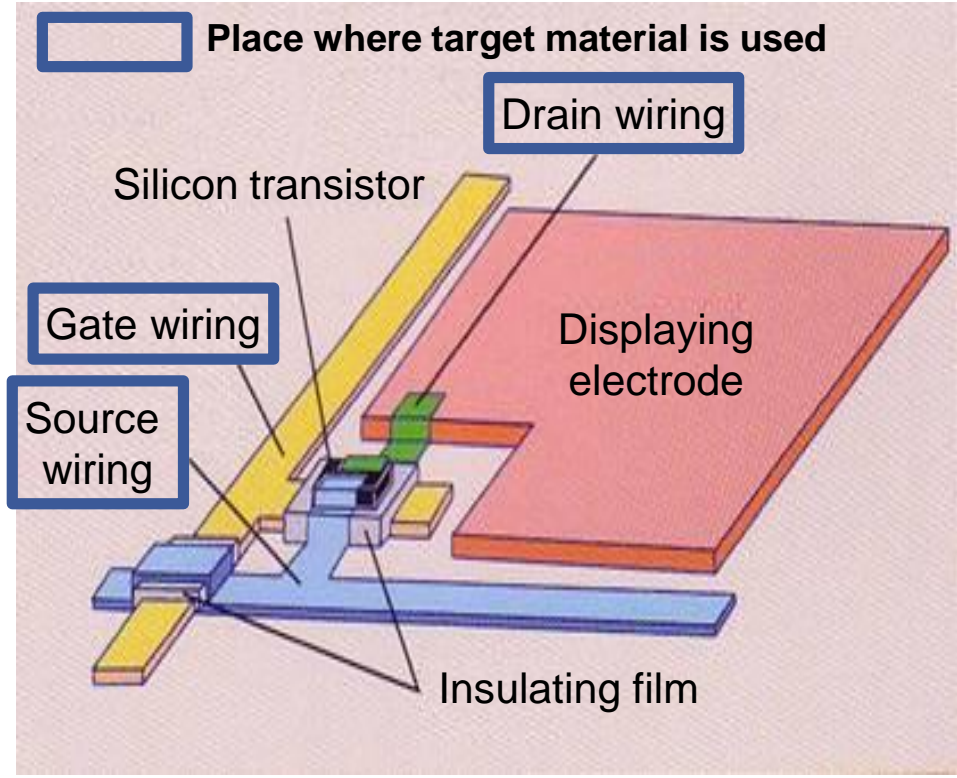
Soft magnetic components FY2018 sales plan: 30% increase (vs FY2016)

Increase in demand for organic EL (OLED)-related products

Backplate



Target material

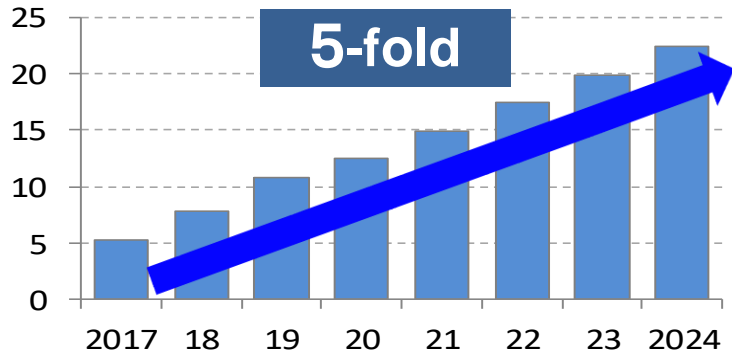


TFT element internal view

Capture market needs with large-scale investments

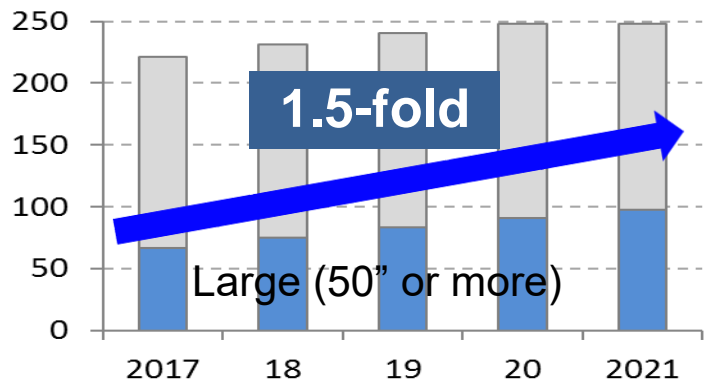
(approx. ¥20 billion in alloys for electronic products)

OLED panel production volume (Mm²)*1



Demand increase

Demand by OLED TV size (M units) *1



Size increase

Backplate

Mass production response capacity

Target material

Broad line-up
(Pure Mo/Mo alloy/
pure Cu, etc.)

Development proposal ability
(New alloy,
Oxide materials)

Wide rolling technology

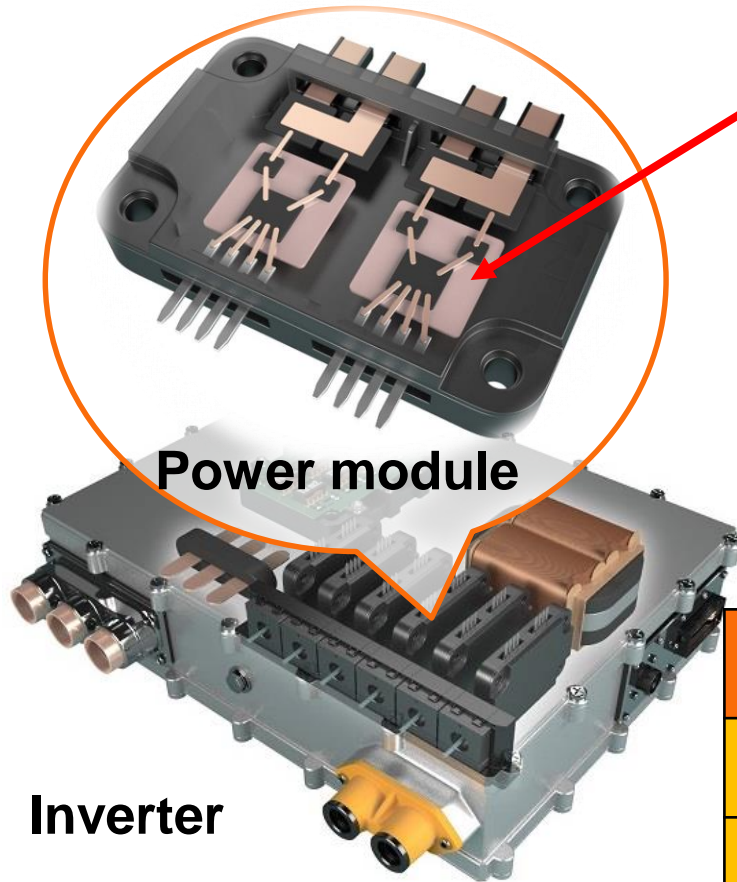
Large material integrated molding technology

Alloys for electronic products-related FY2018 sales plan: 25% increase*2 (vs FY2016)

*1 Market trend is Hitachi Metals' estimate, based on various materials.

*2 Excludes sales of SH Copper Products Co., Ltd.

Expand ceramics products that utilize elemental technology



Power module

Inverter

High heat transfer insulating substrate

- Silicon nitride substrate that combines high thermal conductivity and mechanical rigidity

Contributes to size reduction of water cooling system of power module



Silicon nitride substrate

	Developed product	Conventional product	Aluminum nitride
Thermal conductivity (W/m·K)	130	90	180
Bending strength (MPa)	700	700	350-500

Silicon nitride substrate FY2025 sales plan: 5-fold (vs FY2016)

A group of high-share products that support piping infrastructure

Construction equipment field

Construction equipment

Casting fittings



Composite fittings

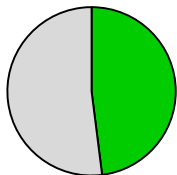


High reliability

Lead-free

Excellent anticorrosion properties

Domestic share



Gas field

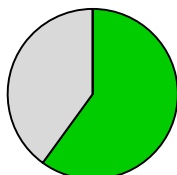
Gas piping system

Flexible piping system



Easy application and safety

Domestic share



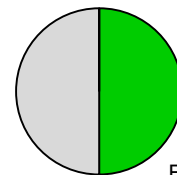
Polyethylene piping system



High quake-resistance

High anticorrosion

Domestic share



Electro-fusion fittings

Industrial field

For semiconductor, plants, and fuel battery

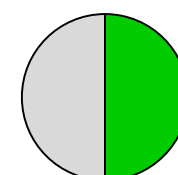
Mass flow controller (MFC)



Liquefied material vapor supplier built in MFCs (vaporizer)

High-precision, high-speed flow control

Global share



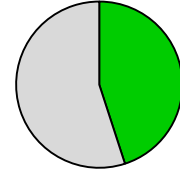
Vaporizing vaporizer

Valve products



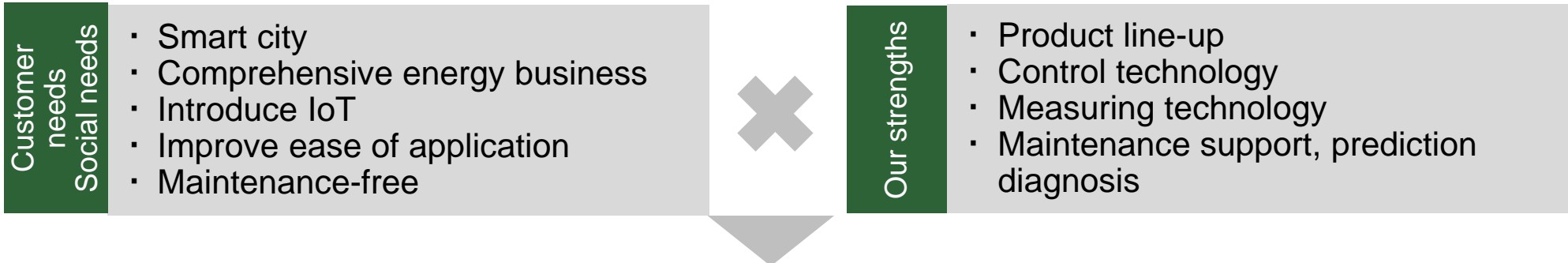
Saves energy and labor at plants with low pressure loss

Domestic share



Malleable valve

*Market share is based on Hitachi Metals' data



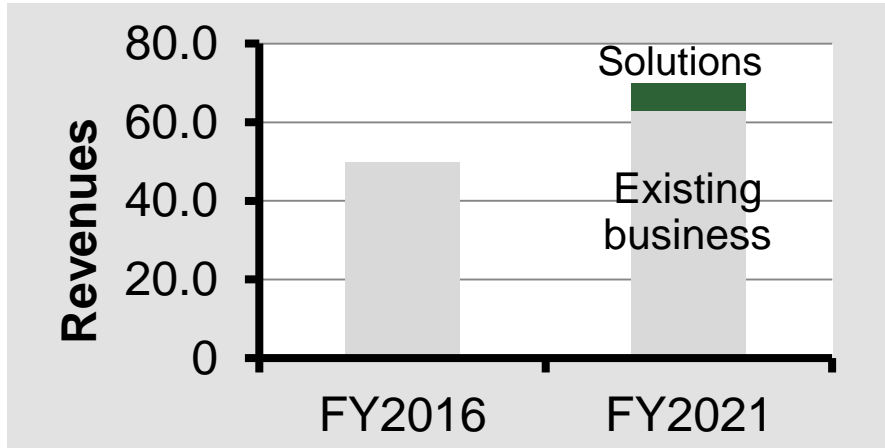
Expand business by strengthening solutions

- Secure safety through optimal control of mass flow
 - Reduce maintenance cost of entire facility
 - Prevent degradation and monitor conditions of piping system
 - Improve ease of application to address labor shortage
- etc.

■ Measures

Strengthen 3-business management system of fittings, valves and MFC
(Implemented on October 1, 2017)
 ⇒ Concentrate managerial resources into growth areas


Enhance production capacity for flexible piping system by 20%. Establish high-efficiency production line for casting fittings.
(To be launched in FY2018)




Piping components business' FY2021 sales plan: 40% increase (vs FY2016)

Expand magnetic wire business

■ Develop unique products for the EV market

HiFC™*1 		HiFC™	Tough pitch copper	Contribution to high-performance motors Reduced size and weight by 2%*2 Improved productivity Improved reliability*3
	Conductivity	Excellent	Good	
	Flexibility	Excellent	Moderate	
	Weldability	Excellent	Moderate	



■ Implement capital expenditure in anticipating strong EV demand

<Raw materials process>
 Introduce new continuous casting & rolling line and new process
 (Scheduled to launch in April 2018)

<Processing process>
 Accelerate *monozukuri* by introducing new production line (Scheduled to launch in 1H, 2018)

Magnet wire FY2025 sales plan: 1.5-fold (vs FY2016)

*1 New proprietary copper alloy developed by Hitachi Metals *2 Copper wire weight reduced by 2% (vs Hitachi Metals' tough pitch copper)

*3 Reliability of welding area improved due to HiFC™ little oxygen in copper

“Everyone” “produces solid results” “through proactive work”

Work style reforms

Diversity

- “Reduce information materials and meetings by half” (10% reduction of total work hours)
- 78 new graduates to be hired next spring (of which 18 are female; female ratio 3 times higher than the previous year’s)
- Instill corporate philosophy (President’s town hall style meetings, penetration tools, etc.)
- Vitalize human resources through *monozukuri* innovations and sales innovations

Achieve stronger front-line operations at production and sales sides and a “transparent Head Office”

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**

FY2018 Plan

Revenues: ¥1 trillion
Adjusted Operating Income: ¥100 billion (Margin: 10.0%)

(Exchange rate assumption US\$1 = ¥110)

**Strive for sustainable growth by executing global growth
strategies and strengthening the business base**

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:

- Changes in economic conditions and regulations in the main markets where the Company operates, particularly Japan, the Americas, Asia and Europe
- Sudden changes in technological trends
- Changes in competitive advantage and the capabilities of the Company and its subsidiaries and affiliates to develop and commercialize new products and technologies
- Fluctuations in the status of product markets, exchange rates and international commodity markets
- Changes in the financing environment
- The capability of the Company and its subsidiaries and affiliates to cope with fluctuations in product supply and demand, the status of product markets, exchange rates and international commodity markets
- Protection of the Company's intellectual property, and securing of licenses to use the intellectual property of other parties
- Changes in the status of alliances with other parties for product development, etc.
- Fluctuations in Japanese stock markets