

Mitsubishi Materials Corporation Investor Conference Material

November 12, 2019

Naoki Ono, Chief Executive Officer

Mitsubishi Materials Corporation



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FY2020 1st Half Result (Comparison with the Previous Year Result)

Comparison with the Previous Year Result

Net sales	: Decreased overall due to a decline in all the businesses.
Operating profit	: Decreased overall as a result of a decline in all the businesses other than Metal business.
Ordinary income	: Decreased due to a fall in operating profit despite an increase in dividend income and so on.
Net income*	: Decreased due to an increase in extraordinary loss, in addition to a fall in ordinary income.
Dividend	: Previous forecast remains unchanged.

(¥ billions)	FY2019 1st Half Result (a)	FY2020 1st Half Result (b)	Difference (b) - (a)
Net sales	855.2	748.4	-106.8
Operating profit	27.5	16.9	-10.6
Ordinary income	33.0	27.2	-5.8
Net income*	14.8	4.5	-10.3
Net income per share (yen)	113.39	34.46	-78.93
Dividend per share (yen)	40	40	-
Exchange rate USD(yen/\$)	110	109	-2
Copper price(LME)	294¢/lb	270¢/lb	-24¢/lb

FY2020 1st Half Result (Comparison with the Previous 1st Half Forecast)

Comparison with the Previous 1st Half Forecast

Net sales	: Decreased overall due to a decline in all the businesses.
Operating profit	: Decreased overall as a result of a decline in all the businesses other than Metal business.
Ordinary income	: Increased due to an increase in dividend income and other items despite a fall in operating profit.
Net income*	: Decreased mainly due to an increase in income taxes despite an increase in ordinary income.
Dividend	: Previous forecast remains unchanged.

(¥ billions)	Previous 1st Half Forecast (a) (Announced on Aug. 7)	FY2020 1st Half Result (b)	Difference (b)-(a)
Net sales	830.0	748.4	-81.6
Operating profit	23.0	16.9	-6.1
Ordinary income	24.0	27.2	3.2
Net income*	5.0	4.5	-5.0
Net income per share (yen)	38.18	34.46	-3.72
Dividend per share (yen)	40	40	-
Exchange rate USD (yen / \$)	110	109	-1
Copper price (LME)	290¢/lb	270¢/lb	-20¢/lb

FY2020 Full Year Forecast

Comparison with the Previous Year Result

Net sales	: Decrease overall due to a decline expected in all the businesses.
Operating profit	: Decrease overall as a result of a decline in all the businesses other than Metal business.
Ordinary income	: Decrease because a fall in operating profit are expected.
Net income*	: Decrease because a fall in ordinary income are expected.
Dividend	: Previous forecast remains unchanged.

(¥ billions)	FY2020 Previous Forecast(a) (Announced on May 13)	FY2020 Forecast (b)	Difference (b)-(a)
Net sales	1700.0	1530.0	-170.0
Operating profit	51.0	31.0	-20.0
Ordinary income	62.0	42.0	-20.0
Net income*	30.0	10.0	-20.0
Net income per share (yen)	229.08	76.37	-152.71
Dividend per share (yen)	80	80	-
Exchange rate USD (yen / \$)	110	108	-2
Copper price (LME)	290¢/lb	268¢/lb	-22¢/lb

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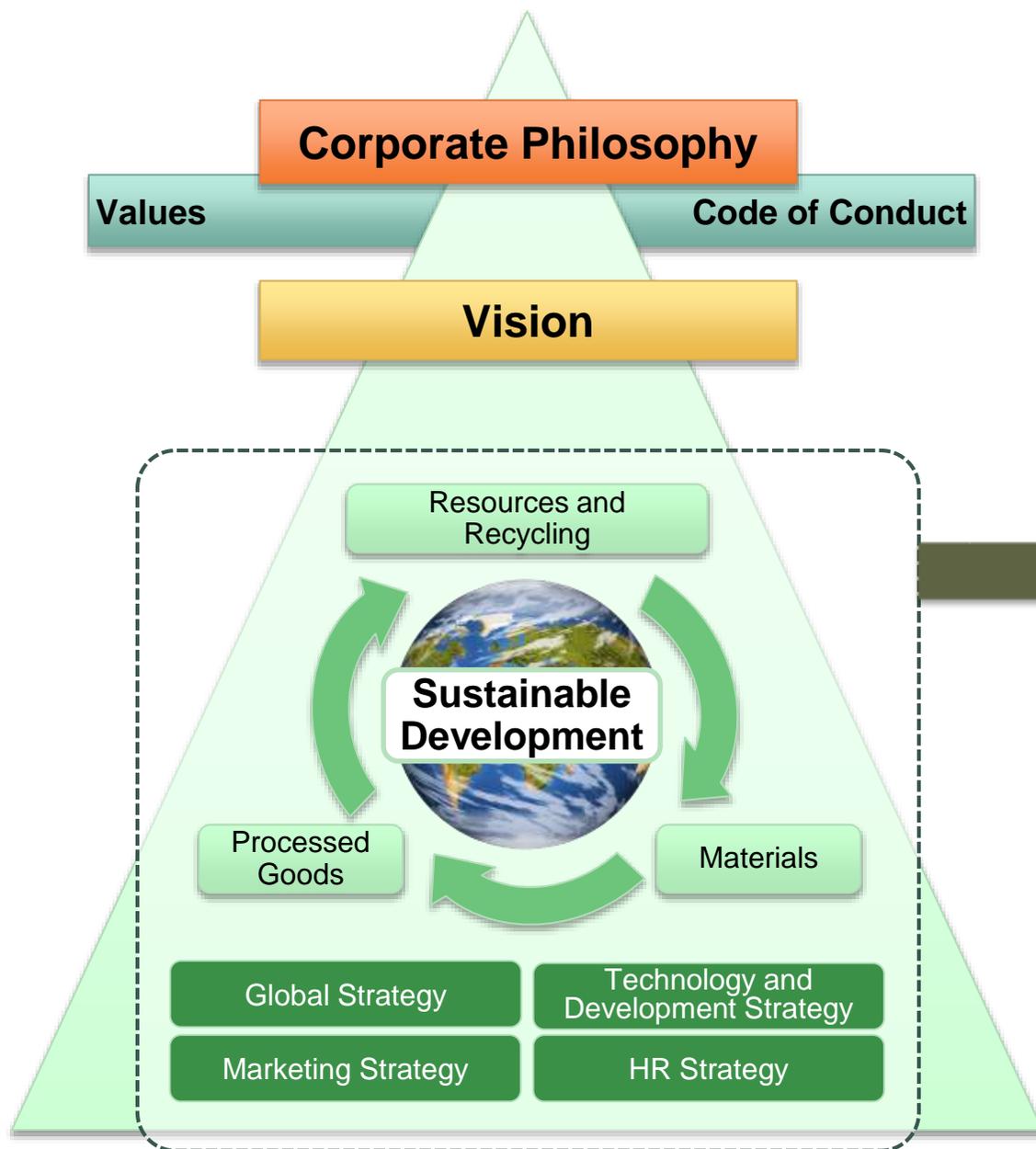
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Group-wide Policy



Long-term Management Policy

Medium- to Long-term Goals (the company in the future)

- ◆ Leading company in domestic and overseas key markets
- ◆ Achieving high profitability and efficiency
- ◆ Achieving growth that exceeds the market growth rate

Group-wide Policy

- ◆ Optimization of business portfolio
- ◆ Comprehensive efforts to increase business competitiveness
- ◆ Creation of new products and businesses

Medium-term Management Strategy

Key Strategies in FY2020 Strategy

- ◆ Achieve growth through innovation
- ◆ Create value by building a recycling-oriented society
- ◆ Increase the company's market presence through investment for growth
- ◆ Increase efficiency through continuous improvement

Progress on the Medium-Term Management Strategy

◆ Medium-Term Management Strategy

Review the growth strategy and investment plan for upcoming three years once a year



◆ Rolling Review of the Medium-Term Management Strategy (FY2020 Strategy)

Growth strategies: No major changes

Investment plan: No major changes

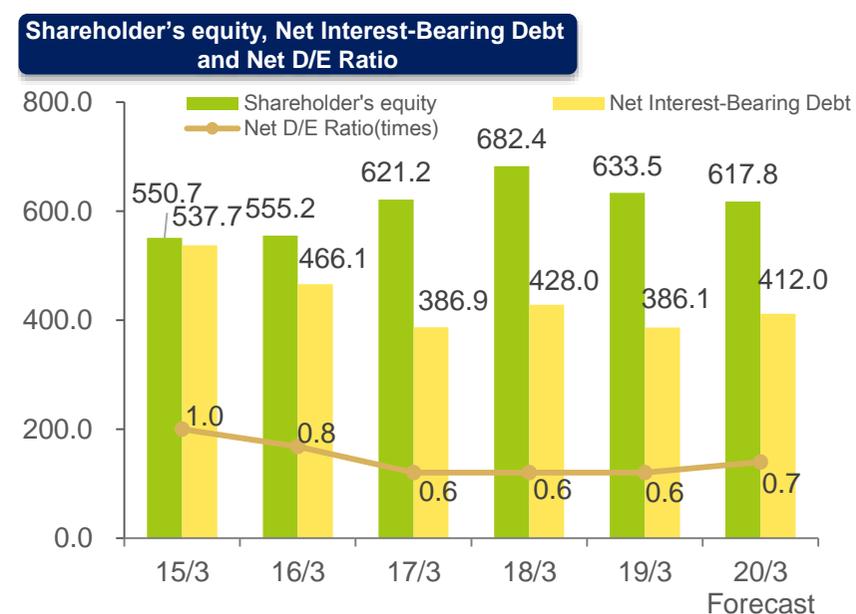
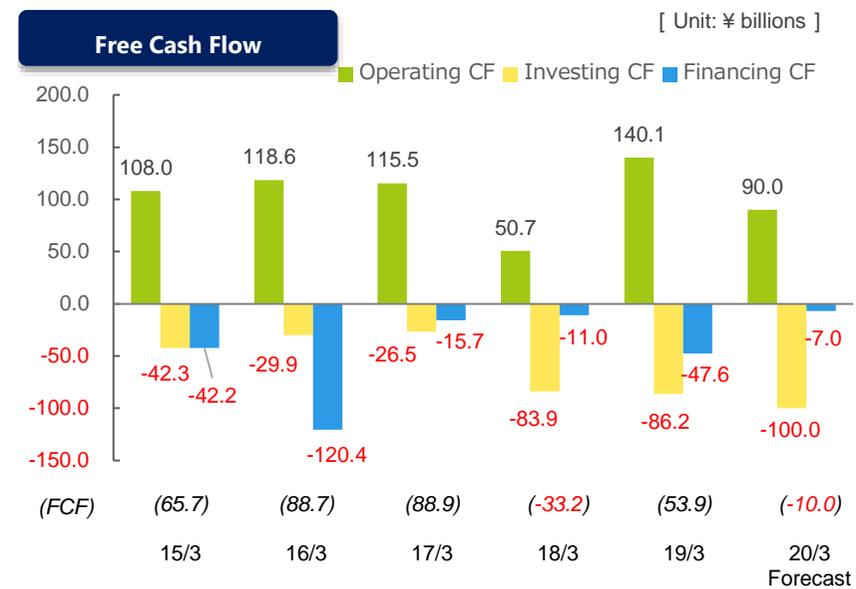
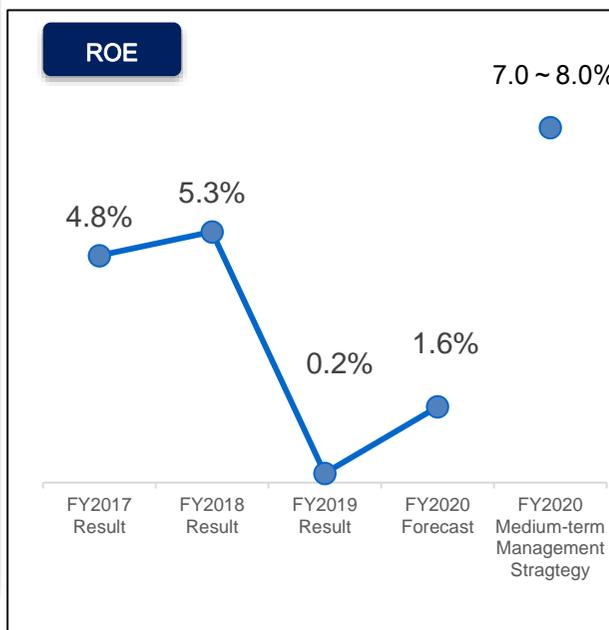
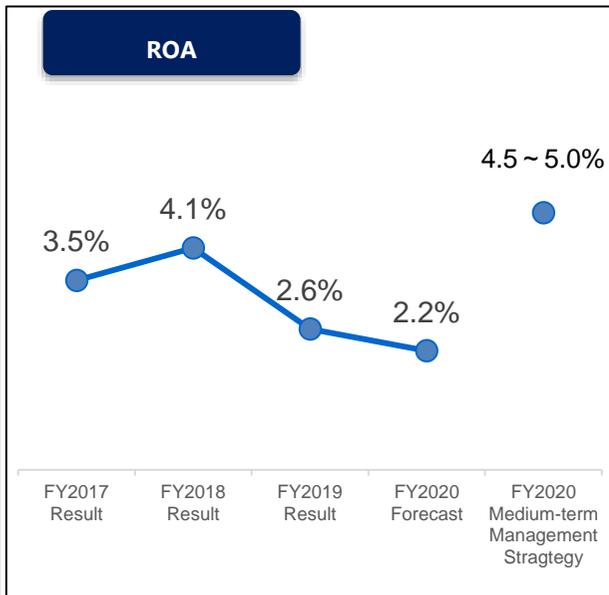
◆ Optimization of business portfolio

- New establishment of the “Advanced Products Company” (2018)
- Absorption-type Merger of the consolidated subsidiary Mitsubishi Shindoh Co., Ltd. (2019)
- Sales of all shares in Kobelco & Materials Copper Tube Co., Ltd. (2019)



◆ Next Medium-term Management Strategy

Currently being prepared (scheduled for announcement at the end of the FY2020)



Enhancement Business Competitiveness

Establishment of the Smart Factory Promotion Center

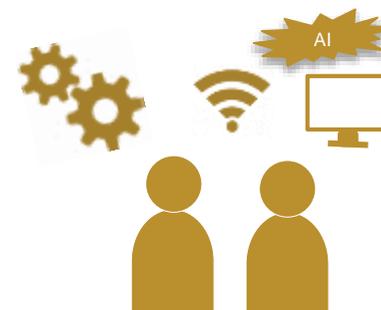
On September 1, 2019, the Smart Factory Promotion Center was established in Omiya-ku, Saitama.
(Press release issued on September 2, 2019)

Item	Contents
Purpose	To promote further digitization and automation of production sites
Business Environment	Diversification of customer needs
	Labor shortages in Japan
Initiatives to Issues	AI-based fault prediction for critical equipment
	Development of inspection equipment for products with complex shapes using robots and image processing technologies
	Building of data collection infrastructure concerning information on objects and people using RFID
	Improving safety through AI-based analysis of in-plant camera images
	Automation of exterior inspections by applying AI to image analysis
	AI-based plant operating support
	Active exchanges with universities and other outside organizations



Support for turning production sites into smart factories

- Automation of inspection and sorting through robots and image processing
- Line automation through collaborative robots
- Improving operating procedures through visualization and analysis of human behavior
- AI-based equipment fault prediction and plant operating support, etc.



Smart Factory Promotion Center

- Development of AI-focused human resources and improving AI literacy
- Enhancing technological capabilities in AI and mechatronics
- Demonstration testing and development of in-house technologies
- Strengthening coordination with universities and other outside organizations

Key Measures to Strengthen and Restructure the Business (from April 2017)

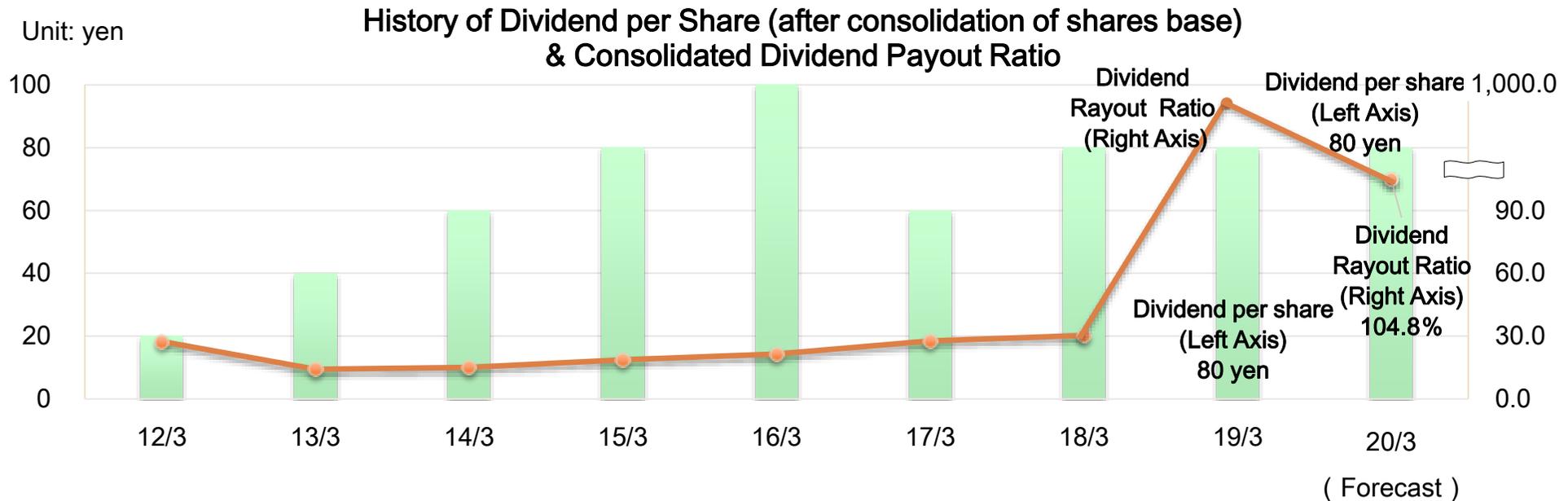
Segment	Results
Advanced Products	<ul style="list-style-type: none"> • “Luvata Special Products Division” became a consolidated subsidiary through completion of the acquisition of shares • Development of Flake-type thermistors for high-precision temperature control (the world’s smallest and with long-term reliability) of laser diodes for optical communication • To begin collaboration with Denka Company Limited for full-fledged mass-production of ceramic insulated circuit substrates with high thermal conductivity for eco-friendly vehicles • Joint development with Mitsubishi Shindoh Co., Ltd. regarding corrosion protective plating technology for the terminal connectors of aluminum wire harnesses which is expected to contribute for reducing the weight of automobiles • Development of two types of copper sintering bonding materials for next-generation power modules capable of solving problems that arise in conventional solder • Development of uniformity electrodeposition coating technology for highly heat-resistant and highly insulating resin for next-generation vehicles • <u>Developed compact high-performance multiband antennas for IoT devices that use cellular communications (LTE / 3G)</u> • <u>Aiming to become the leading global company in the industry of copper & copper alloy products through the absorption merger of consolidated subsidiary Mitsubishi Shindoh Co., Ltd.</u> • <u>Sold all shares in Kobelco & Materials Copper Tube Co., Ltd.</u>
Metalworking Solutions Business	<ul style="list-style-type: none"> • "Central Japan Technical Center" was established • All shares in “Hitachi Metals MMC Superalloy, Ltd.” were sold • "TianJin LingYun tool Design Co., LTD. (China)" was relocated, and improved and expanded • Tungsten recycling capacity at Japan New Metals Co., Ltd. was increased 1.5 times • "Machining Technology and Education Center in North America (United States)" was relocated, and improved and expanded • <u>"Stuttgart Technical Center (Germany)" was established</u> • <u>"Queretaro Technical Center (Mexico)" was established</u>
Metals Business	<ul style="list-style-type: none"> • "MM Metal Recycling B.V.", an E-Scrap sampling facility established in the Netherlands, went into operation
Cement Business	<ul style="list-style-type: none"> • Capacity of waste plastic processing at Kyushu Plant increased 1.7 times

Black: FY2018 and FY2019
Red: FY2020

Key Measures to Strengthen and Restructure the Business (from April 2017)

Segment	Results	Profitable: FY2018 and FY2019 Unprofitable: FY2020
Others Business (Environment & Energy Business)	<ul style="list-style-type: none"> • "KitaKyushu Ash Recycle Systems Co., Ltd.", which is engaged in the treatment of incineration fly ash, went into operation • To Begin the Joint development of Recycling Technology of Cobalt, Nickel and Other Metals with Nippon Magnetic Dressing Co., Ltd. • "New Energy Fujimino Co., Ltd." was established for operating a business of producing biogas from food waste • <u>Began operations of Wasabizawa Geothermal Power Plant</u> • <u>Started construction of Appi Geothermal Power Plant</u> • <u>Started demonstration testing of technology to diagnose deterioration of in-vehicle lithium-ion batteries</u> • <u>Strengthened structure of business to produce biogas from food waste</u> 	
Common	<ul style="list-style-type: none"> • All shares in "Mitsubishi Materials Real Estate Corporation" were sold • Investment in "Incubation Alliance, Inc.," which is involved in the development and manufacture of the new carbonaceous material, graphene • "New Business Development & Promotion Division" and "EV Material Development & Recycling Business Promotion Dept." were established • Establishment of "MMC Innovation Investment Limited Partnership," which will invest in venture companies that have material technologies • <u>Established Smart Factory Promotion Center to further advance the digitization and automation of production sites</u> 	

Shareholder Return



	17/3 (Results)	18/3 - 20/3
Dividend	60 yen/share *	80 yen/share

- ◆ While the Company's performance is changed, its policy is to maintain stable dividends, and annual dividends during the FY2018-2020 period will be **80 yen per share** (same as dividend in FY2018).
- ◆ If the consolidated dividend payout ratio is lower than 25%, however, the Company will temporarily increase the dividend or purchase treasury stock.

* A consolidation of shares of the Company's common stock at a 10:1 ratio was executed, with an effective date of October 1, 2016. According to this, dividend per share for FY2012 to FY2017 are calculated on the assumption that the consolidation of its shares was conducted at the beginning of the FY2012.

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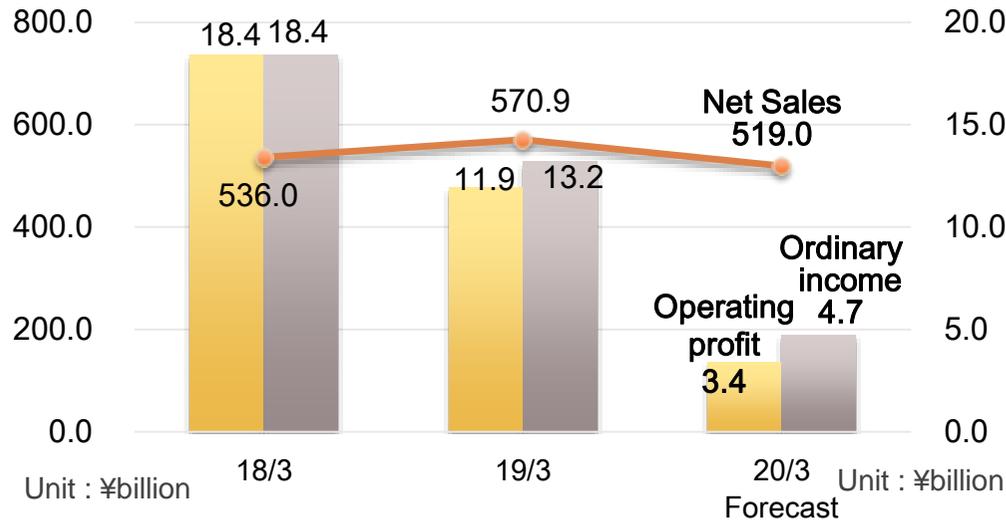
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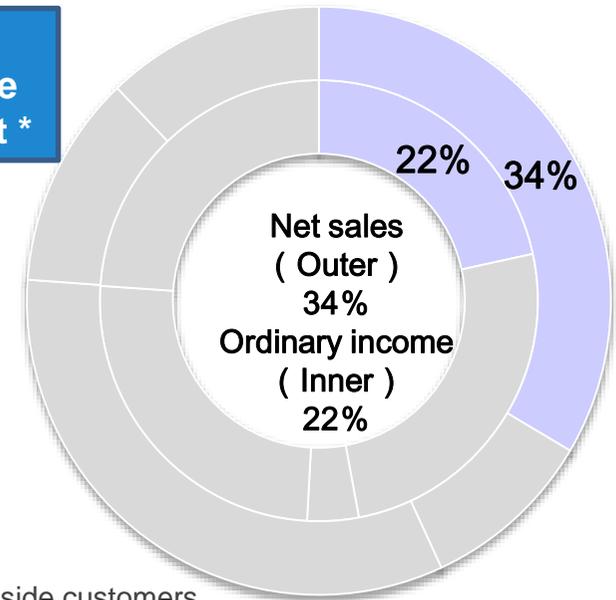
Advanced Products

Advanced Products

History of Consolidate Earnings



Net sales & Ordinary income ratio by Segment *



*FY2019 Result
Net sales is for outside customers

FY2020

◆ Copper & Copper Alloy Products

Mitsubishi Shindoh Co., Ltd. experiences a decline in sales of terminal materials for automobiles due to production adjustments by automotive component manufacturers.

The Luvata Group experiences a decline in sales of welding-related products for automotive manufacturers in China and elsewhere, and declining in sales of conductive components for automotive and other sectors in Europe and Asia.

◆ Electronic Materials & Components

Sales of products for semi-conductors and electronics decline due to decelerating growth of the smartphone market and worsening of semiconductor market conditions.

Additionally, sales of electronic device products also decline due to worsening market conditions in China attributable to trade friction between China and the United States.

◆ Aluminum

Mitsubishi Aluminum Co., Ltd. experiences declining sales of heat exchanger sheet materials for automobiles and extrusion products for trucks and automobiles due to harsh market conditions and other factors.

Universal Can Corporation expands sales with the market launch of upsized aluminum bottle cans, but due to the ongoing impact from PET bottles for coffee beverages, sales of aluminum bottle cans decline. Similarly for regular cans, it will be necessary to limit supply quantities for multi-product supply, and lower sales are expected.

Advanced Products

Medium-term Management Strategy - Progress on Key Strategies

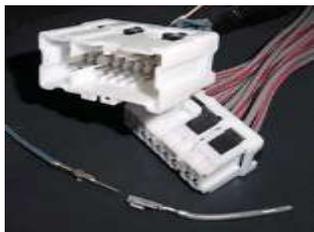
◆ Automotive Sector

Rapid shift of automobiles to EVs, automatic driving technology, and progress of connected technology

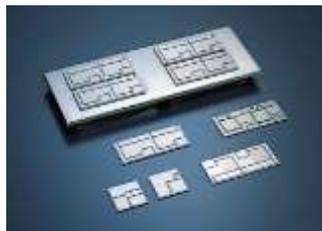


[Major Progress in FY 2020]

Key Strategies		Measures and Plans	Progress
Copper & Copper Alloy Products	Fortify the manufacturing system of rolling business	Increase production capacity of terminal materials for automobiles by introducing continuous annealing furnaces	Construction work proceeding on schedule Construction expected to be completed within FY2020
Electronic Materials & Components	New products and sales expansion in the next-generation vehicle market	(1) Strengthen insulated substrates with high thermal conductivity business (2) Increase sales of solar heat-ray shielding (3) Increase sales of thermistors and surge absorbers	(1) The expansion of facility capacity is proceeding on schedule Focus on reducing production costs (2) Planned sales have been achieved (3) Adoption for next-generation vehicles has expanded
Aluminum	Promotion of selection and concentration / shift to heat exchange materials	Although consideration for a joint venture with Gränges was canceled, we continue to hold discussions on future business opportunities	Engaged in consideration in search of new business opportunities



Terminals connectors
* Customer product



DBA substrates



Heat exchanger for automobiles
(End products)

Advanced Products

Medium-term Management Strategy - Progress on Key Strategies

- ◆ **Electronics Sector**
Utilizing Big Data, expansion of IoT, AI, 5G, etc.
- ◆ **Semiconductor Sector**
Growth in demand for semiconductor manufacturing equipment and related materials that support demand for automobiles and electronics



[Major Progress in FY 2020]

Key Strategies		Measures and Plans	Progress
Electronic Materials & Components	[Electronics] New products and sales expansion in the IoT- related market	Enhance facilities to prepare for an increase in orders receiving	Building increased production capacity in Thailand
Copper & Copper Alloy Products	[Semiconductor] Expand sealing materials business	Complete the facility expansion at Minoshima Works Commence an increase in production and sales expansion in FY2021	Construction work proceeding on schedule Scheduled to begin operating within FY2020



Sensors



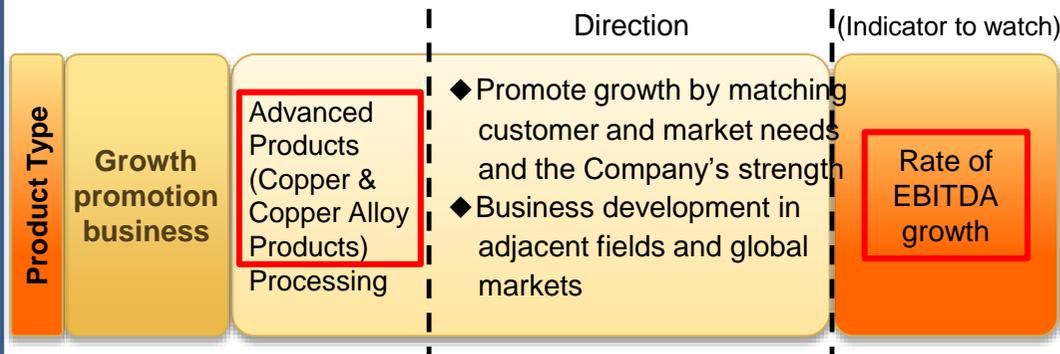
Sealing Parts

Advanced Products

Absorption-type Merger of Mitsubishi Shindoh Co., Ltd.

July, 2019 Announcement of Mitsubishi Shindoh merger
 April, 2020 Scheduled date of the merger

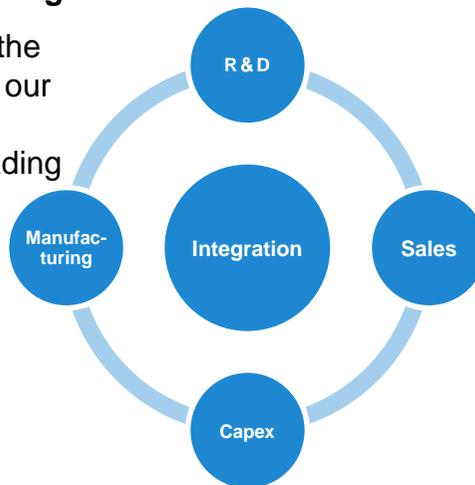
◆ Positions of Copper & Copper Alloy



◆ Purpose of the Absorption-type Merger

To integrate Mitsubishi Shindoh into the Company and cooperatively operate our management resources.

We will aim to become the global leading company in the industry of copper & copper alloy products by improving our presence globally and capturing new demand.



◆ Market Needs

Higher current & Higher voltage

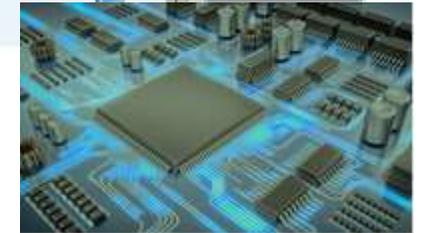
Computerized control



IoT, AI

CASE*

Reduction of the environmental impact



◆ Strategic Investment

Planning capex of approx. ¥30.0 billion in total from FY2021 to 2027. To increase our production capacity by about 30% from the current level, mainly for automobile-related products in which strong demand is expected.

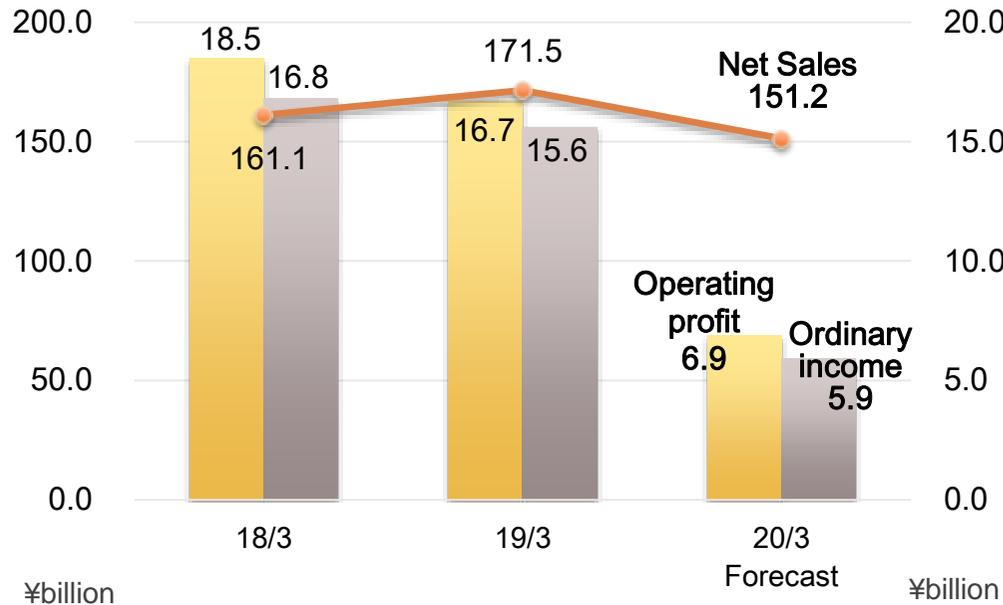
- Expansion of rolling business
- Promoting the integration of extrusion business
- Enhance supply capacity of raw materials in Sakai Plant and sales expansion of the Group companies
- Strengthening and promoting the development of our business in overseas markets and downstream market
- Improvement of the capability for marketing and R&D

* CASE: Connected, Autonomous, Shared & Services, Electric

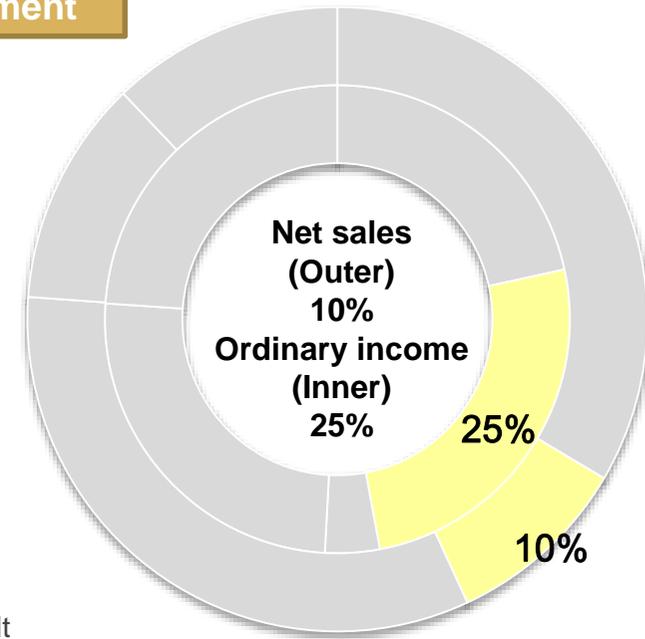
Metalworking Solutions Business

Metalworking Solutions Business

History of Consolidate Earnings



Net sales & Ordinary income ratio by Segment *



*FY2019 Result
Net sales is for outside customers

FY2020

◆ Cemented Carbide Products

Market environment in each region has worsened. Market environments are particularly severe in China and Southeast Asia.

On a per-industry basis, performance is strong for aircraft and medical, but the automobile and mold & die sectors have suffered a slowdown.

Metalworking Solutions Business

Medium-term Management Strategy - Progress on Key Strategies

◆ Cemented Carbide Products Business

A global player capable of providing high value-added products and service solutions



Cemented carbide tools

[Major Progress in FY 2020]

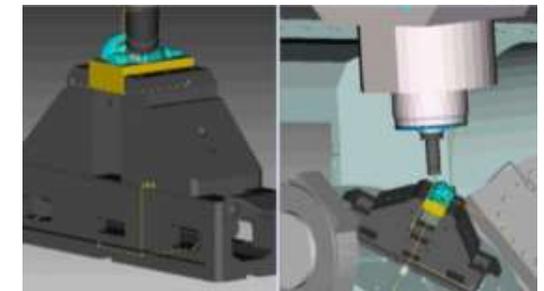
Key Strategies		Measures and Plans	Progress
Cemented Carbide Products	Expand technical center networks	Plan to establish new technical centers in Germany and India	Establishment of Stuttgart Technical Center (Germany: June 2019) Establishment of Queretaro Technical Center (Mexico: September 2019) Now planning establishment of India (Pune) Technical Center (during FY2020)
Cemented carbide products	Promote tungsten recycling	Increase scrap collected from overseas and the recycle ratio in raw materials	Taking action to increase collection of scrap in manufacturing plants and sales bases Slightly over 20%(FY2019) ⇒ Nearly 30%(FY2020)



Insert



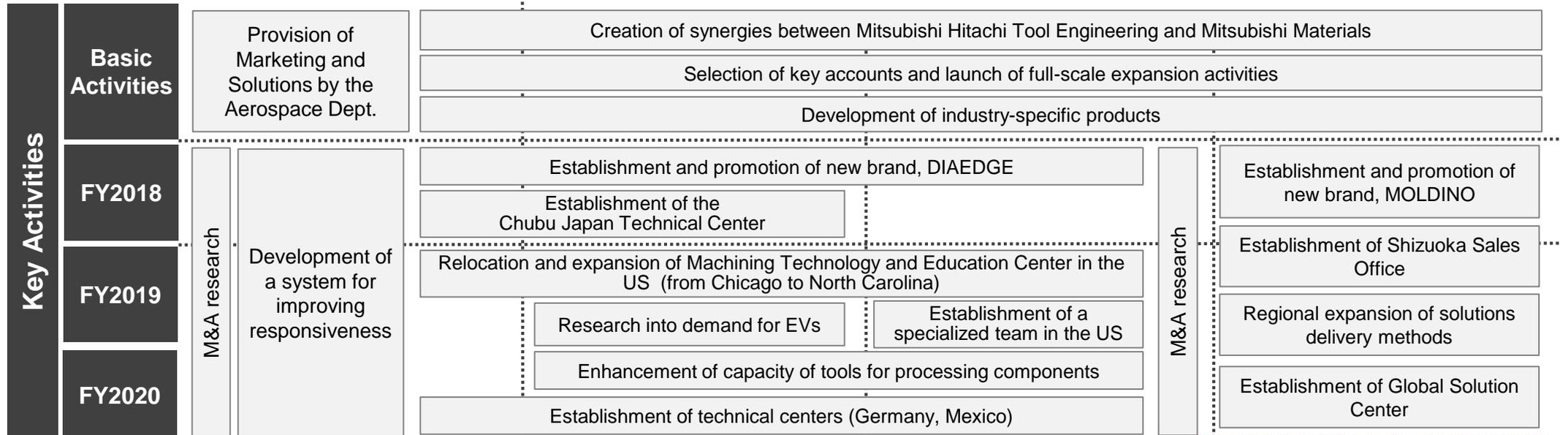
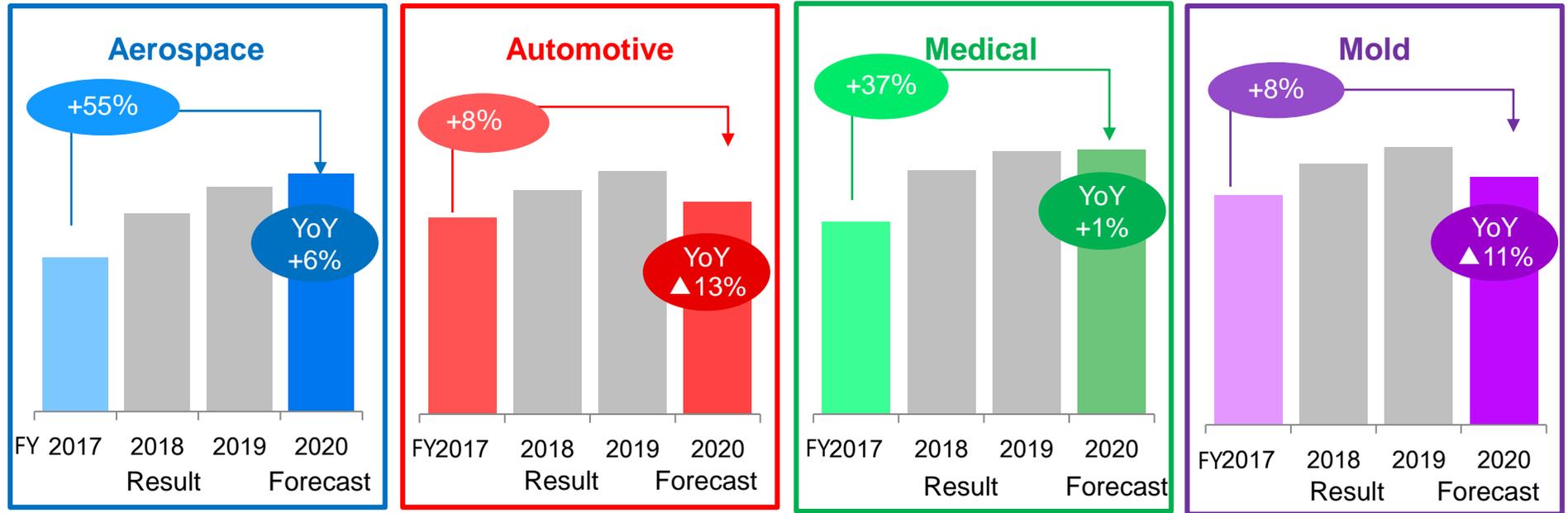
Technical Center



Digital processing simulation (technical center)

Cemented Carbide Products

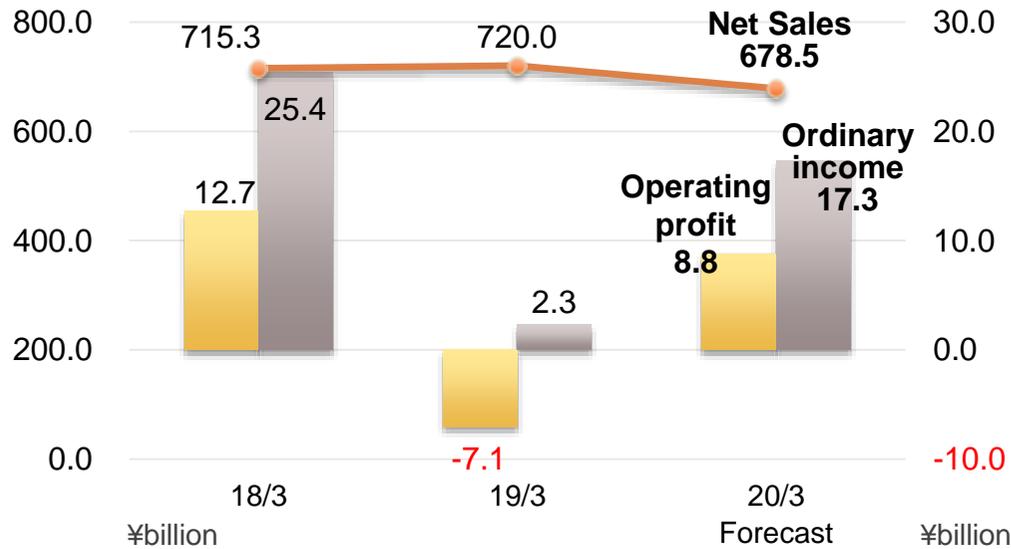
Sales Trend by Industry



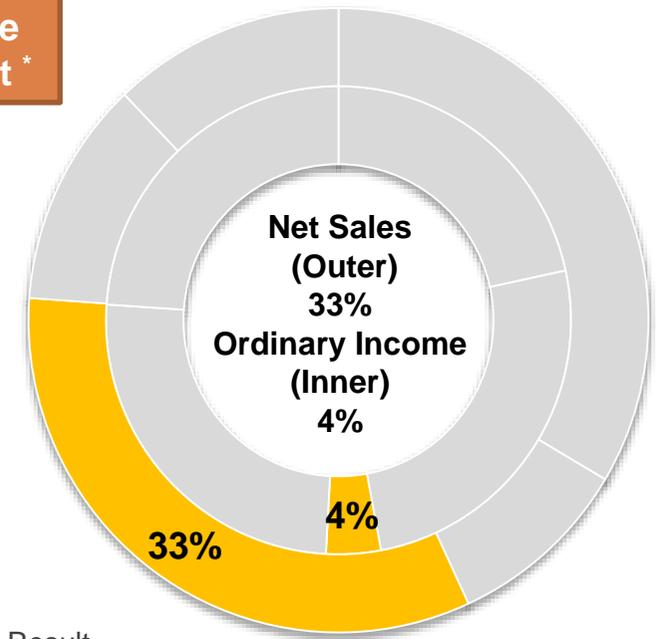
Metals Business

Metals Business

History of Consolidate Earnings



Net sales & Ordinary income ratio by Segment *



*FY2019 Result
Net sales is for outside customers

FY2020

◆ Mining

Expecting dividend income from copper mines of 11.7 billion yen, in line with plans at the beginning of the year

◆ Smelting

The repairs of valuable metals is improving as planned.

Seek stable operation of Naoshima Smelter and Refinery, PT. Smelting in Indonesia and Onahama Smelting and Refining, none of which are scheduled for periodic furnace repairs this period.

Metals Business

Medium-term Management Strategy - Progress on Key Strategies

Medium- to long-term Goals

- ◆ Increase synergy between new copper mine development and smelting
- ◆ Expand the recycling business and increase its profitability



[Major Progress in FY 2020]

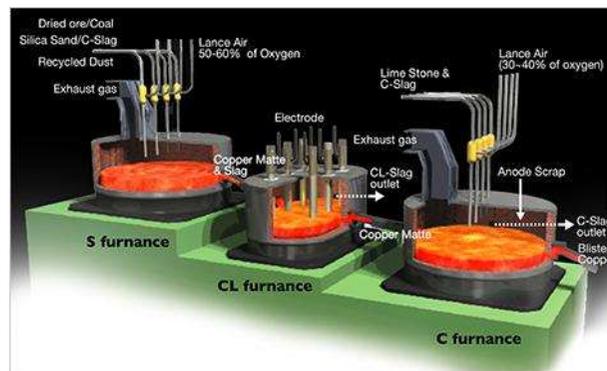
Key Strategies		Measures and Plans	Progress
Mine	Develop new projects	For the Zafranal area, focus on the task of acquiring environment licenses and permits after examining the feasibility study. Meanwhile, start making an approach to new projects.	The feasibility study for the Zafranal mine is generally complete, and is currently under review. We plan to begin procedures to apply for an environment licenses and permits within the year. Other new projects are also being developed to expand the project pipeline for business continuity.
Smelting	Optimize the smelting business	Build a new processing and collection flow across the production locations. Establishing a system for increasing capacity for processing copper ore at PT. Smelting (PTS) in Indonesia	Improvements to new processing and collection flow across production sites such as slime processing at the Naoshima Smelter & Refinery and the recovery of tin materials at Hosokura Metal Mining are being promoted. Launch of increased processing at PT. Smelting is completed



Copper concentrate



Gold and silver scraps (E-scrap)



Mitsubishi process



Zafranal mine (Pelu)



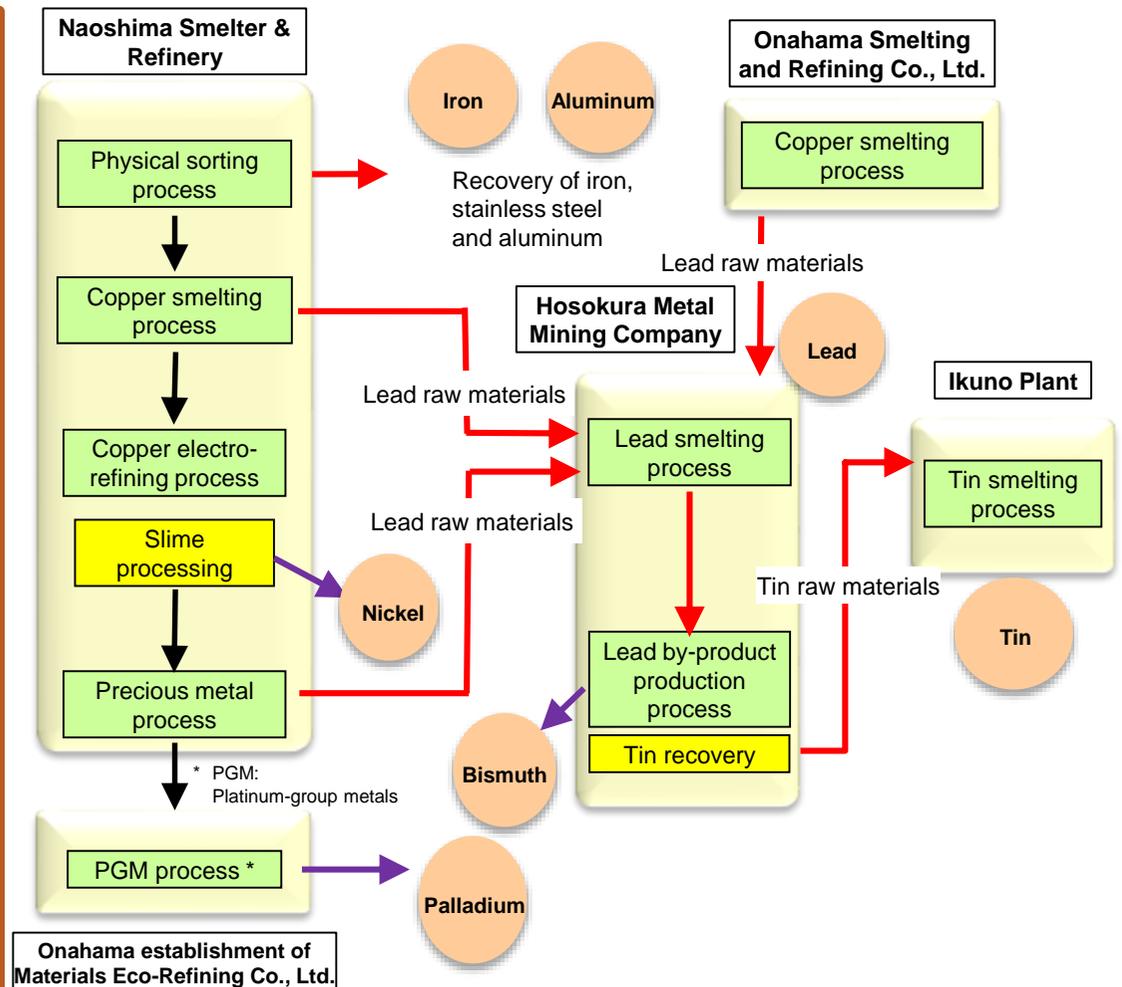
Metals Business

◆ Development foundation for increasing E-Scrap recycling

An increase in E-Scrap recycling resulted in growth in the load of impurities, which has begun to cause issues. The Company positions the FY2020 as a “willful slowdown” and will actively undertake the sorting and recycling of impurities contained in E-Scrap and smelting metals from them utilizing the strength of smelter network in the Group.

Through this measures, troubles will be reduced. Furthermore, E-Scrap recycling will be also stabilized by acquiring a new income source, and we will expand processing amount in the future.

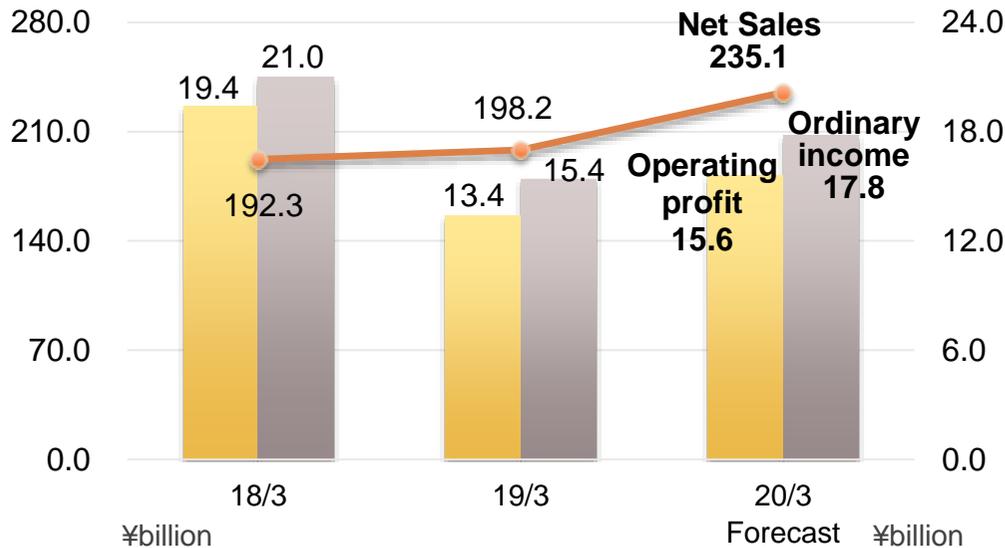
Item	FY2020 Plan	FY2020 Progress
Concentrate lead raw materials generated at two copper smelters, Naoshima and Onahama (increase the recovery of copper in lead raw materials)	Increase the amount of lead recovered from lead raw materials generated at copper smelters	Transportation of lead sediment from the Naoshima Smelter & Refinery to Onahama Smelting and Refining implemented. Operations concentrated at Onahama Smelting and Refining.
Improvements to the slime processing process at the Naoshima Smelter & Refinery	Plan to start construction (Plan to be completed in FY2021)	Installation work underway ahead of implementation from autumn 2020.
Recover tin at Hosokura Metal Mining Company	Plan to start and complete construction (operation will be started in FY2021)	Installation work underway ahead of implementation during FY2020
Increase palladium processing capacity at Onahama site of Materials Eco-Refining Co., Ltd.	Establish a system for increasing capacity of processing	The new line has been installed and is operating according to plan



Cement Business

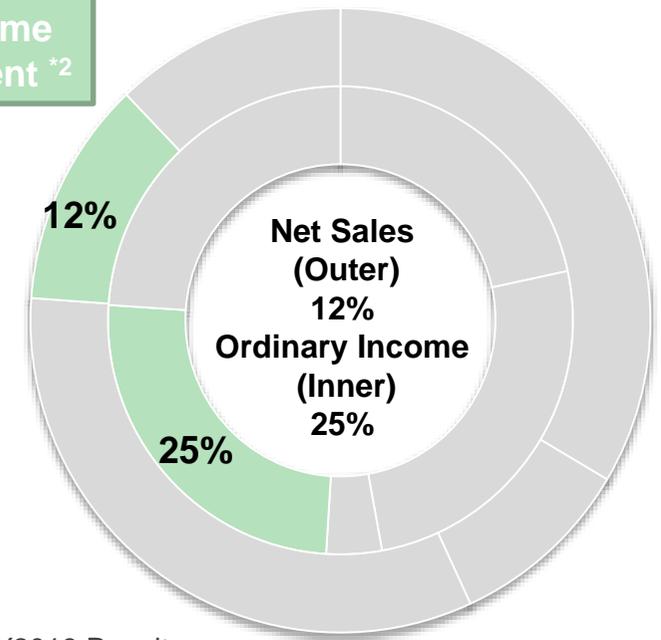
Cement Business

History of Consolidate Earnings *1



*1 As of April 1, 2019, the coal-related business in the “Others business” changed to the “Cement business.”

Net sales & Ordinary income ratio by Segment *2



*FY2019 Result
Net sales is for outside customers

FY2020

◆ Japan

Domestic demand for cement is as the forecast at the beginning of the year (42,500 thousand tons, in line with FY2019)
The Company will persistently explain the necessity for sales price optimizations of cement and continue negotiations.

◆ California, USA

Aim to increase sales in the cement business under the environment of stable demand.
While competition in the ready-mixed concrete business continues to be intense, sales are expected to increase thanks to stable demand.

Cement Business

Medium-term Management Strategy - Progress on Key Strategies

- ◆ Become a leading company in terms of efficiency in the cement industry
- ◆ Become a local area champion overseas



[Major Progress in FY2020]

Key Strategies		Measures and Plans	Progress
Japan	Establish a stable operation system	Improving production total efficiency (Plan to increase the efficiency of combustion burners and clinker coolers)	[Kyushu Plant] Increased efficiency of No. 5 kiln and combustion burner complete (July, 2019) Planned completion of increased efficiency of No. 3 kiln and clinker cooler (December, 2019)
Overseas	Expand the US business (Expand the ready-mixed concrete business)	Plan to start operation at Simi Valley plant (FY2020/1Q)	Construction of ready-mixed concrete plant was completed and shipments commenced in August 2019
Overseas	Expand the US business (Expand the ready-mixed concrete business)	Considering further development of facilities in the Northern California	New ready-mixed concrete plant began operation in July 2019 (two plants are currently operating)



Cement Business

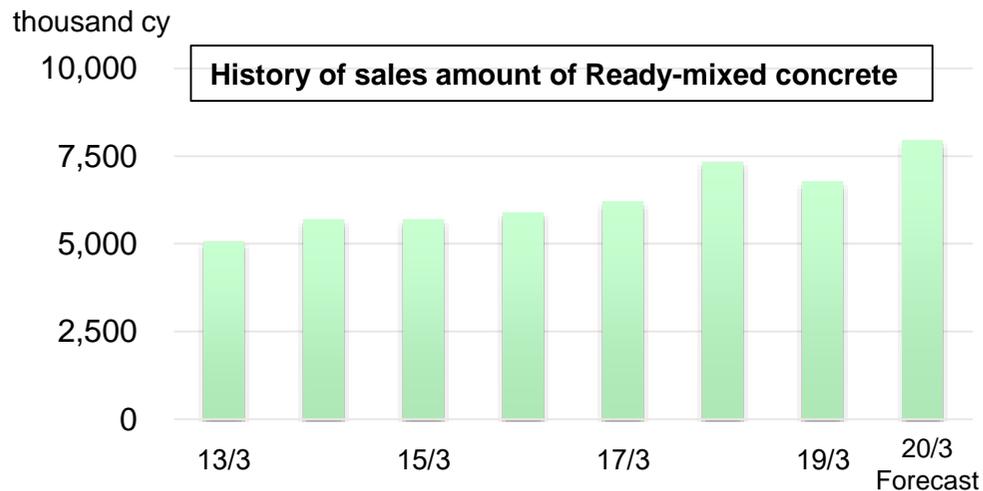
◆ Robertson's Ready Mix Business Expansion

[Ready-mixed Concrete Business]

Region	Description	Timing
Southern California	Acquisition of Temescal Valley Plant	2018
Northern California	Lathrop Plant Installation (removal in 2019)	2018
Northern California	French Camp Plant Installation	2019
Northern California	Acquisition of Vernalis Plant	2019
Southern California	Completion of Simi Valley Plant	2019

[Aggregate Business]

Region	Description	Timing
Southern California	Acquisition of land adjoining Cabazon mine	2017
Southern California	Acquisition of permit for expansion plan for Redlands Mine	2019



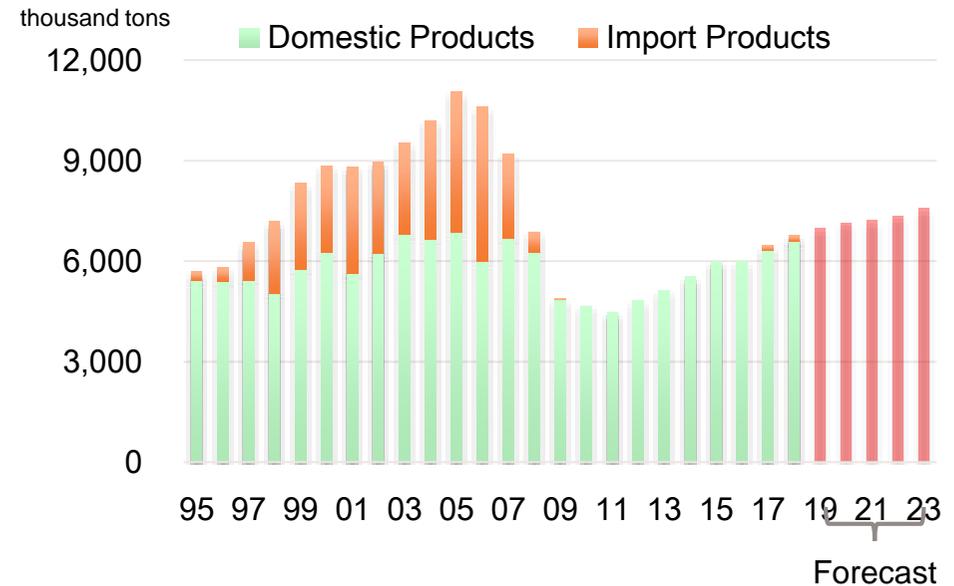
◆ Demand History (Domestic / Export)*

* Source: Cement Association



◆ Change in Cement Demand in the Southern California Region*

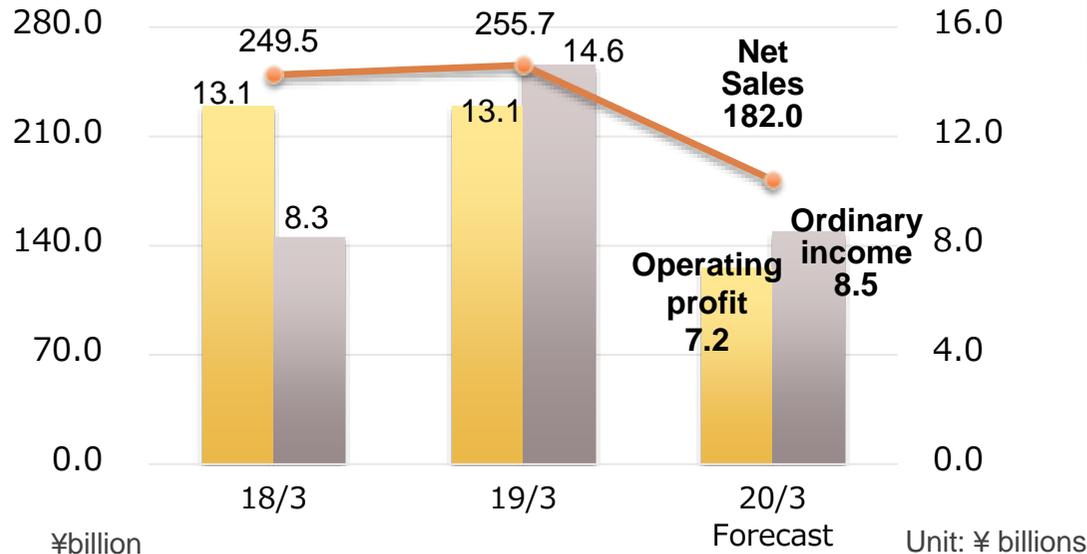
* Source: PCA



Others Business

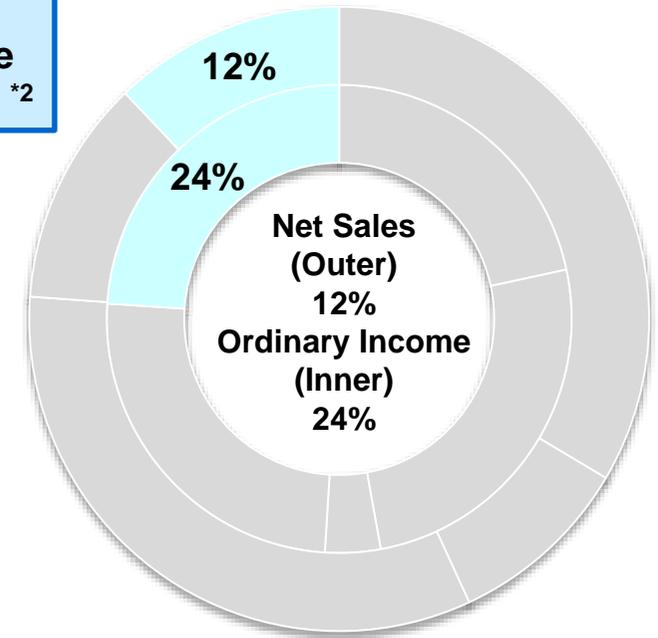
Others Business

History of Consolidate Earnings *1



*1 As of April 1, 2019, the coal-related business in the “Others business” changed to the “Cement business.”

Net sales & Ordinary income ratio by Segment *2



*2 FY2019 Result
Net sales is for outside customers

FY2020

◆ Environmental Recycling

- In the incineration fly ash treatment business, KitaKyushu Ash Recycle Systems Co., Ltd is currently engaged in construction work to increase processing capacity.
- In the business of producing biogas from food waste, New Energy Fujimino Co., Ltd. began plant construction from July. Additionally, Ichikawa Kankyo Engineering Co., Ltd. , the Co-op Deli Consumers' Co-operative Union and Co-op Mirai, became newly shareholders of New Energy Fujimino Co., Ltd. to strengthen its business structure.

◆ Renewable Energy

The Wasabizawa Geothermal Power Plant has been operating steadily since May 2019. Additionally, construction was started on the Appi Geothermal Power Plant in August.

Others Business

Medium-term Management Strategy - Progress on Key Strategies

- ◆ **Environmental Recycling**
Establish and expand recycling businesses that is trusted by stakeholders
- ◆ **Renewable Energy**
Aim to become a leading company in Japan with overall strengths in geothermal power generation



[Major Progress in FY2020]

Key Strategies		Measures and Plans	Progress
Environmental Recycling	Promote automated demolition in home appliance recycling	"Chubu Eco Technology Co., Ltd." introduce an automatic sorting robot and commence verification tests	Introduced automatic picking robots on washing machine and air conditioning dismantlement line. Demonstration testing currently underway.
Renewable Energy	Expand new geothermal power generation business	Plan to begin operations at Wasabizawa Geothermal Power Plant in May, 2019	Commenced operations on schedule in May 2019
Renewable Energy	Expand new geothermal power generation business	Start construction of Appi Geothermal Power Plant Scheduled to commence operation in 2024	Construction work started in August 2019



Others Business

◆ Strengthening the Structure of the Business to Produce Biogas from Food Waste

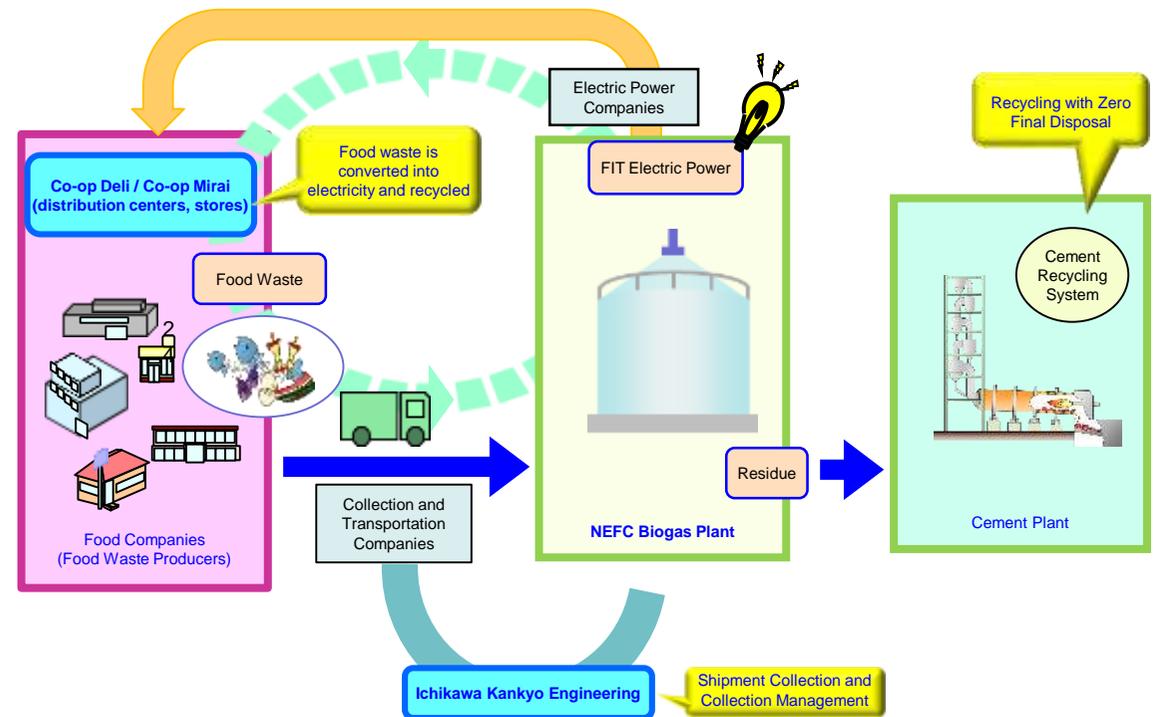
(Press release issued October 29, 2019)

To strengthen biogas business foundations, capital increase was implemented in New Energy Fujimino Co., Ltd. ("NEFC," hereafter) (before increased investment: 100% wholly owned subsidiary), namely Ichikawa Kankyo Engineering Co., Ltd. ("IKE"), which has a track record collecting and transporting food waste, and the food companies Co-op Deli Consumers' Co-operative Union ("Co-op Deli") and Co-op Mirai Consumers' Co-operative Union ("Co-op Mirai") were newly shareholders.

Future Plans and Developments

Strengthening	Smooth pick-up of food waste shipments through collaboration with IKE Receiving food waste through coordination with Co-op Deli and Co-op Mirai, use of electric power generated through biogas plants by stores and other locations, and development of a food recycling loop
Increased investment	50 million yen ⇒ 250 million yen
Controlling shares	Mitsubishi Materials: 100% ↓ Mitsubishi Materials: 75% IKE : 20% Co-op Deli : 2.5% Co-op Mirai : 2.5%
Start of operations	September 2020 (planned) (Initial plan: April 2020)
Planned throughput	40 tons of food waste / day

Business Model



Contents

1. Performance Summary (P.4 - 6)

2. Progress on the Medium-Term Management Strategy (P.8 - 13)

3. Initiatives by Segment (P.15 - 35)

4. Issues and Enhancement of Group Governance (P.37 - 43)

Recap

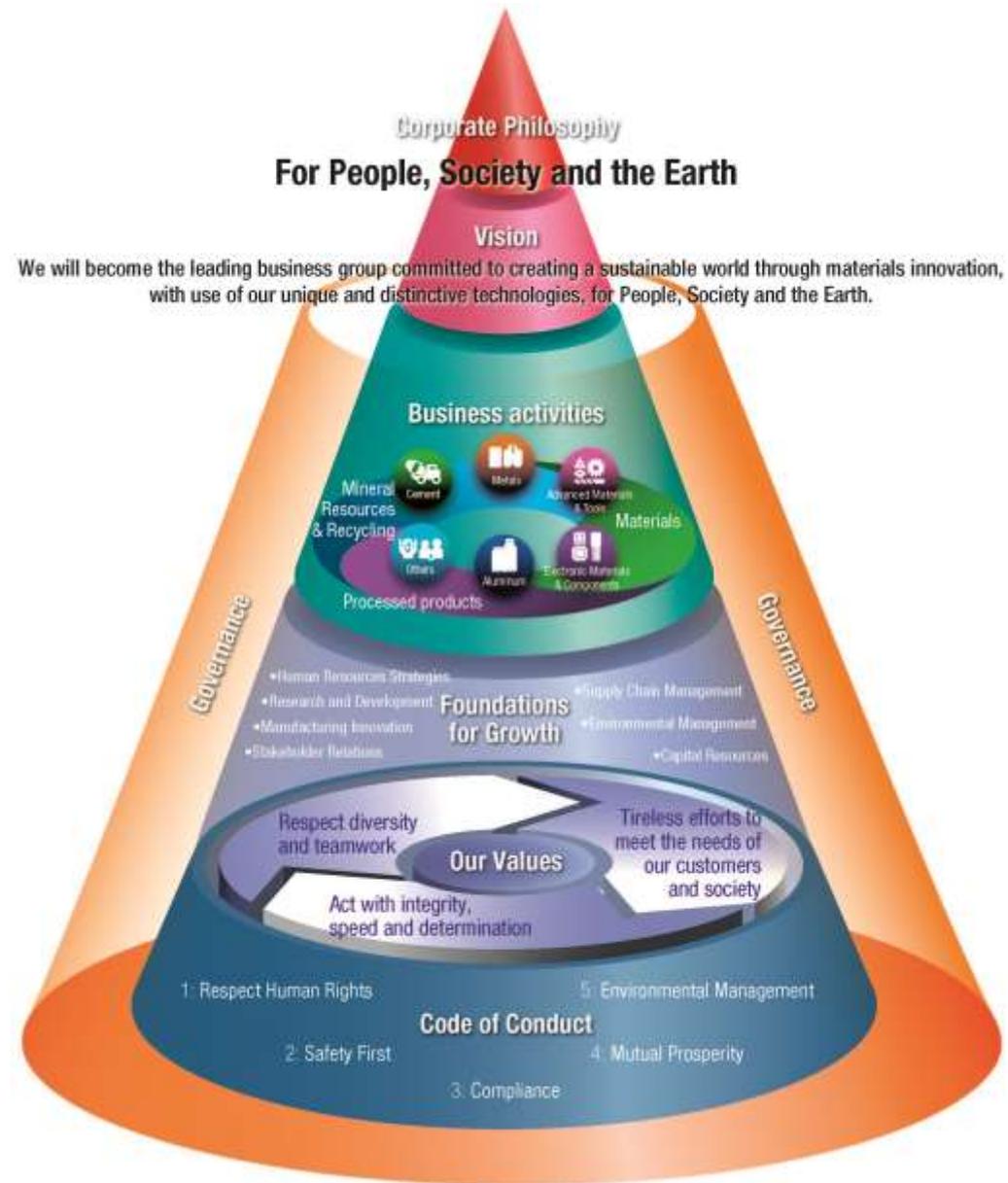
Enhancement of the Governance Framework for Quality Control

Thorough Enhancement and Promotion of Group Governance

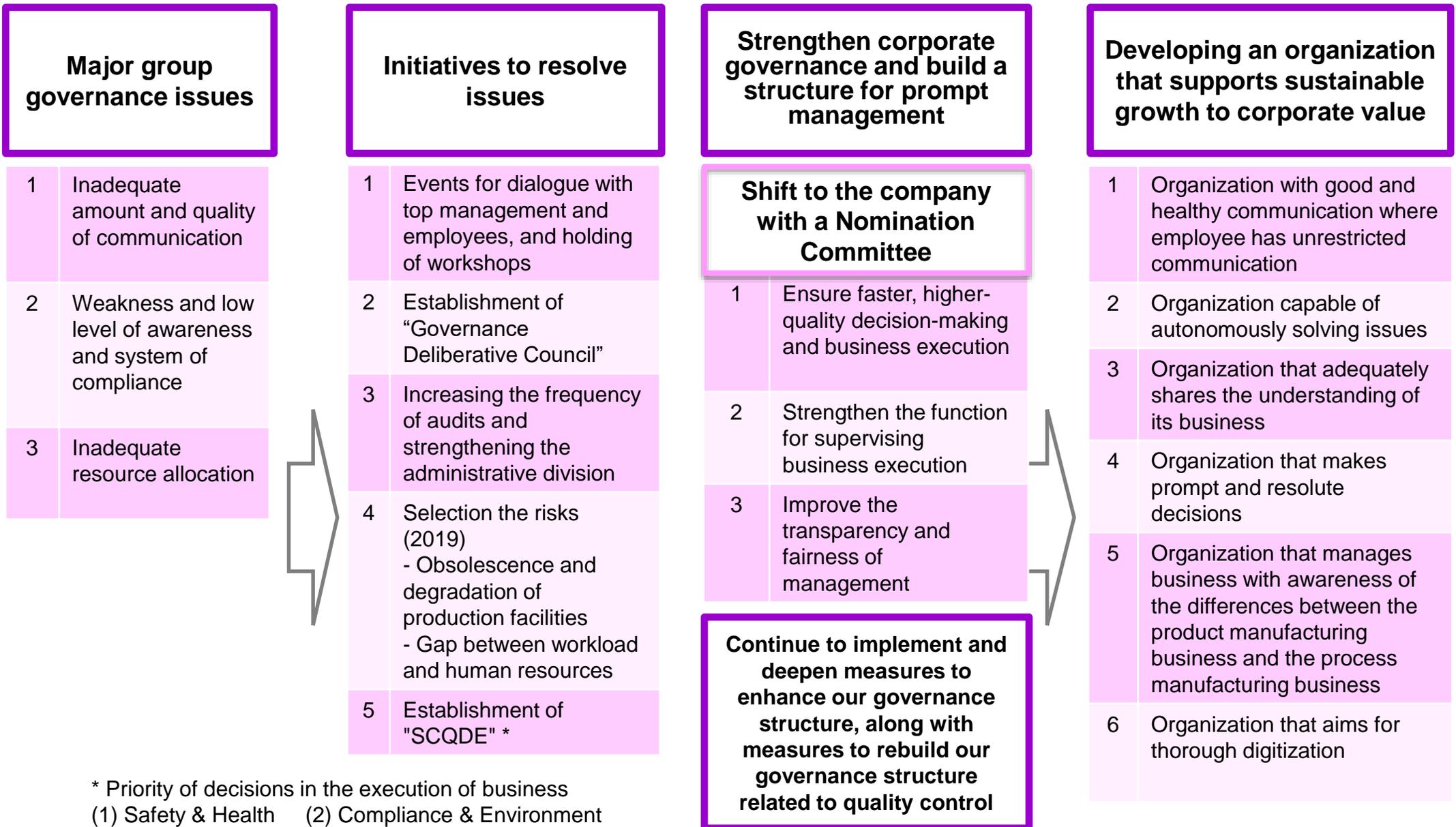
Further Improvement of Governance Function

Implementation of More Timely and Effective Management

To Ensure Implementation of each Measures in Final Fiscal Year of the Medium-Term Management Strategy



Towards Sustainable Growth in Corporate Value



* Priority of decisions in the execution of business
 (1) Safety & Health (2) Compliance & Environment
 (3) Quality (4) Delivery (5) Earnings

Group Governance Framework Enhancement Measures

1

Enhancement of framework for discussion, and reporting of governance-related matters

- ◆ We will implement a framework for reducing risks and preventing problem occurrences
⇒ We have been deliberating and sharing policies, plans, etc. on governance-related matters through the “Governance Deliberative Council”

2

Improvement of functions of management divisions and their collaboration with operating divisions

- ◆ We have established the Governance Division to improve administrative division’s control and support functions for governance-related matters

3

Improvement of human resources training and encouragement of active interaction

- ◆ We expand educations regarding governance-related matters
- ◆ In addition to promoting human resources interactions in the Group, and endeavoring to deepen communication, we have been providing human resources training throughout the Group by developing the knowledge and experience in various divisions

4

Internal audit strengthening

- ◆ The frequency and content of audits has been enhanced through cooperation with each department within the Governance Division.

5

Studies with a business optimization focus

- ◆ Effectiveness of the governance is one of the important decision-making criteria when considering business portfolio
- ◆ We are seeking to achieve an appropriate balance so that the Group’s governance capabilities match the business domains

Initiative for Group Governance Framework Enhancement Measures

Further development, and increase efficiency of Governance Enhancement Measures are being implemented as planned

Governance Framework Enhancement Measures	FY2020 Plan	1st Half Result of FY2020
<p>(1) Improvements to governance-related review and reporting systems</p> <p>(2) Improvement of functions of management divisions and their collaboration with operating divisions</p>	<ul style="list-style-type: none"> ➤ Ongoing operations of the Governance Deliberative Council ➤ Report on performance of operations, and review the flow of the plan for the conduct of governance and progress reports ➤ Select the locations for priority support and build a support system ➤ Enhance overseas regional management companies ➤ Operation of the new risk management system 	<ul style="list-style-type: none"> ➤ Holding of Governance Deliberative Council meeting (September) ➤ Conducting a review of the reporting flow and switching to operations that emphasis dialogue with companies and sites ➤ Per-function assessments of each organization are underway to select locations for priority support ➤ Coordinating with overseas regional management companies and providing support to overseas Group companies ➤ Conducting risk management training
<p>(3) Improvement of human resources training and encouragement of active interaction</p>	<ul style="list-style-type: none"> ➤ Continue governance training for new executives of the Group ➤ Promote to improve communication ➤ Continue the compliance awareness surveys (twice) ➤ Continue human resources exchanges 	<ul style="list-style-type: none"> ➤ Conducting governance training for new executives of the Group ➤ Conducting communication workshops ➤ Conducting compliance awareness survey (June) ➤ Conducting human resources exchanges between Group companies
<p>(4) Internal audit strengthening</p>	<ul style="list-style-type: none"> ➤ 2nd year in one cycle ➤ Continue the governance audits (120 locations) and quality audits (80 locations) ➤ Further increase the number of auditors 	<ul style="list-style-type: none"> ➤ Implementation of governance audits at 37 locations ➤ Implementation of quality audits at a total of 41 locations in Japan and overseas ➤ Increasing the number of auditors and strengthening the framework
<p>(5) Studies with a business optimization focus</p>	<ul style="list-style-type: none"> ➤ Start reorganization of some companies 	<ul style="list-style-type: none"> ➤ In light of growth strategies, business portfolio optimization and incidental governance perspectives, decisions were made to implement the absorption-type merger of Mitsubishi Shindoh Co., Ltd. and transfer shares in Kobelco & Materials Copper Tube Co., Ltd.

Preventive measures of the Matters of Non-Conforming Products

Main causes of the shipment of non-conforming products

- ◆ Inadequate framework for exerting influence on product development and order receiving processes at order receiving stage
- ◆ Attitude excessively prioritizing "order receiving" and "delivery date"
- ◆ Order received and mass production that the specifications exceeding manufacturing capability

- ◆ Insufficient framework of quality assurance system
- ◆ Pressure on quality assurance departments from other departments

- ◆ Low awareness of compliance with specifications
- ◆ Arrogance in thinking that quality control is being achieved
- ◆ Low sensitivity to risk in relation to quality issues

- ◆ Insufficient business resources (insufficient inspectors, inspection equipment, etc.)

- ◆ Audit procedures that has become a mere facade

Preventive measures

(Restructuring Measures of the Governance Framework for Quality Control in the Group)

1) Implementation of a front loading system for order receiving

2) Enhancement of the framework and authority of the quality control department

3) Expansion of quality training

4) Promoting automated inspection equipment

5) Enhancement of quality audits

6) Utilization of outside consultants

Initiative for Preventive measures of the Matters of Non-Conforming Products

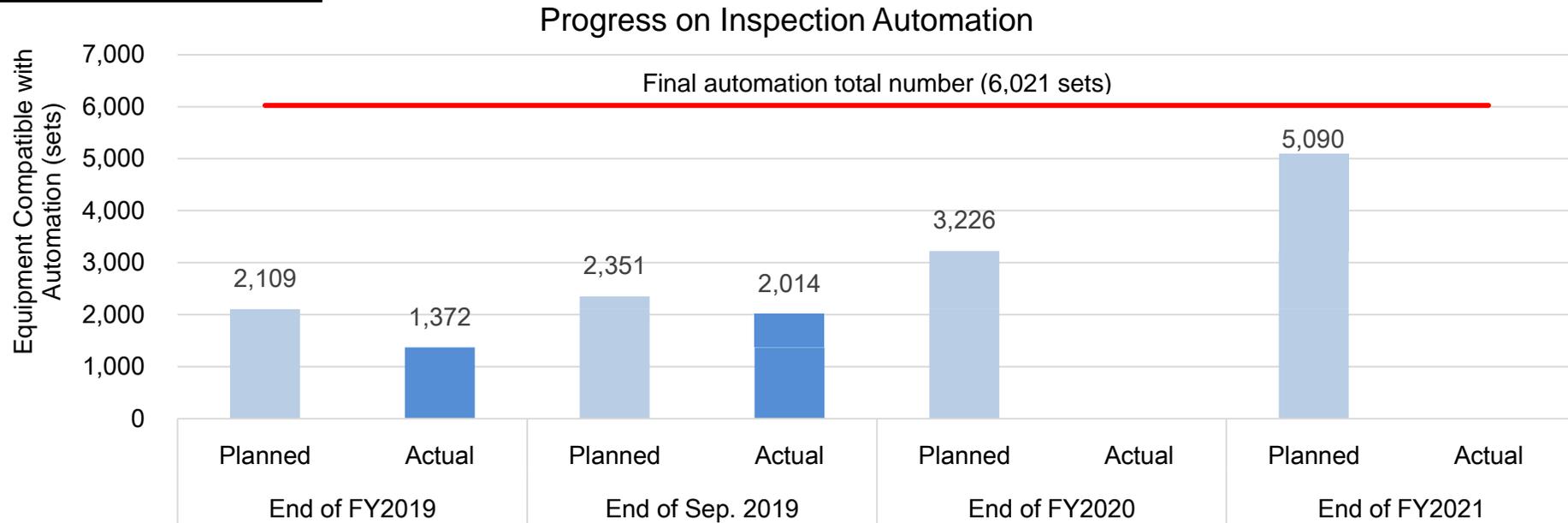
Each Preventive measures of matters of non-confirming products is being implemented as planned

Recurrence Prevention Measures	FY2020 Plan	1st Half Result of FY2020
(1) Implementation of a front loading system (FLS)	<ul style="list-style-type: none"> ➤ Accelerate improvement of the order receiving system in locations other than the six affected locations (utilize quality guidance meetings led by outside consultants) 	<ul style="list-style-type: none"> ➤ FLS guidelines were revised to be easier to understand and then disseminated
(2) Enhancement of the framework and authority of the quality control department	<ul style="list-style-type: none"> ➤ Confirm the effectiveness and provide support for reorganization and rule definition in the quality audits ➤ Confirm the independence of the quality control division in small locations 	<ul style="list-style-type: none"> ➤ Enhancing the details of and disseminating the basic quality rules and quality control guidelines
(3) Expansion of quality training	<ul style="list-style-type: none"> ➤ Dissemination of the basic quality rules again and to continue the training ➤ Providing support for quality improvements at overseas locations (in Asia, Europe and the U.S., including methods for utilization automation data) ➤ Holding meetings for quality personnel utilizing case studies (3 times) 	<ul style="list-style-type: none"> ➤ Disseminating and conducting training on revised version of the quality control guidelines ➤ <u>Progress on support to improve quality at 8 overseas sites</u> ➤ First meetings for quality personnel (June 2020, attended by 130 people)
(4) Promotion of automated inspection equipment	<ul style="list-style-type: none"> ➤ Periodically check and promote the automation plan ➤ Sharing information of the automation of inspection equipment 	<ul style="list-style-type: none"> ➤ <u>Conducting periodic checks on the progress of automation</u> ➤ Selecting inspection automation personnel and sharing information
(5) Enhancement of quality audits	<ul style="list-style-type: none"> ➤ Quality audits in 80 locations (40 locations each in Japan and overseas) ➤ In the second year of the once every 2 year cycle, increase the number of quality auditors to accelerate quality audits 	<ul style="list-style-type: none"> ➤ Conducted quality audits at a total of 41 locations in Japan and overseas
(6) Utilization of outside consultants	<ul style="list-style-type: none"> ➤ Begin to provide support for the improvement of quality control in locations other than the six affected locations (twice a month, a total of 24 times) 	<ul style="list-style-type: none"> ➤ <u>Consultant guidance provided at 14 locations other than the six affected locations</u>

Promoting automated inspection equipment

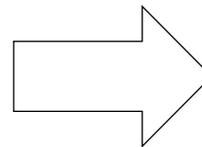
■ Status of Inspection Automation

On schedule, implementing to install automated inspection equipment In domestic and overseas locations.



Example of automation measures for hardness measurement

Before:
Manual measurement



After:
Automated measurement
+ Automated recording



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These projected performance figures are based on information available to the Company's management as of the day for releasing this material.

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