

# Business Results and Progress of Key Measures

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FY2020 (FY Ended March 2021)

**DOWA HOLDINGS CO.,LTD.**

May 19, 2021

# Results for FY2020 (1) Overview of Results

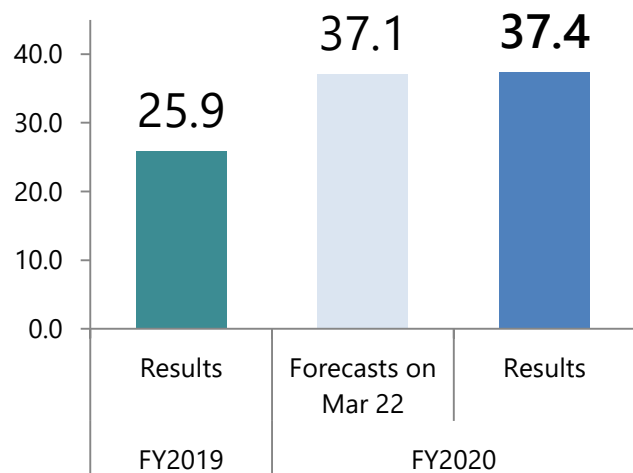
Billion yen (Amounts less than 100 million yen are omitted.)

	FY2019 Results A	FY2020		Changes			
		Forecasts on Mar 22 B	Results C	Year-on-Year (C - A)		From Forecasts on Mar. 22 (C - B)	
Net Sales	485.1	582.8	<b>588.0</b>	102.8	21%	5.2	1%
Operating Income	25.9	37.1	<b>37.4</b>	11.4	44%	0.3	1%
Ordinary Income	28.9	35.0	<b>37.2</b>	8.2	28%	2.2	6%
Profit attributable to owners of parent	17.3	15.7	<b>21.8</b>	4.4	25%	6.1	39%

✓ For FY2020, both sales and profit increased year on year.

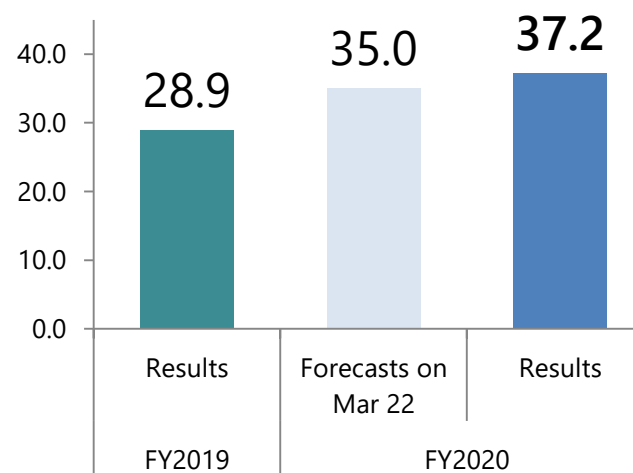
## Operating income

Billion yen



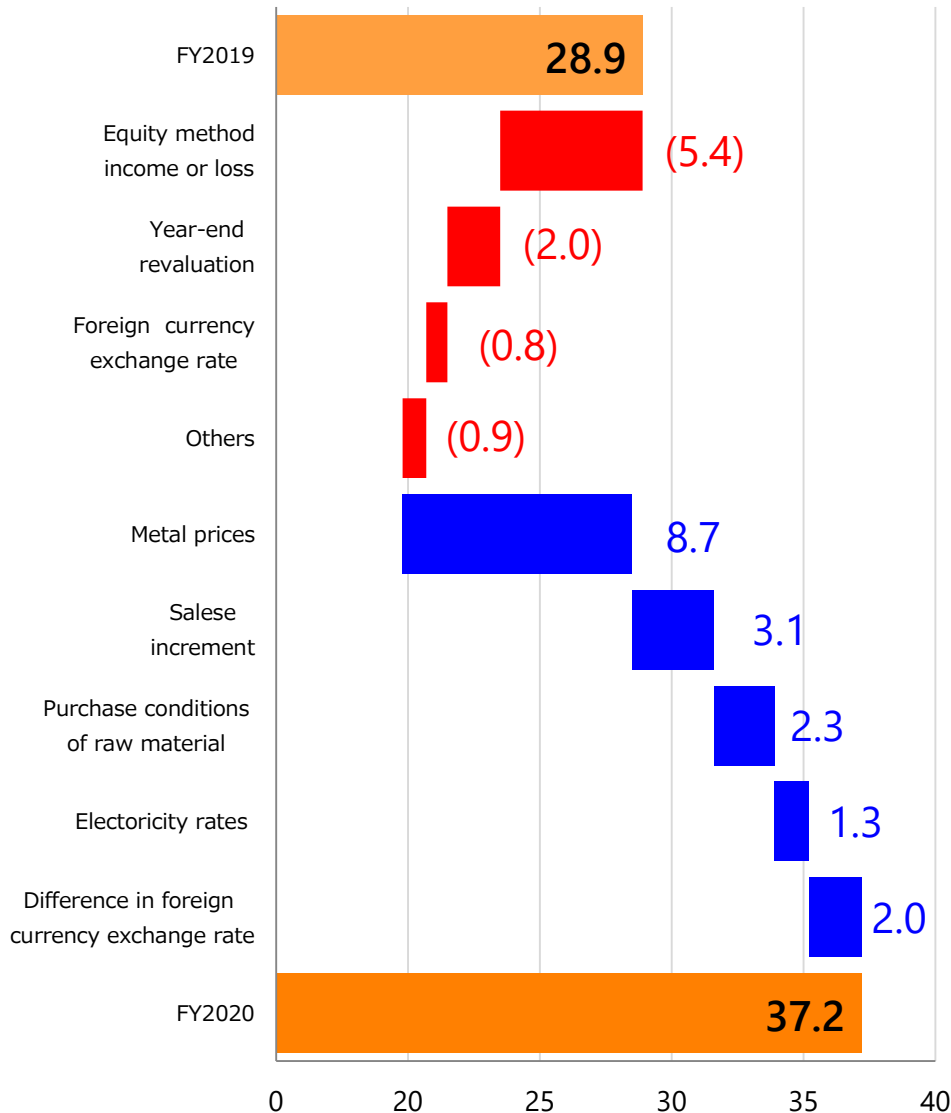
## Ordinary Income

Billion yen



# Results for FY2020 (2) Factor Analysis of Ordinary Income

Billion yen (Amounts less than 100 million yen are omitted.)



## Major factors for change

- Profit decline recorded by Fujita Kanko, an equity-method affiliate
- Loss on valuation at the end of fiscal year following a market rise
- Revenue fall explained by a stronger yen on full-year average than in the previous fiscal year
- Increase in depreciation, and others
- Full-year average prices of precious metals and base metals soared year on year.
- Demand for automotive products decreased in the first half and rallied in the second. Demand for domestic waste treatment and for silver powder used in solar panels were strong on the whole.
- Purchase conditions (T/C) for zinc raw materials improved.
- Electricity rates dropped.
- Foreign exchange gains and others

**Profit rose 8.2 billion yen year on year.**

**Displaying the strength of its unique business portfolio, the Company achieved a profit rise even under the COVID-19 pandemic.**

# Results for FY2020 (3) Results by Segment

Billion yen (Amounts less than 100 million yen are omitted.)

	FY2019 Results			FY2020 Results			Changes		
	Net Sales	Operating Income	Ordinary Income	Net Sales	Operating Income	Ordinary Income	Net Sales	Operating Income	Ordinary Income
Environmental Management & Recycling	112.1	7.2	6.9	117.6	8.4	8.6	5.4	1.2	1.7
Nonferrous Metals	227.2	10.0	12.2	282.0	20.3	25.9	54.7	10.3	13.7
Electronic Materials	98.2	1.0	2.4	151.2	2.4	3.6	53.0	1.4	1.2
Metal Processing	82.3	5.1	5.1	77.8	4.3	4.6	(4.5)	(0.7)	(0.5)
Heat Treatment	27.9	1.2	1.2	23.1	0.7	0.8	(4.8)	(0.4)	(0.4)
Other/ Elimination	(62.8)	1.3	1.0	(63.9)	1.0	(6.5)	(1.0)	(0.3)	(7.5)
Total	485.1	25.9	28.9	588.0	37.4	37.2	102.8	11.4	8.2

# FY2021 Full-year (1) Forecasts

Billion yen (Amounts less than 100 million yen are omitted.)

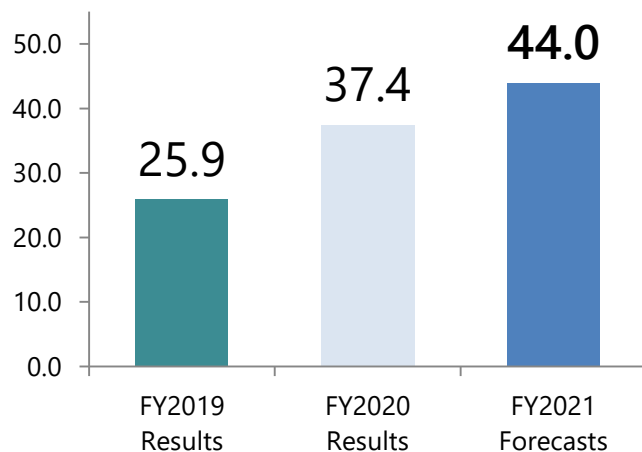
	FY2020 Results	FY2021 Forecasts	Changes	
Net Sales	588.0	640.0	51.9	9%
Operating Income	37.4	44.0	6.5	17%
Ordinary Income	37.2	50.0	12.8	34%
Profit attributable to owners of parent	21.8	30.0	8.1	37%

\* The forecasts for FY2021 do not include Fujita Kanko's results forecast.

- ✓ A continued increase in sales and profit is forecast, given that past investments in starting the mass production of new products will exhibit a positive effect in addition to a metal market rise and rallying demand for automotive products.

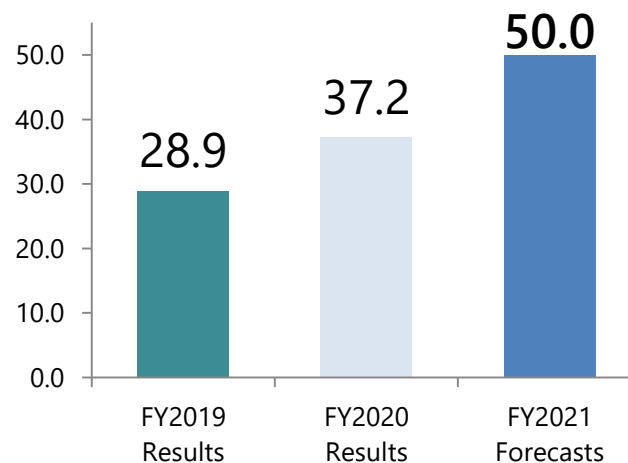
## Operating Income

Billion yen



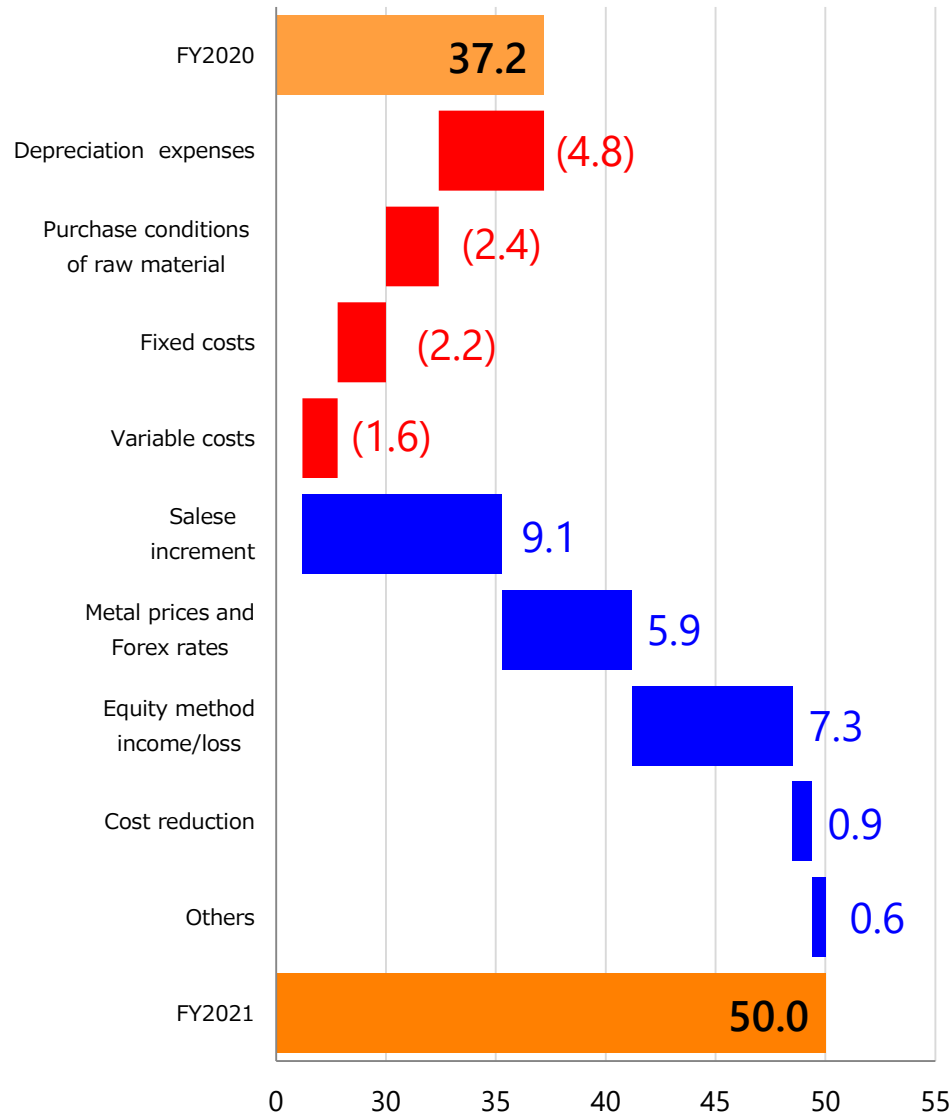
## Ordinary Income

Billion yen



# FY2021 Full-year (2) Factor Analysis of Ordinary Income

Billion yen (Amounts less than 100 million yen are omitted.)



## Major factors for change

- Investments in growth will be continued.
- Purchase conditions (T/C) for zinc raw materials will deteriorate.
- Selling, general and administrative expenses and research and development expenses will grow.
- Prices of materials to be purchased will increase.
- Demand for automotive products will rally, waste treatment volume in Southeast Asia will be resurgent, silver powder demand will rise and new products will be launched, among other trends.
- Prices of base metals and precious metals are expected to rise.
- Increased profit of companies running overseas mines
- Equity-method profit/loss of Fujita Kanko (loss of 7.1 billion yen → Not taken into account)
- Cost cutting efforts will continue.

**Profit will rise 12.8 billion yen year on year.**

The Company will attain a significant profit increase amid strong metal prices in addition to a turnaround and increase in demand in different businesses.

# FY2021 Full-year (3) Forecasts by Segment

Billion yen (Amounts less than 100 million yen are omitted.)

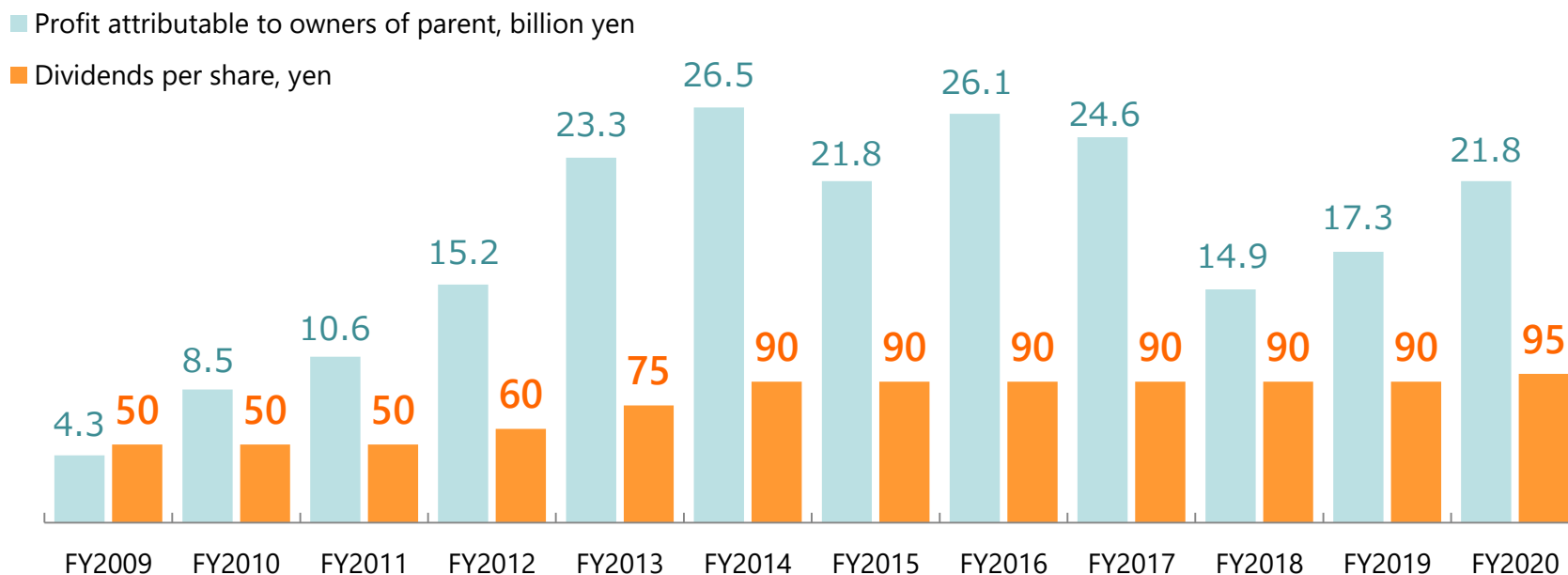
	FY2020 Results			FY2021 Forecasts			Changes		
	Net Sales	Operating Income	Ordinary Income	Net Sales	Operating Income	Ordinary Income	Net Sales	Operating Income	Ordinary Income
Environmental Management & Recycling	117.6	8.4	8.6	129.0	8.0	8.2	11.3	(0.4)	(0.4)
Nonferrous Metals	282.0	20.3	25.9	308.5	22.7	28.2	26.4	2.3	2.2
Electronic Materials	151.2	2.4	3.6	152.5	4.3	5.1	1.2	1.8	1.4
Metal Processing	77.8	4.3	4.6	83.4	5.5	5.6	5.5	1.1	0.9
Heat Treatment	23.1	0.7	0.8	28.2	2.5	2.3	5.0	1.7	1.4
Other/ Elimination	(63.9)	1.0	(6.5)	(61.6)	1.0	0.6	2.3	(0.0)	7.1
Total	588.0	37.4	37.2	640.0	44.0	50.0	51.9	6.5	12.8

# Shareholder returns

DOWA sets out a policy of increasing dividends as performance allows, while ensuring sufficient internal reserves for bolstering the corporate structure and expanding business in the future in line with the basic principle of maintaining stable dividends.

During the Midterm Plan 2020, the Company aims to increase the dividend commensurate with the level of profitability, while maintaining a stable annual dividend of 90 yen per share.

In light of the circumstances described above and in consideration of results and future fund demand, the Company has decided to increase the annual dividend by 90 yen per share year on year, to 95 yen per share.



Note: The annual dividend per share between FY2009 and FY2016 has been adjusted to the amount after the consolidation of shares.



# Ref. FY2021 Forecasts (Assumptions and Sensitivities)

Sensitivity (Operating Income / FY2021)			Million yen
	Assumptions	Fluctuation	Sensitivity
Exchange rate	108.0 ¥/\$	±1 ¥/\$	600
Copper	8,500 \$/t	±100 \$/t	40
Zinc	2,500 \$/t	±100 \$/t	420
Indium	180 \$/kg	±10 \$/kg	60

\* Exchange rate sensitivity; Nonferrous Metals 480 million yen and Electronic Materials 120 million yen.

## Foreign-exchange rate and Metal Prices

	FY2020			FY2021			(Ref.)
	H1 Averages	H2 Averages	Full Year Averages	H1 Assumptions	H2 Assumptions	Full Year Averages	Apr. 2021 Averages
Exchange rate: (¥/\$)	106.9	105.2	106.1	108.0	108.0	108.0	109.1
Copper: (\$/t)	5,931	7,826	6,879	8,500	8,500	8,500	9,336
Zinc: (\$/t)	2,150	2,689	2,419	2,500	2,500	2,500	2,827
Indium: (\$/kg)	147	185	166	180	180	180	201

Sensitivity is based on assumptions that the Company assumes to be reasonable at the time of publication.  
Actual effects may differ materially due to a variety of factors.

Review of Midterm Plan 2020

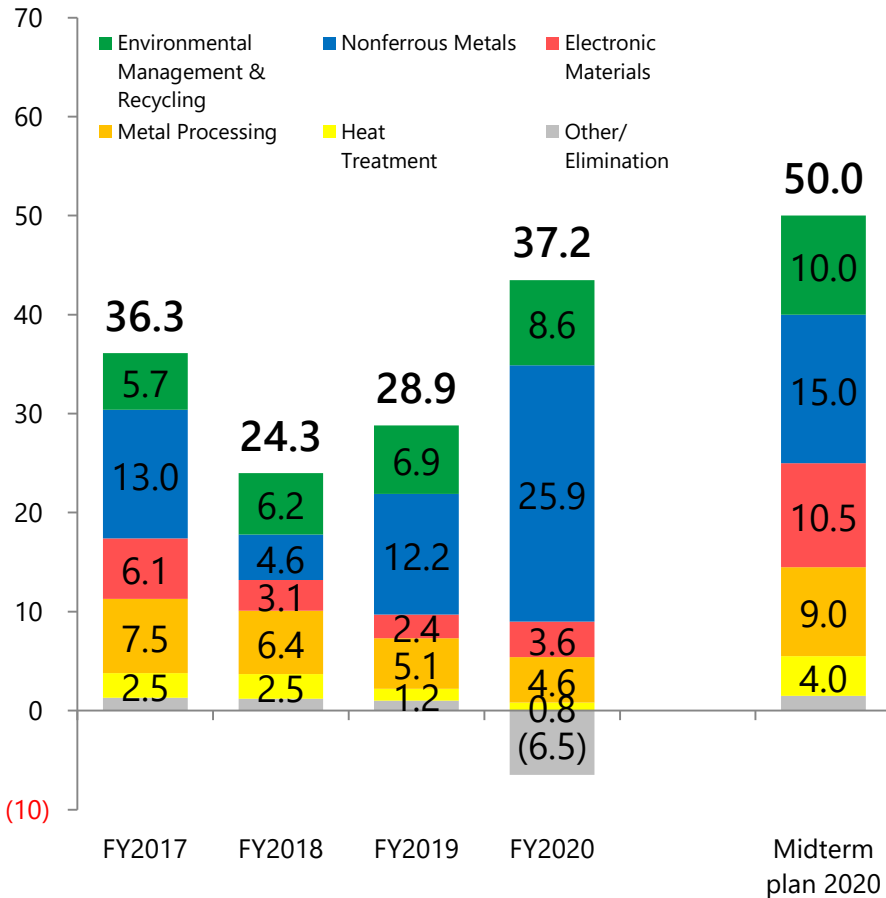
# Progress in Financial Aspects

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# Ordinary Income, ROA/ROE

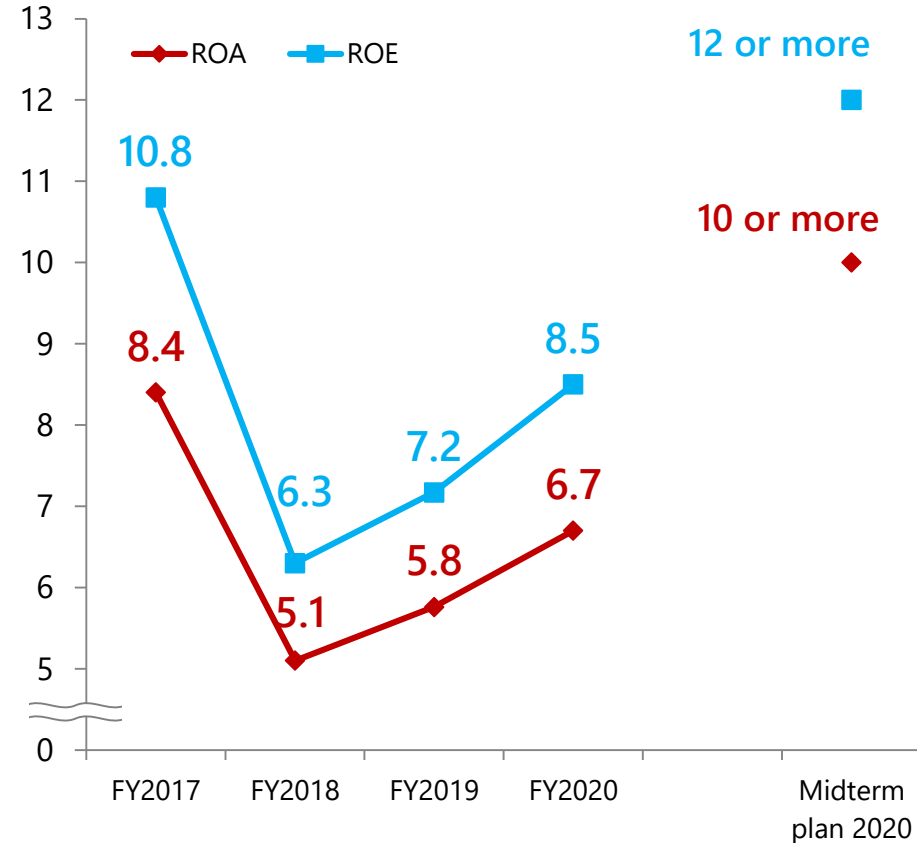
## Ordinary Income

Billion yen



## ROA/ROE

(%)

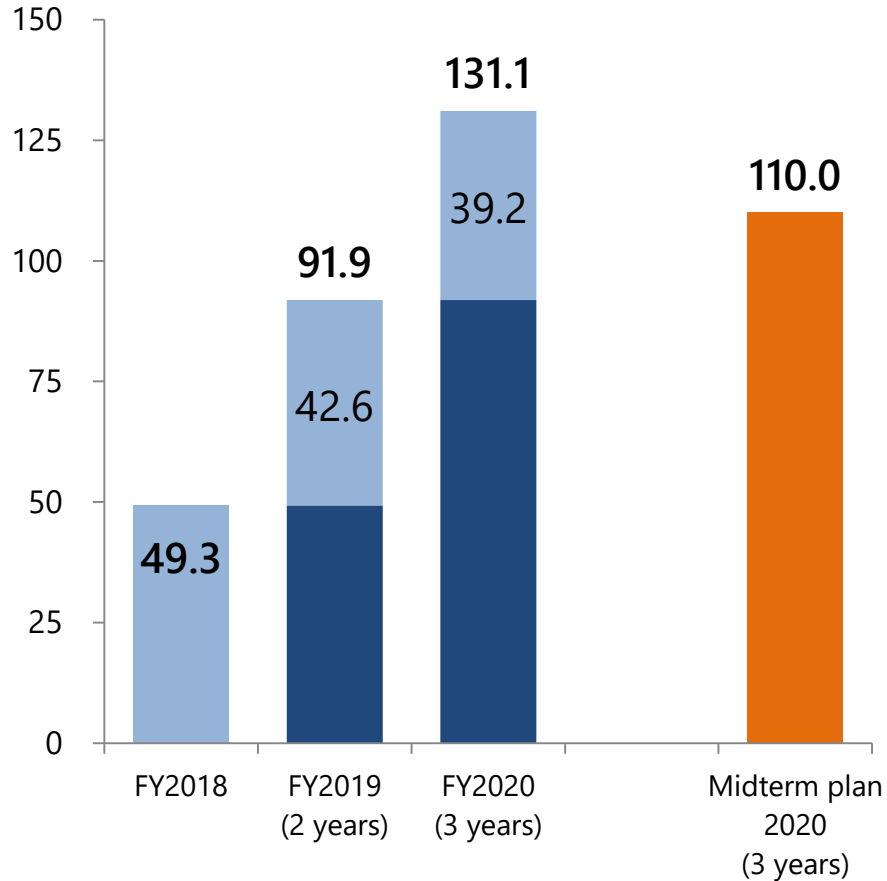


After an investment project developed into a business, the profit level rose. Performance indicators improved for the second consecutive year.

# Investment, R&D Expenses

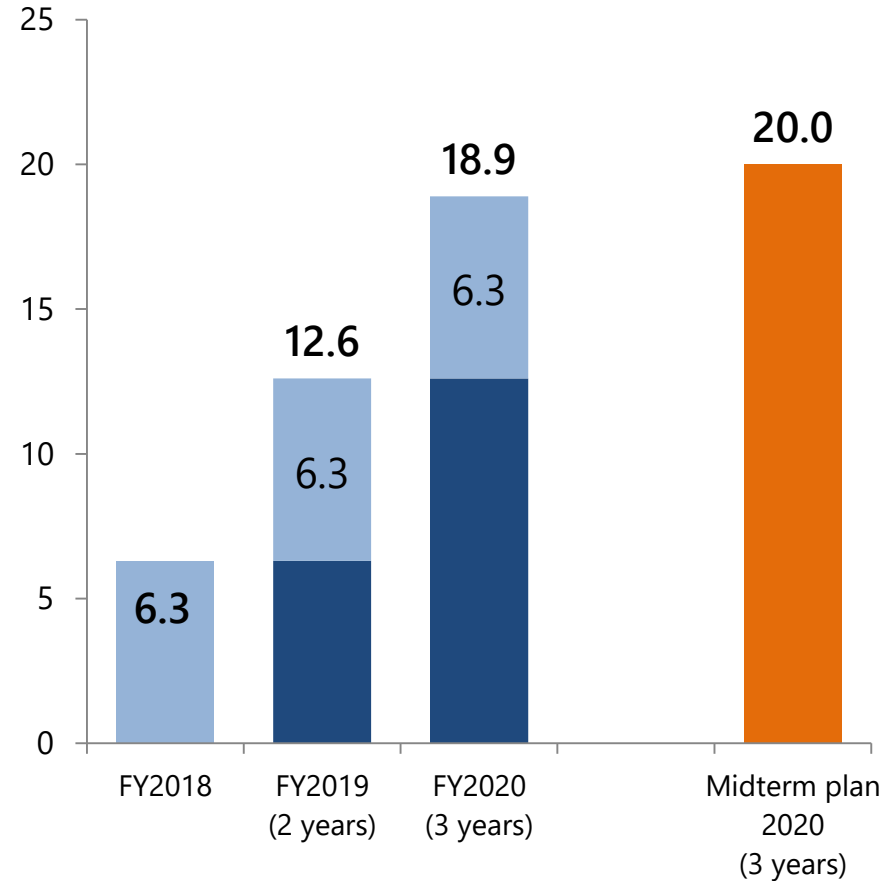
## Investment

Billion yen



## R&D Expenses

Billion yen



Mainly because of additional projects, investments were larger than in the Midterm Plan.  
Research and development expenses were as planned.

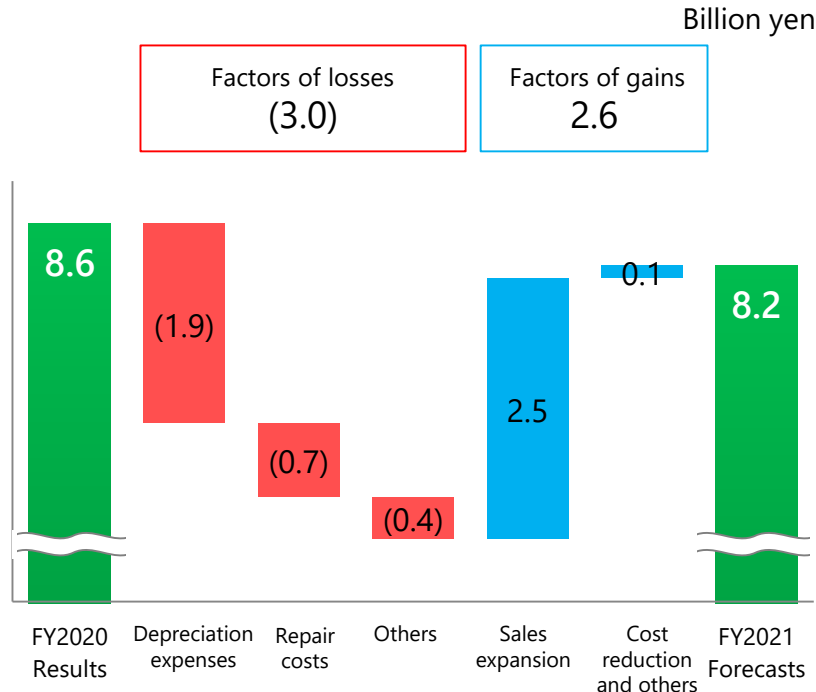
# Progress of Key Measures in Each Segment

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### Business Environment (FY2021)

- Waste will be generated in large quantities in Japan and in Southeast Asia.
- Automobile shredder dust and waste home electrical appliances will be collected in large quantities.

### Ordinary Income (year-on-year)



### 《Major Product Trends》

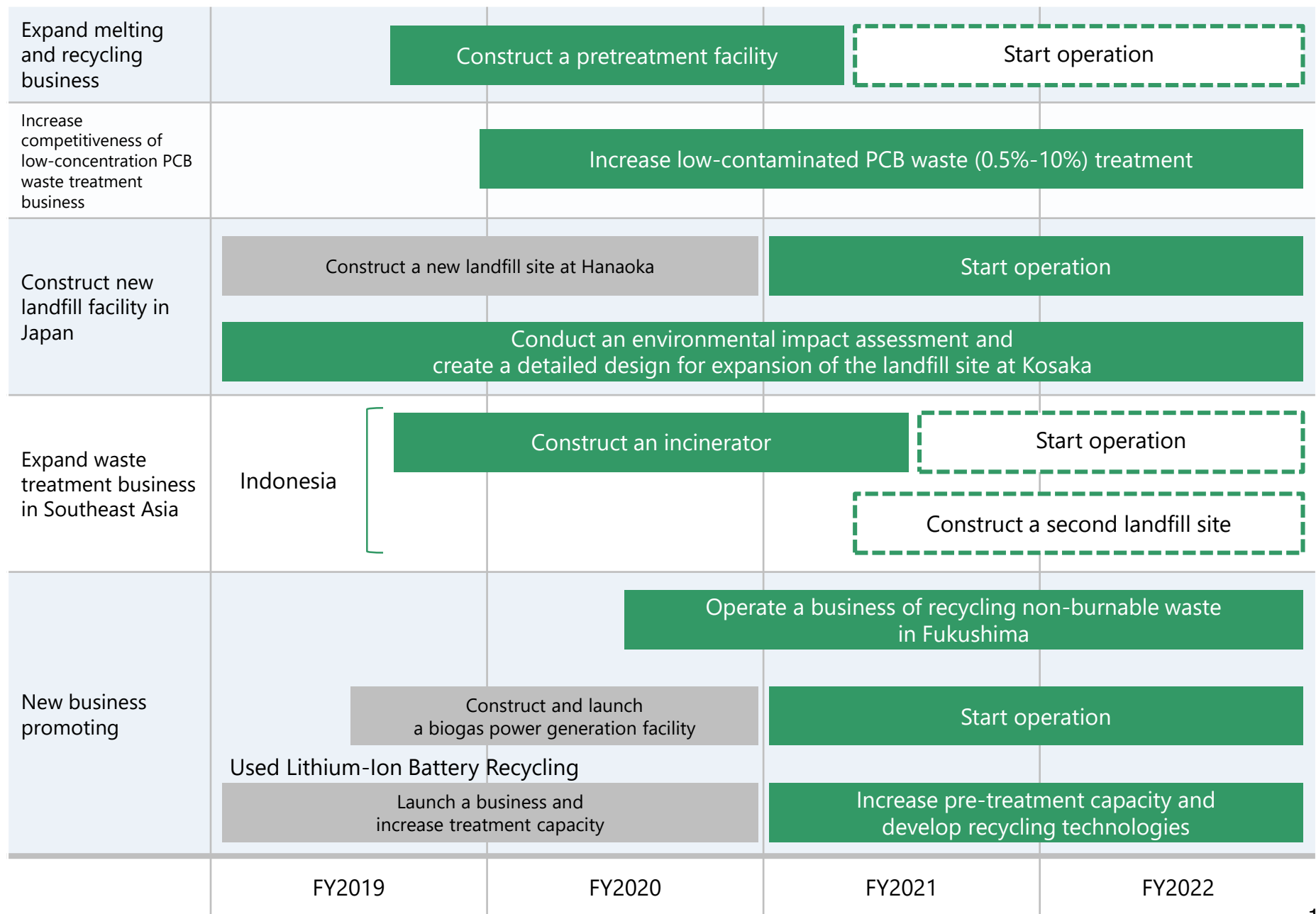
(FY2020/H1 = 100)

	FY2020		FY2021	
	H1	H2	H1	H2
Intermediated Waste Treatment Volume in Japan	100	99	<b>103</b>	<b>103</b>
Treatment Volume in Melting and Recycling business	100	99	<b>109</b>	<b>119</b>
Waste Treatment Amount in Southeast Asia	100	95	<b>125</b>	<b>138</b>
Treatment Volume in Electric Equipment Recycling business	100	102	<b>106</b>	<b>104</b>

### Overview of FY2021

- Investments in Japan and overseas will end and depreciation will grow.
- A brisk volume of domestic waste will be processed for intermediate treatment.
- The treatment volume in melting and recycling will rise.
- A turnaround in waste generated in Southeast Asia is anticipated.
- For the recycling of waste home electrical appliances, dismantling and sorting sites will continue to operate at high levels.

# Progress of Key Measures in Midterm Plan



# Strengthening of Business Response Capabilities in Japanese Market

## Expand melting and recycling business

- Amid growing needs for recycling, the Company is increasingly being commissioned to conduct melting and recycling treatment.
- Needs for treatment of incinerated ash, which is difficult to recycle, are increasing.



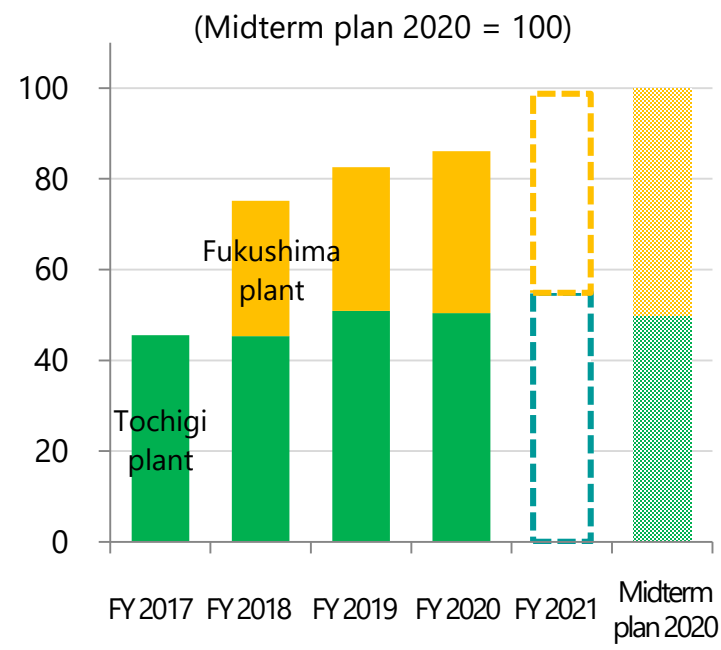
A pretreatment facility is to come into operation in June 2021.

- Capable of melting incinerated ash with a high salt content
- Increasing treatment efficiency of melting plants through volume reduction



Increase the capacity of plants in Tochigi and Fukushima to capture demand.

Trends in melting/recycling treatment volume



### Process flow in the melting and recycling business





# Strengthening of Business Response Capabilities in Southeast Asia Markets

- Pharmaceutical, chemical and many other manufacturers now operate in Southeast Asia and an increasing amount of hazardous waste is generated.
- Only a limited number of operators are capable of treating hazardous waste.



Expand the waste treatment services to capture needs for hazardous waste treatment.

## Indonesia

- Incinerator: Scheduled to commence commercial operation in August following trial operation after completion in June 2021
- Second landfill site: Construction due to start in June 2021

## Thailand, Singapore

- Incineration: Increase collection of hazardous waste to boost profitability

## Myanmar

- Customers suspend or reduce operation of their factories.
- Continue minimal operation while ensuring safety of employees



The incinerator is under construction in Indonesia.

# New Business Development

## ■ Biogas power generation from food waste

- Needs for effectively using food waste are growing.
- It is difficult to recycle food waste containing packages and containers.



A biogas power generation facility commenced operation in April 2021.

- An equipment for removing packages and containers has been introduced to open the way for generating power from food waste, which was conventionally incinerated for disposal.

→ This helps reduce greenhouse gas emissions and serves as a stable source of renewable energy for the region.



Biogas power generation plant

## ■ Recycling of used lithium-ion batteries

- With the use of expertise in and existing facilities for waste treatment, heat treatment safely inactivates used lithium-ion batteries.
- It paves the way for the recovery of iron, copper, aluminum and cobalt-nickel mixture on the recycling line.



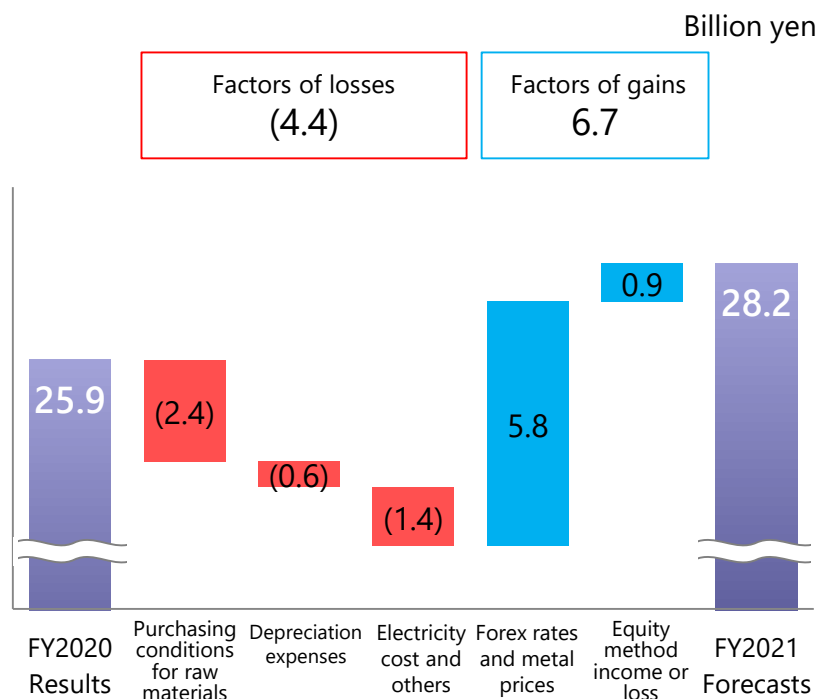
- Increase treatment capacity and improve quality of recovered metals in preparation for future demand growth.

# Business Overview

## Business Environment (FY2021)

- Metal prices:  
On the rise for both base metals and precious metals
- Demand for metals:  
Expected to be strong overall following a turnaround in demand for automobiles

## Ordinary Income (year-on-year)



## 《Major Product Trends》

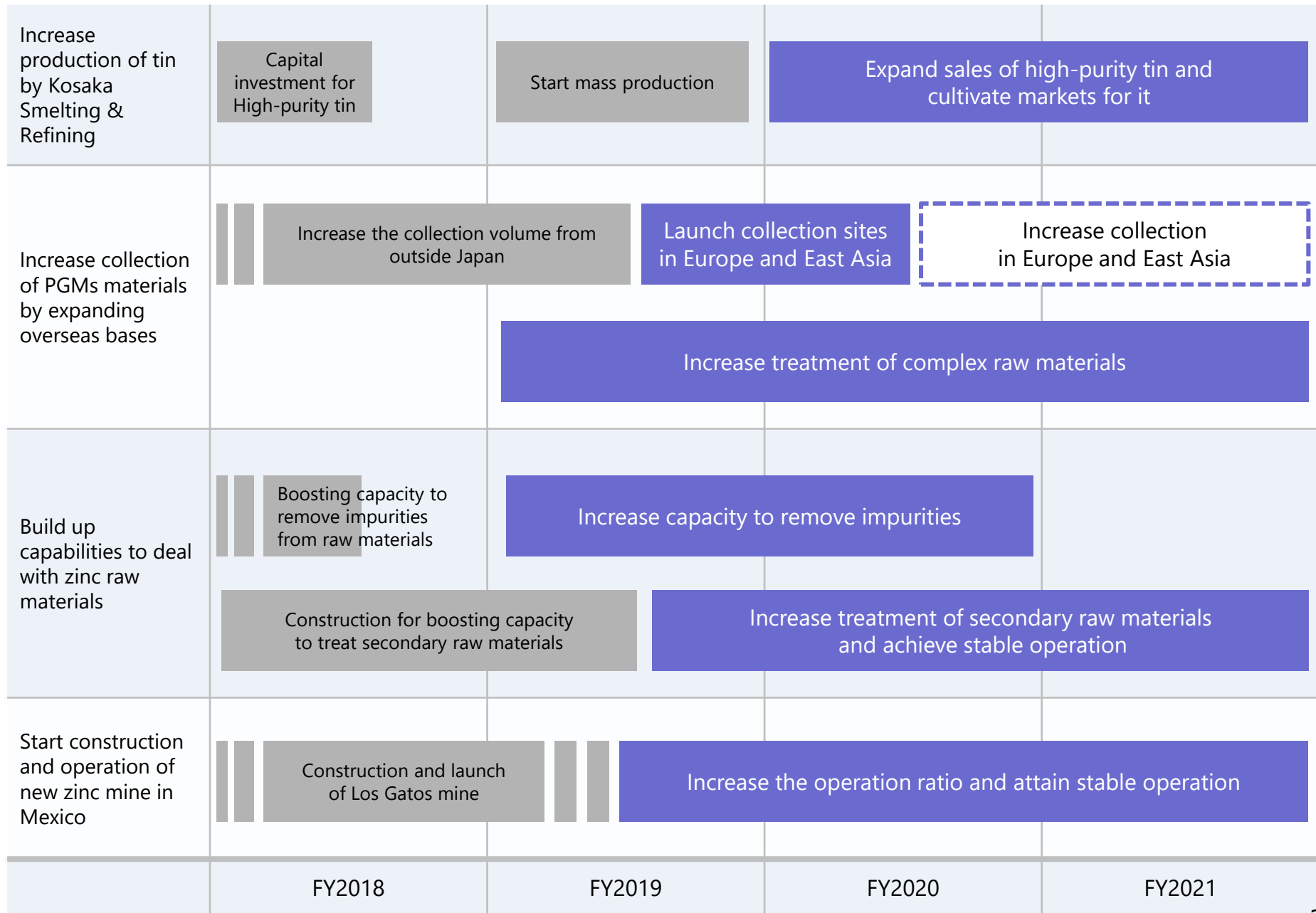
(FY2020/H1 = 100)

	FY2020		FY2021	
	H1	H2	H1	H2
Copper Production (Kosaka・Onahama)	100	99	94	104
Gold Production (Kosaka)	100	120	123	144
Zinc Production (Akita)	100	124	107	124

## Overview of FY2021

- The yen is expected to be weaker than the previous year.
- Purchase conditions (T/C) for zinc raw materials will deteriorate considerably.
- Production of copper will remain nearly at the previous year's level while that of gold, zinc, PGM and others will generally grow.
- Overseas mines as equity-method affiliates will earn more.

# The Progress of Major Actions on Midterm plan



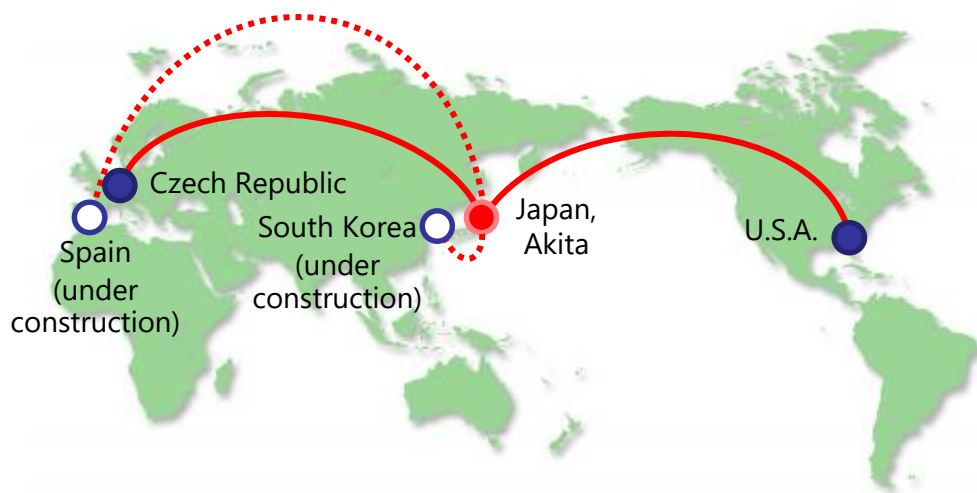
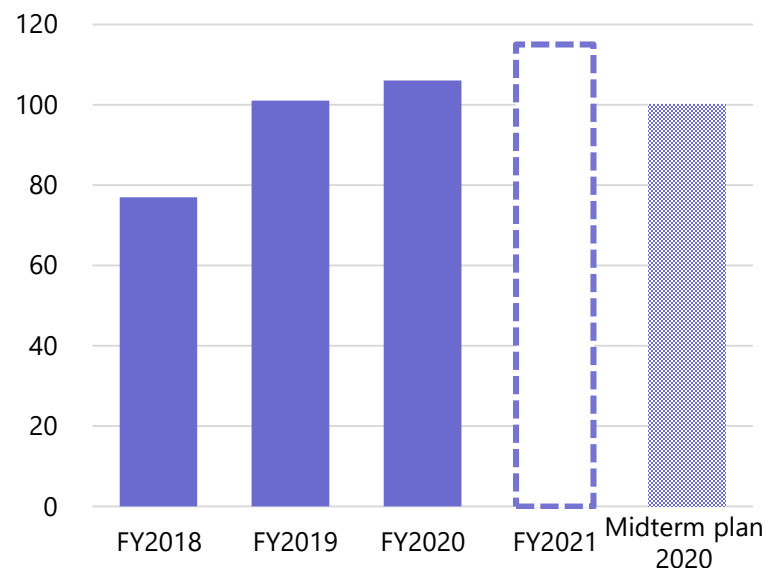
# Expansion of PGM Recovery Business

In FY2020, the collection and treatment volume surpassed 1,000 tons a month amid brisk demand.

→ Keep the collection and treatment volume at a high level in the future.

- Strengthen and expand overseas collection sites. (Strengthen the U.S.-based one and increase those in Spain and South Korea)
- Improve productivity of the sampling process
- Increase treatment of complex raw materials

Trend in treatment volume in PGM recovery business (Midterm Plan 2020 = 100)



Overseas PGM sampling sites



PGM recovery plant

# Actions in Zinc Business

Institute measures for improving capabilities to deal with different zinc materials

- Los Gatos Mine: Implement year-round full production of zinc concentrate for Akita Zinc with a view to stabilize earnings.
- Akita Zinc: Embarking on further increase in impurities removal capacity, which is expected to reach completion in the second half of FY2021  
→ Increase treatment capacity for zinc concentrate with a high content of impurities to help stabilize production
- Bolstering of capacity to process secondary raw materials finished and operation already commenced in August 2020
- Zinc processing in Thailand: Strong sales projected amid rallying demand for hot dip galvanizing for automobiles  
→ Resume consideration of investment in increased production



Ore crushing equipment at the Los Gatos Mine



Zinc processing site in Thailand

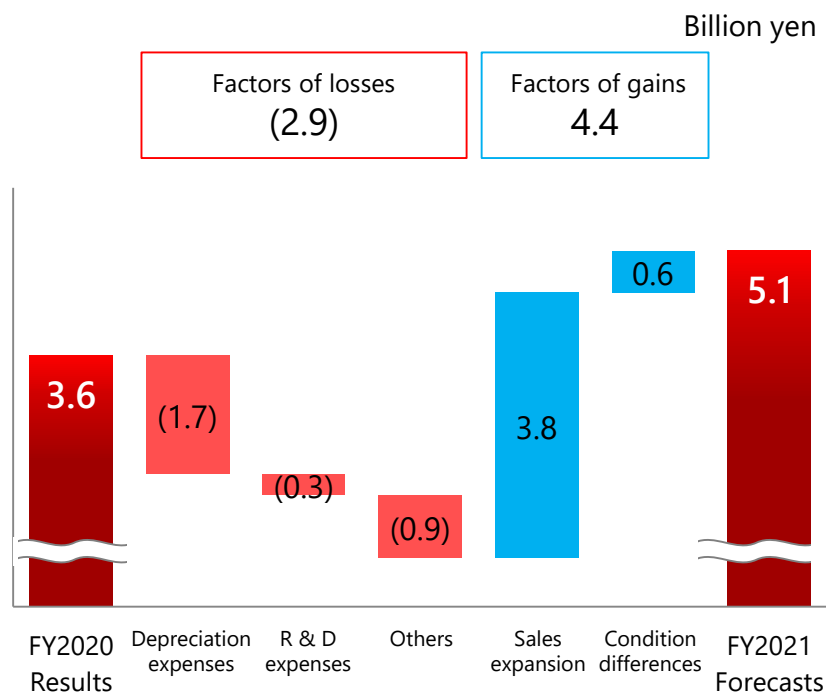


# Business Overview

## Business Environment (FY2021)

- As smartphone sales volume rallies and expands, the new type of proximity sensors is becoming the mainstream.
- Solar panel installations will continue to grow. The ratio of new generation panels is expected to expand.

## Ordinary Income (year-on-year)



## 《Major Product Trends》

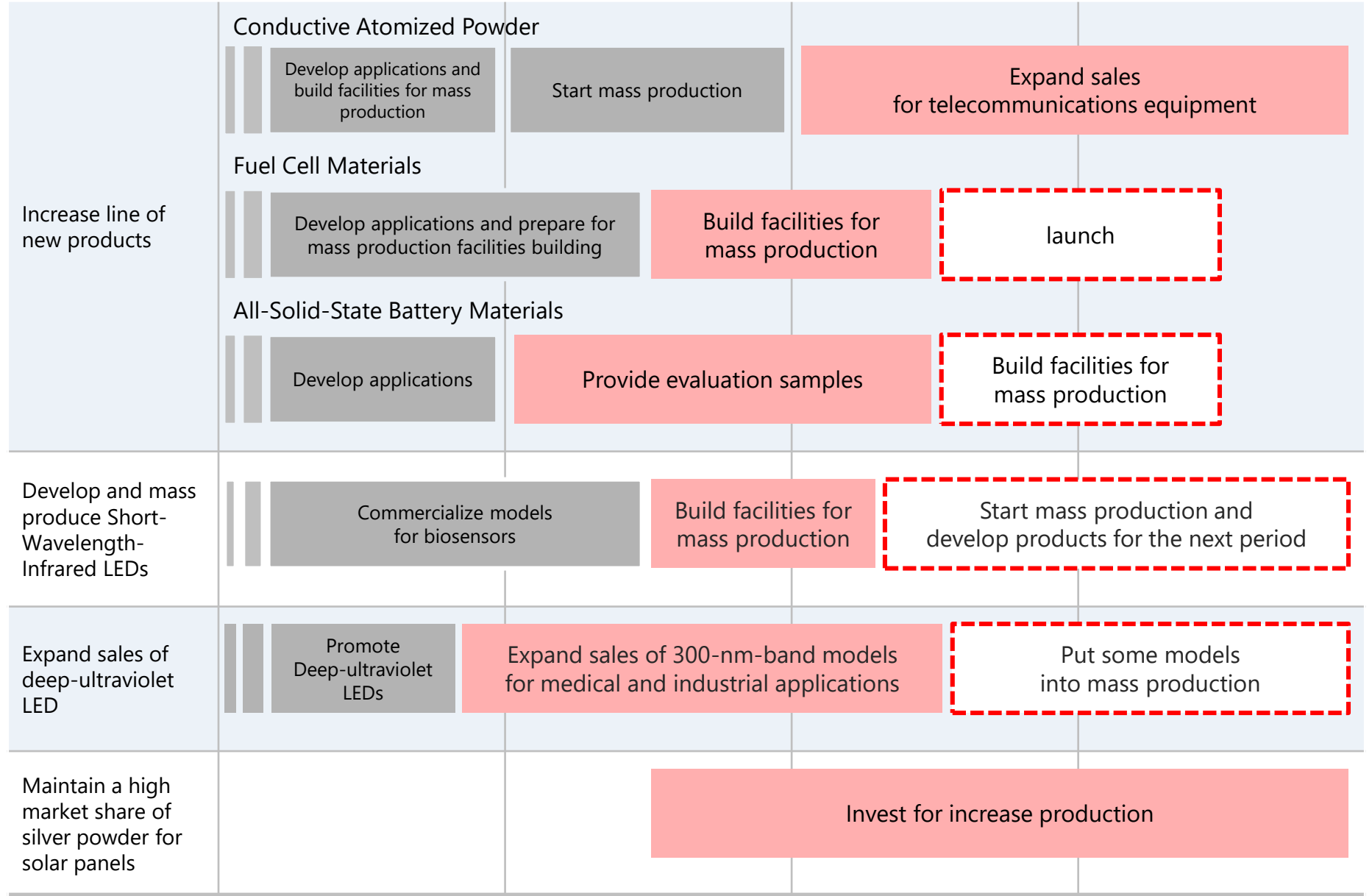
(FY2020/H1 = 100)

	FY2020		FY2021	
	H1	H2	H1	H2
LED Sales Volume	100	96	139	181
Silver Powder Sales Volume	100	105	109	109
Income from new products (e.g. evaluation sample incomes)	100	76	86	111

## Overview of FY2021

- After the start of mass production and sales of short-wavelength-infrared LEDs, LED sales volume and depreciation will rise.
- Silver powder for new generation panels will make brisk sales.
- Among new products, fuel cell materials and deep-ultraviolet LEDs will earn higher sample revenues. Research and development expenses will increase in preparation for mass production.

# Progress of Key Measures in Midterm Plan



FY2019

FY2020

FY2021

FY2022



### Conductive atomized powder

Mass production and sales were started in April 2019 for MLCC applications.

The Company is receiving more orders in line with soaring demand for automotive and telecommunications applications.

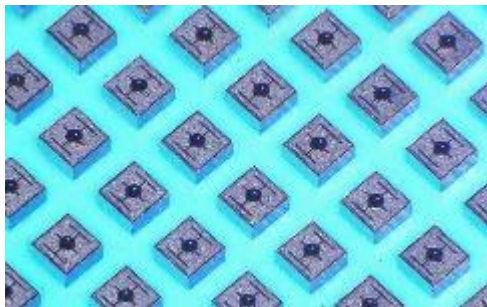
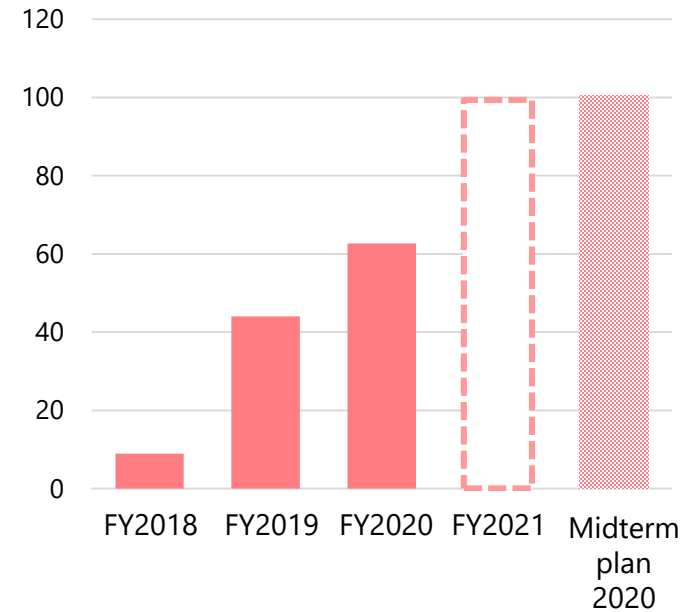
→ Expand sales for circuit board substrates and electronic components for telecommunications with a view to stabilizing revenue

### Short-Wavelength-Infrared LEDs

Development efforts are made and mass production facilities are built and launched for introduction to wearable devices equipped with biosensors.

→ Start mass production and sales within the first half of FY2021.

Trends in Conductive atomized powder sales volume (Midterm plan 2020 = 100)



Short-wavelength-infrared LED chips



Smartwatch

Wireless earphones

Smart glasses

Wearable devices that the new LEDs may be incorporated

# Expansion to New Energy Fields

## Silver powder

Strong demand for solar panels due to new energy policies in various countries

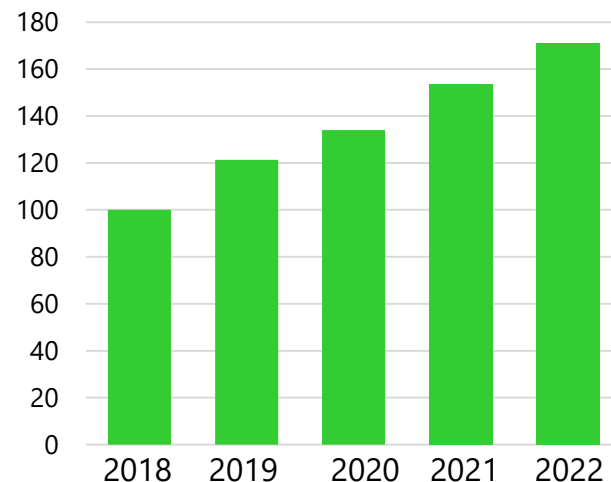
- Step up activities for developing silver powder answering demand for finer wiring to advance higher efficiency.
- Invest in increased production step by step to boost supply capacity.

## All-Solid-State Battery Materials

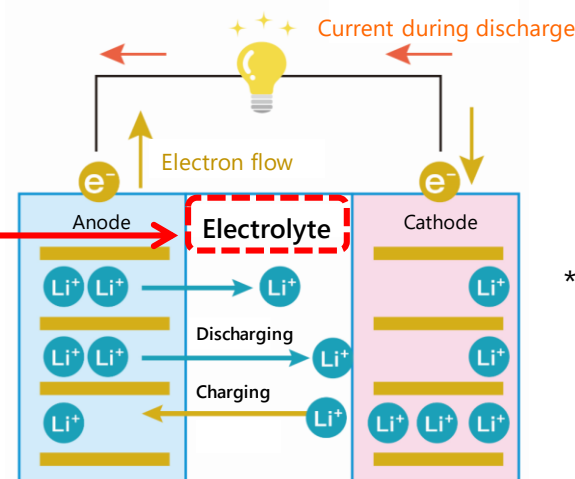
Solid electrolyte powder for all-solid-state batteries for telecommunication terminals (LAGP\*) has been developed. It is under evaluation by users.

- Build manufacturing facilities in FY2021 with an eye towards mass production.

Global solar panel installations (2018 = 100) \* Source: DOWA



Solid electrolyte powder under development



Structure of an all-solid-state battery

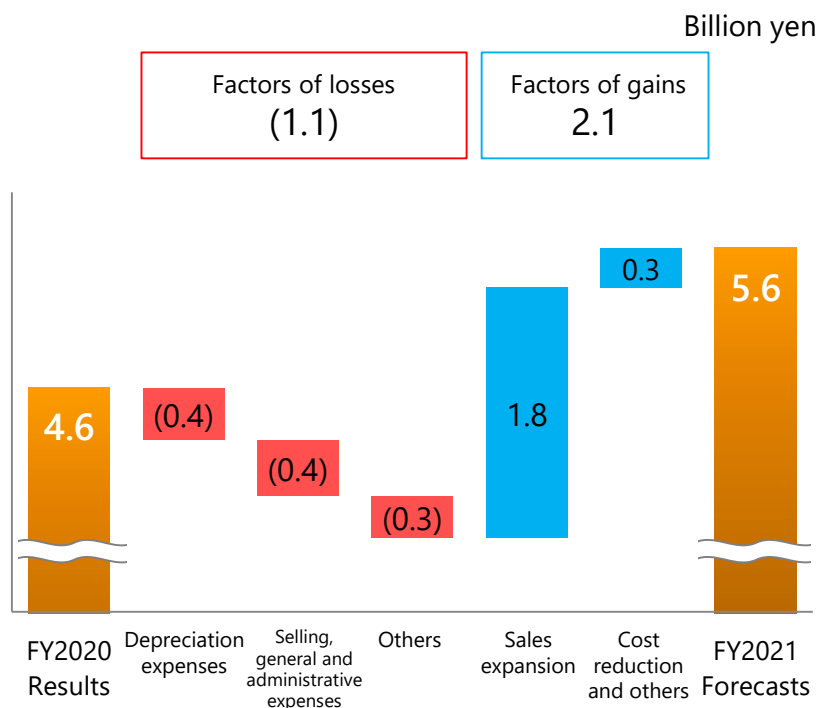


# Business Overview

## Business Environment (FY2021)

- The shift of automobiles to electric power and intelligence advances.
- Telecommunication devices support increasing functions and faster communication.
- Increases in servers and base stations mean an expansion in demand for principal products.

## Ordinary Income (year-on-year)



## 《Major Product Trends》

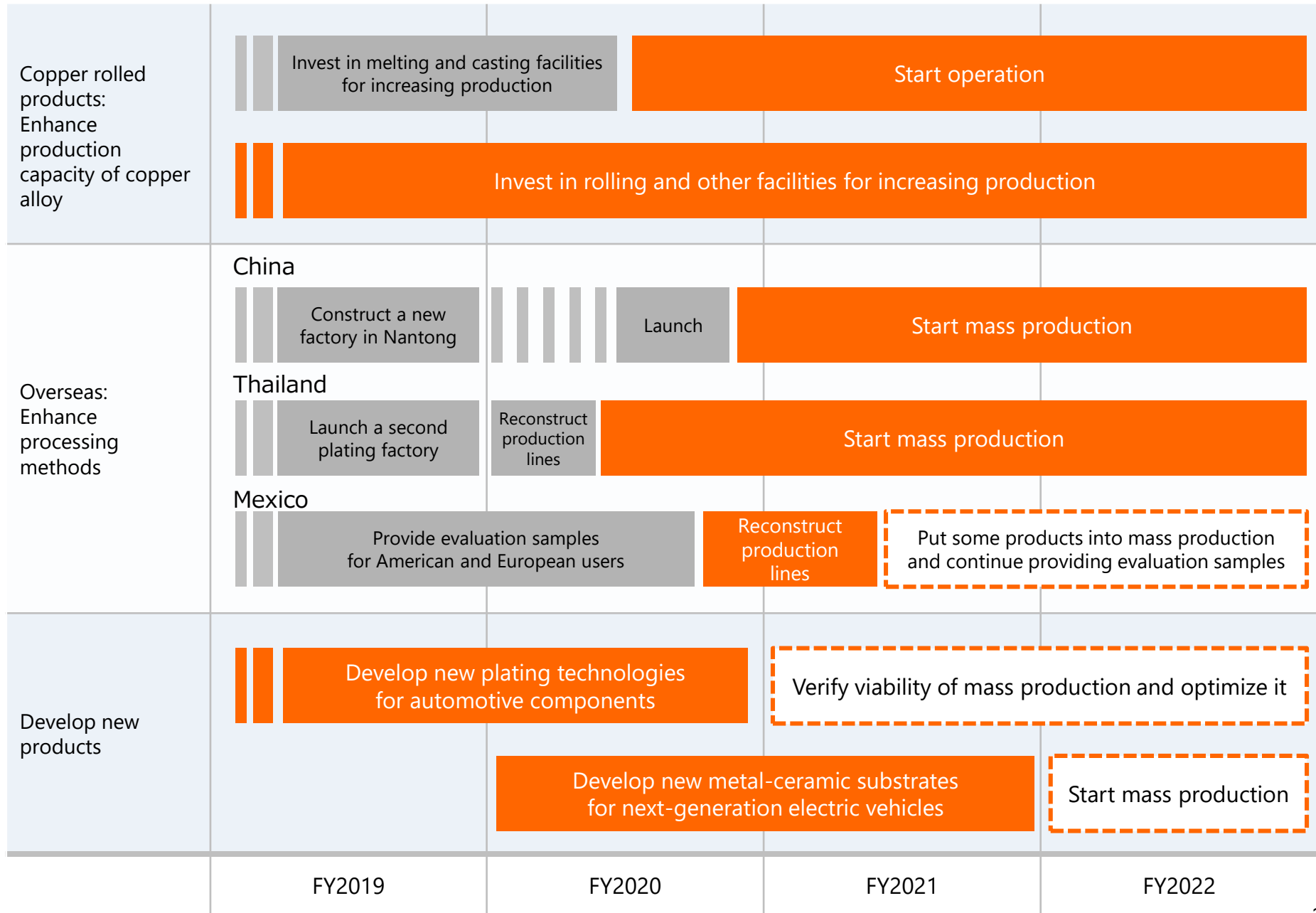
(FY2020/H1 = 100)

	FY2020		FY2021	
	H1	H2	H1	H2
Copper Alloy Sales Volume (For Automobile)	100	151	<b>141</b>	<b>147</b>
Copper Alloy Sales Volume (For information and communication equipment)	100	113	<b>108</b>	<b>113</b>

## Overview of FY2021

- Demand will recover for copper rolled products and precious metal electroplating for automobiles.
- Metal-ceramic substrates will see poor sales from railway operators.
- Facilities will be continuously enhanced at major production sites in Japan in a bid to respond to demand that is expecting to expand over the medium and long terms.

# Progress of Key Measures in Midterm Plan



## ■ Copper rolled products

Japan: Investments made in increasing production of high performance copper alloys

- Melting and casting facilities started operation.
- New rolling facilities under construction towards inauguration in FY2022

→ Respond to surging needs for thinner copper rolled products

China: A second tin plating factory has started operation in the city of Nantong.

Capable of slitting and plating, it is located outside the Export Processing Zone.

→ Capture demand for local automotive applications in China



New factory in China  
(DOWA METALTECH (NANTONG))

## ■ Electroplating

Enhance and reconstruct the plating lines according to changing demand in Japan, Thailand and Mexico

Japan: Increase plating lines according to growing demand for terminal plating for electric vehicles

Thailand: Expand sales to main local customers of automotive terminal plating

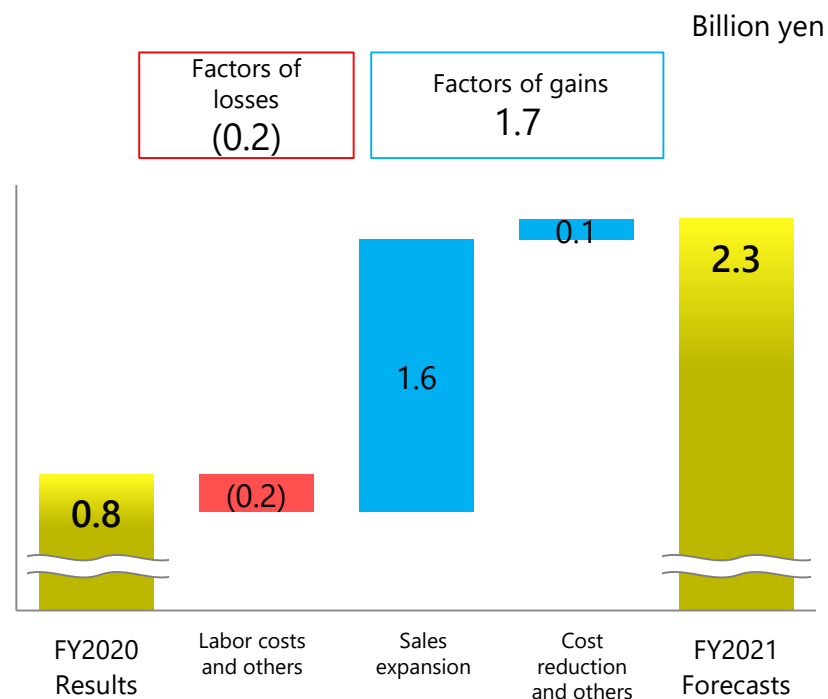
Mexico: Capture new demand in the local market of automotive terminal plating

# Business Overview

## Business Environment (FY2021)

- Automobile production volume is turning around in Japan and overseas after slowing due to the COVID-19 pandemic.

## Ordinary Income (year-on-year)



## 《Major Product Trends》

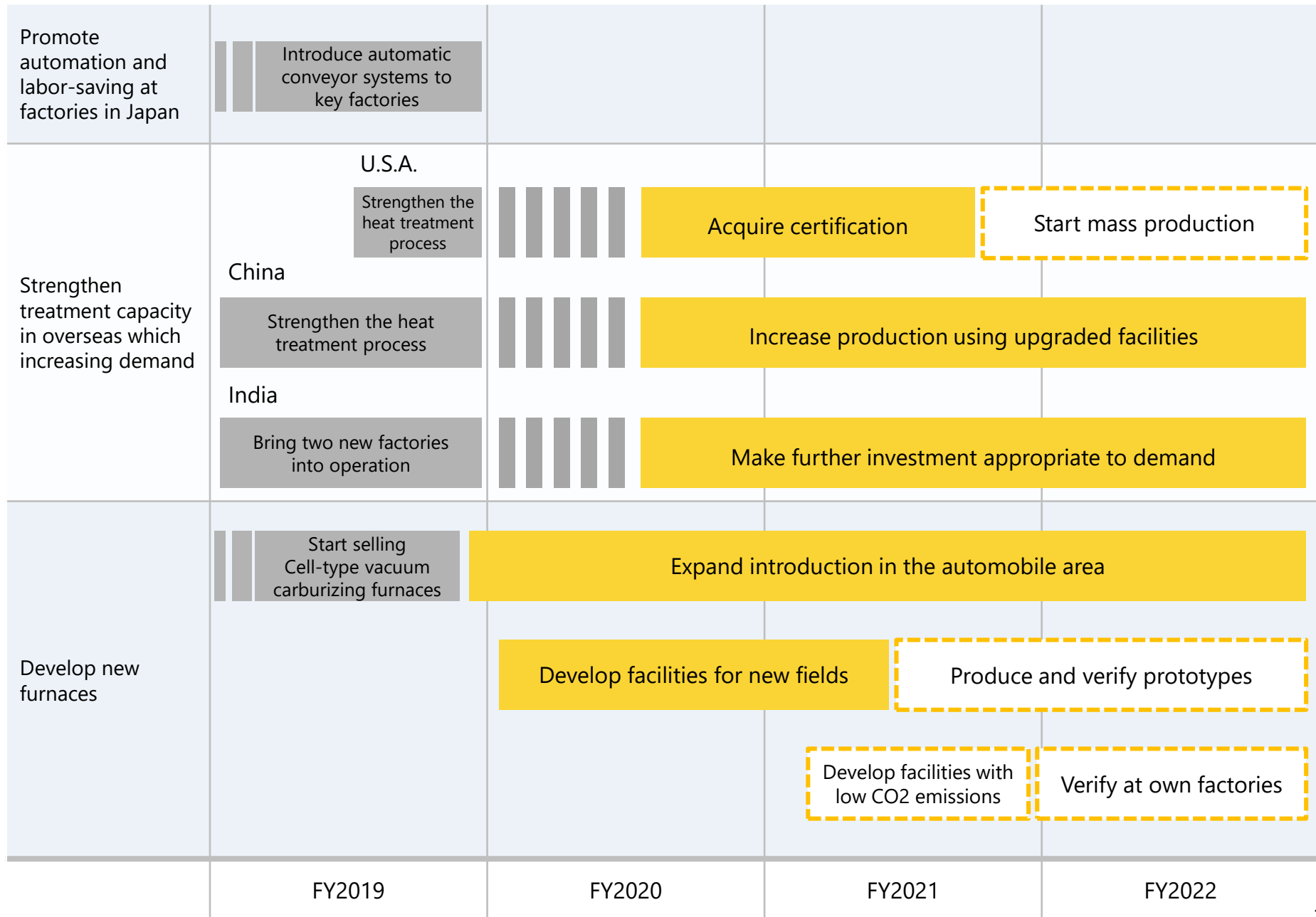
(FY2020/H1 = 100)

	FY2020		FY2021	
	H1	H2	H1	H2
Heat Treatment Sales Amount	100	154	145	156
Industrial Furnaces Sales Amount	100	109	86	173

## Overview of FY2021

- Demand will increase chiefly for heat treatment processing in sync with recovery of automobile production in Japan and abroad.
- Measures in response to growing demand will be taken while maintaining the effect of cost reduction in FY2020.

# Progress of Key Measures in Midterm Plan



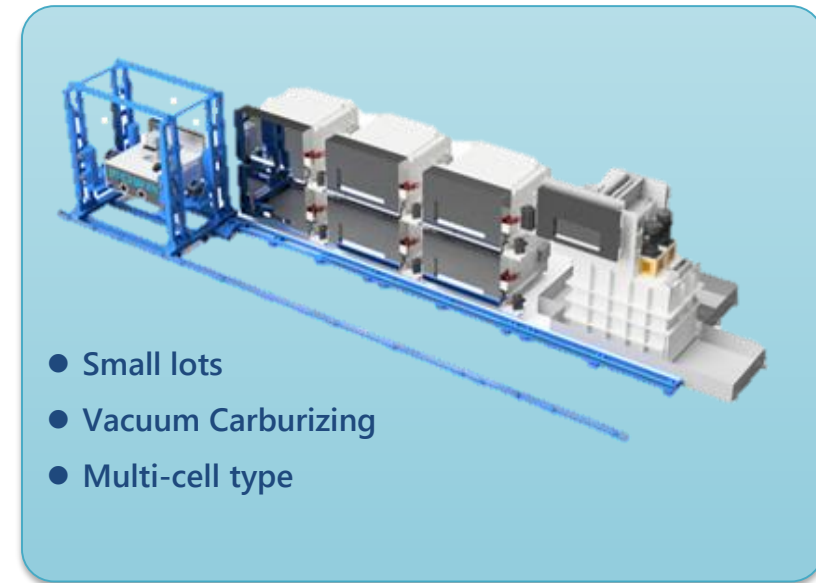
## ■ Carmakers speed up CO<sub>2</sub> emission cuts

(1) The production ratio of EVs, HVs and PHVs rises.

→ An EV has a smaller number of parts. However, demand for heat treatment will grow in line with the increase in automobile production.

(2) Carmakers revise their investment plans to cut CO<sub>2</sub> emissions from their own heat treatment lines.

→ Needs will grow for heat treatment facilities with low CO<sub>2</sub> emissions.



SS vacuum carburizing furnace attaining low CO<sub>2</sub> emissions

[Heat treatment business]

- Aim to win more orders with the use of the global production system and sales channels.

[Industrial furnace business]

- Accelerate development and sales expansion of carburizing facilities that help reduce CO<sub>2</sub> emissions from heat treatment lines.

**Display the advantage of operating both software and hardware businesses to the fullest degree to capture changing demand**



# DOWA

\* Forward-looking statements made in this document, such as business forecast, are based on the information available at this time and on certain premises that the Company assumes to be reasonable. Actual performance may differ materially from such forecasts due to a variety of factors.