

Business Results and Progress of Key Measures

First Half of FY2021 (FY Ending March 2022)

DOWA HOLDINGS CO.,LTD.

November 16, 2021

Results for FY2021/H1 Overview of Results

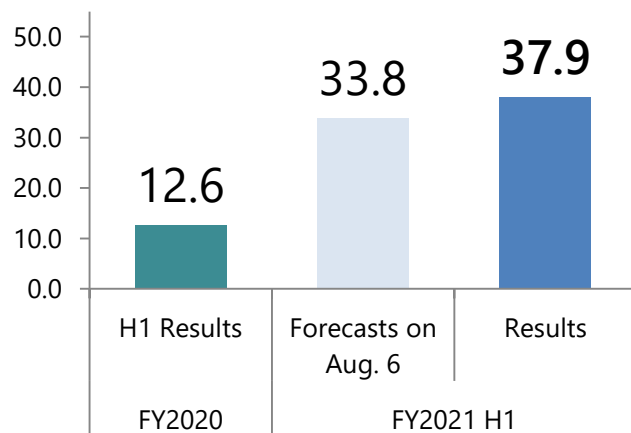
Billion yen (Amounts less than 100 million yen are omitted.)

	FY2020 H1 Results A	FY2021 H1		Changes			
		Forecasts on Aug. 6 B	Results C	Year-on-Year (C - A)		From Forecasts on Aug. 6 (C - B)	
Net Sales	252.4	397.1	423.2	170.7	68%	26.1	7%
Operating Income	12.6	33.8	37.9	25.3	201%	4.1	12%
Ordinary Income	9.3	38.6	47.4	38.1	409%	8.8	-
Profit attributable to owners of parent	1.6	25.0	32.5	30.9	1917%	7.5	-

- ✓ In the first half of FY2021, both sales and profit increased significantly year on year.
- ✓ The forecasts announced on Aug. 6 did not include equity method income and loss of Fujita Kanko Inc., therefore changes in ordinary income and profit attributable to owners of parent are treated as reference values.

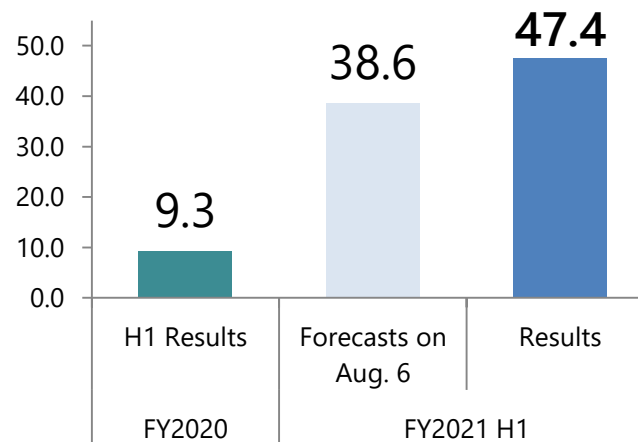
Operating income

Billion yen



Ordinary Income

Billion yen



FY2021 Full Year Forecasts

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

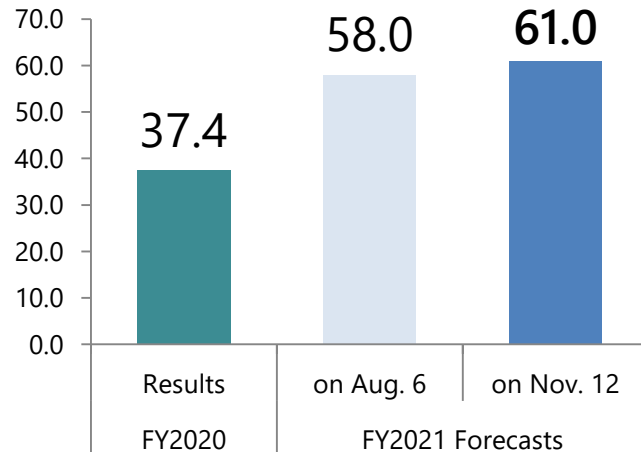
	FY2020 Results A	FY2021 Forecasts		Changes			
		Forecasts on Aug. 6 B	Forecasts on Nov. 12 C	Forecasts comparison (C - B)	Year on Year (C - A)		
Net Sales	588.0	780.0	840.0	60.0	8%	251.9	43%
Operating Income	37.4	58.0	61.0	3.0	5%	23.5	63%
Ordinary Income	27.8	66.0	70.0	4.0	6%	42.1	-
Profit attributable to owners of parent	21.8	42.0	44.0	2.0	5%	22.1	-

* FY2021 forecasts does not include Fujita Kanko's results and forecasts.

- ✓ Although the outlook remains uncertain due to the fall in precious metal prices and the automobile production cutbacks, the Company expects sales and profits to increase year-on-year for the full year based on the results of the first half and business environment in second half.

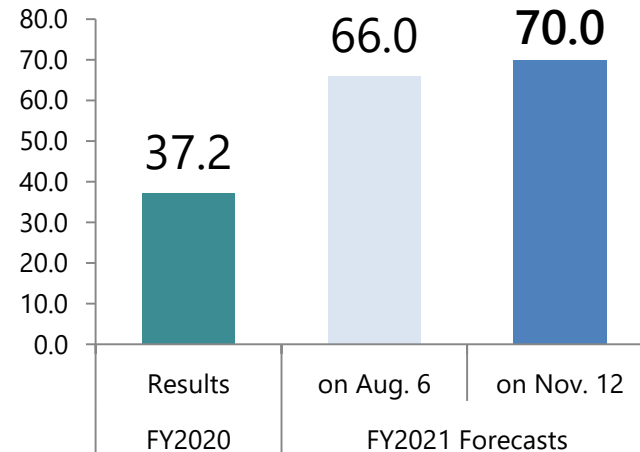
Operating income

Billion yen



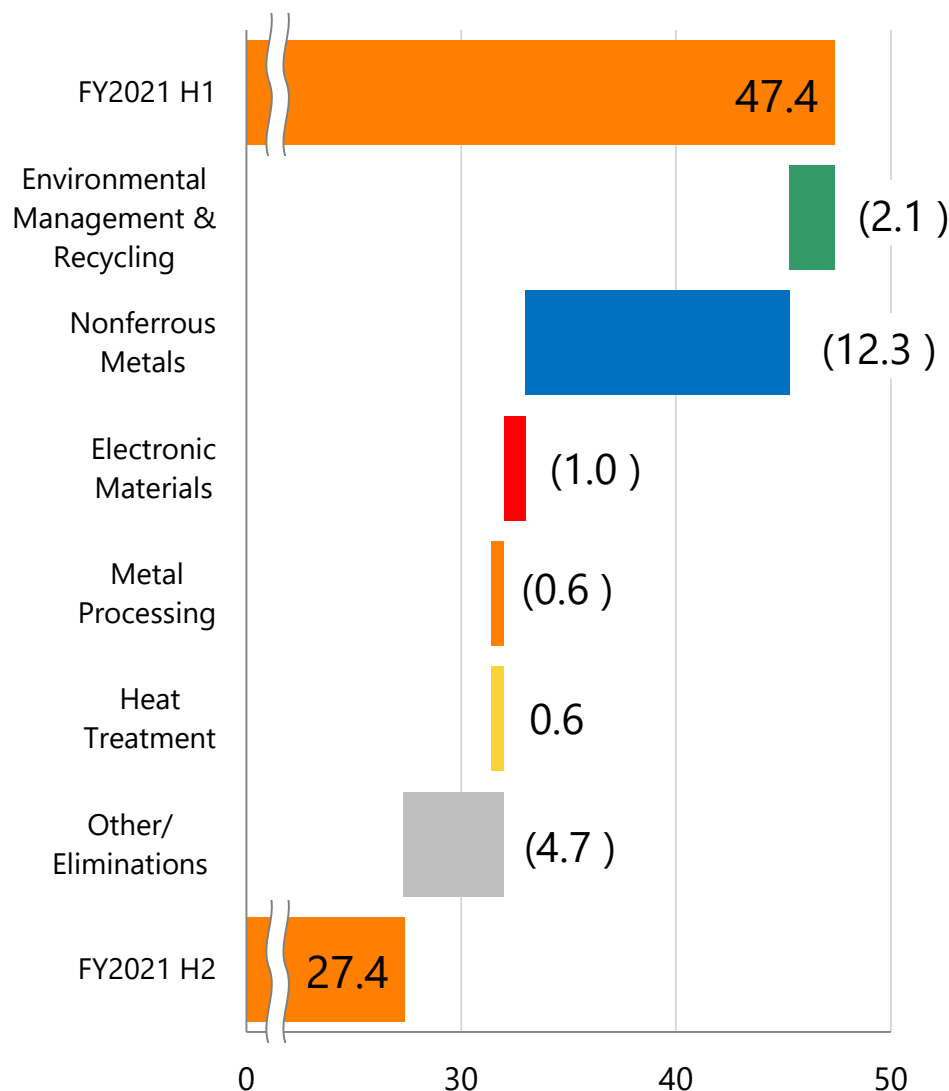
Ordinary Income

Billion yen



Changes in Business Environment (FY2021 H2)

Billion yen (Amounts less than 100 million yen are rounded down.)



Major factors for change

- Fall in unit prices for the waste treatment.
- Prices of precious metals are expected to fall.
- Prices of precious metals are expected to fall.
- Cost will increase chiefly due to the worsening of purchase conditions of raw materials and an increase in energy cost.
- Demand for silver powder for solar panels is firm.
- Decrease in profits due to difference in LEDs product mix.
- The effect of automobile production cutbacks is limited. Demand is likely to remain firm.
- Increase in raw materials cost and energy cost.
- The effect of automobile production cutbacks will be limited.
- Revenue related to the completion of industrial furnaces will be posted (a seasonal factor).
- A decrease in profit because profit at an equity method affiliate (Fujita Kanko Inc.) is not reflected to full year forecasts.

**Ordinary income is expected to fall
¥20.0 billion from that in the first half.**

Each business is affected by changes in the external environment.
Notwithstanding that, demand will likely remain firm.

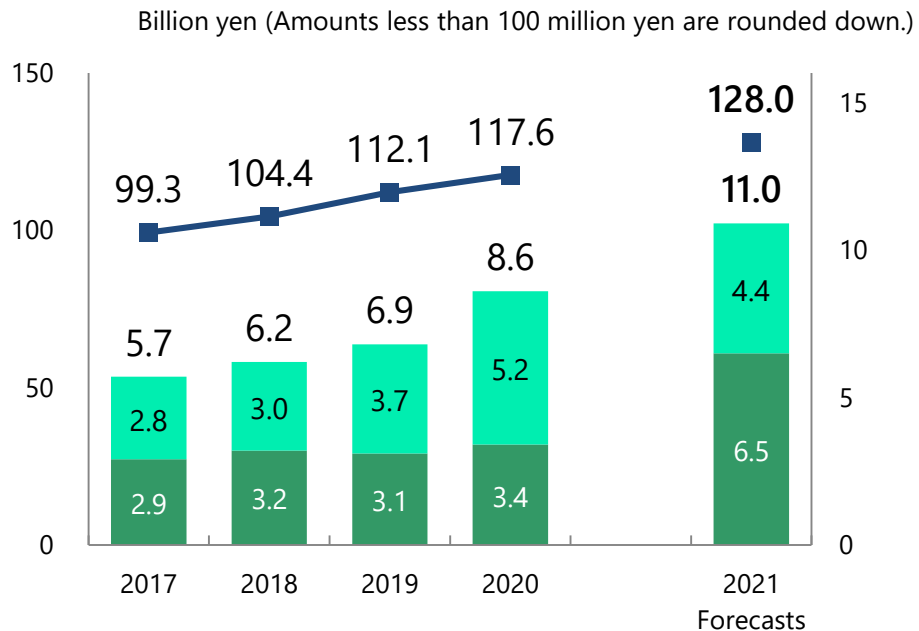
Progress of Key Measures in Each Segment

Business Overview

Business Environment (FY2021/H2)

- Waste treatment: Firm in Japan and remain flat in Southeast Asia.
- Competition will intensify in the collection of recycling materials for smelters.
- Automobile shredder dust and discarded home electrical appliances will be collected in large quantities.

Net Sales & Ordinary Income



■ ordinary income in H2 ■ ordinary income in H1 —■ Net sales

《Major Product Trends》

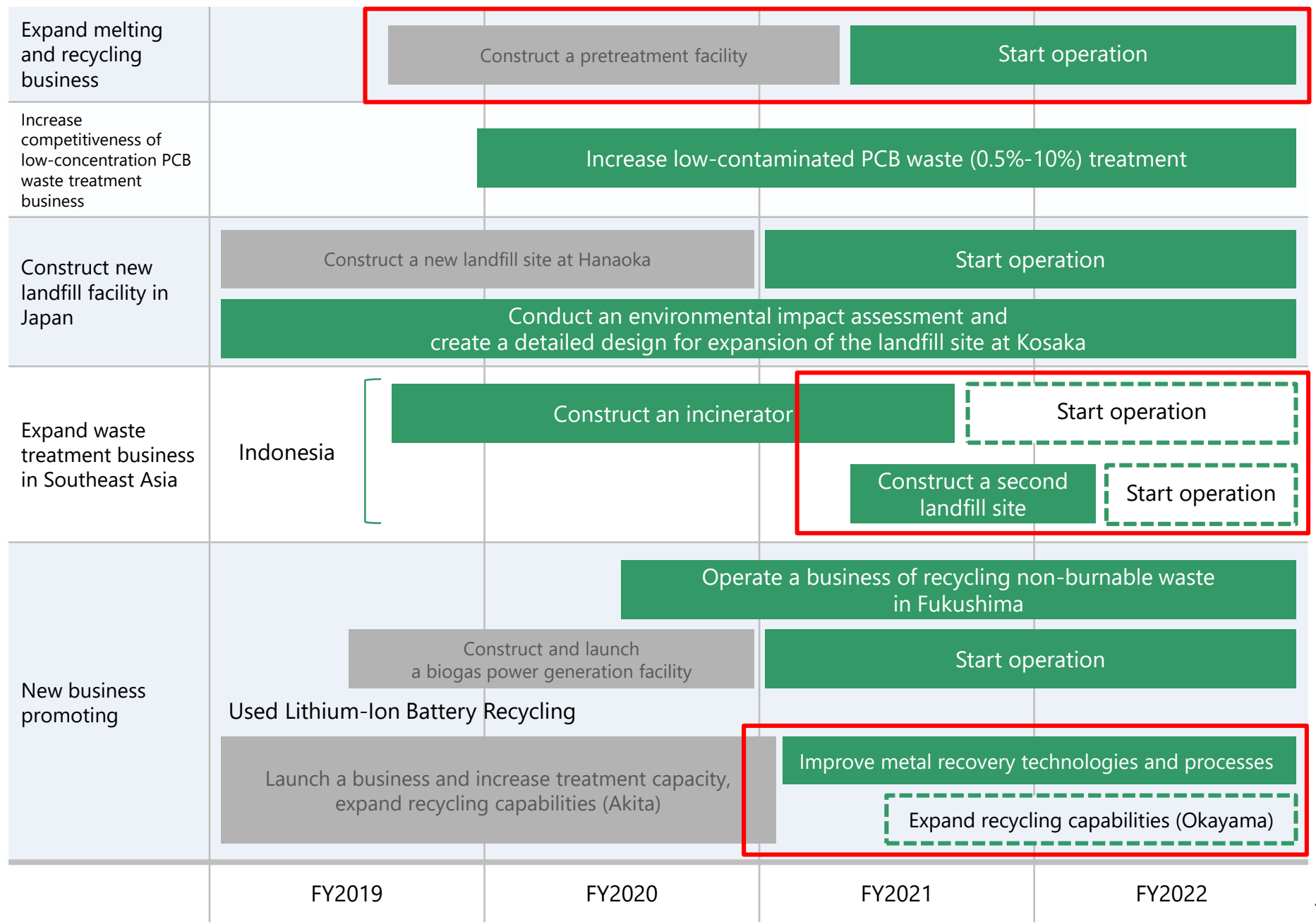
(FY2020/H1 = 100)

	FY2020		FY2021	
	H1	H2	H1	H2
Intermediated Waste Treatment Volume in Japan	100	99	105	105
Treatment Volume in Melting and Recycling business	100	99	102	121
Waste Treatment Amount in Southeast Asia	100	95	105	102
Treatment Volume in Electric Equipment Recycling business	100	102	105	101

Overview of FY2021/H2 (comparison with H1)

- A brisk volume of domestic waste will be processed for intermediate treatment. The unit price is expected to fall slightly.
- The treatment volume in melting and recycling will rise.
- In the business of recycling non-burnable waste, most revenue planned in FY2021 is concentrated in the first half.
- Revenue from recycling business will decrease due to falls in prices of precious metals.

Progress of Key Measures in Midterm Plan



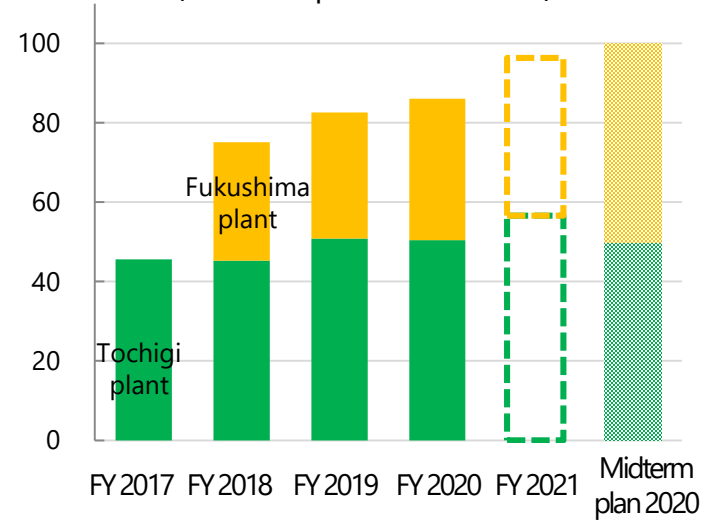
Expand melting and recycling business

A pretreatment facility started operation in June 2021.

- Remove impurities (salt) that prevent recycling, which expands capabilities for the ash with a high salt content and increases treatment efficiency at melting plants.
- > Contributing to increasing the capacity of the Tochigi plant in FY2021.
- From FY2022, the Company plans to expand collection and treatment of the pretreated ash at the Tochigi and Fukushima plants.

Trends in melting/recycling treatment volume

(Midterm plan 2020 = 100)



Recycling of used lithium-ion batteries

Expand the recycling business of used lithium-ion batteries for automobiles by utilizing existing heat treatment facilities.

- In order to improve recycling efficiency, a recycling line will be newly established in Okayama following Akita (plan to start operation in FY2022/1Q).



Heat treatment facility in Akita

Increase profitability by increasing processing capabilities, expanding areas where materials are collected, and improving metal recovery technologies and processes.

Indonesia

- The market is sluggish and construction is delayed due to pandemic of COVID-19.
- The environment management business still has substantial growth potential against the backdrop of the advancement of industry and economic development.

Incinerator

- Put into trial operation in September 2021.
 - **Start commercial operation in FY2021 (planned).**
- > Expand the menu of hazardous waste to be treated.



Incinerator

Second landfill site

- **Construction started in June 2021.**
- About 40% progress as of September 30, 2021.
- Start operation in the second quarter of FY2022 (planned).



Second landfill site (under construction)

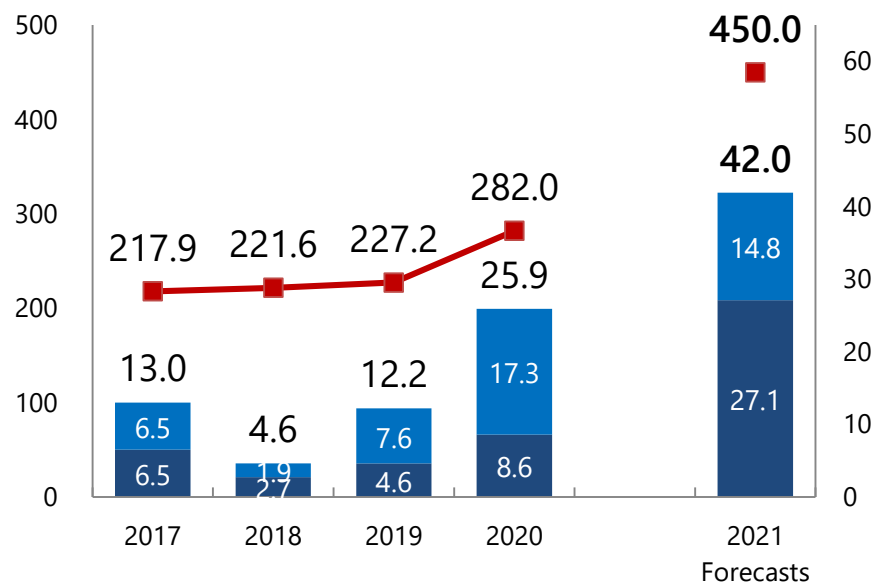
Business Overview

Business Environment (FY2021/H2)

- Metal prices: The prices of base metals will be about the same as the average prices in H1. The prices of precious metals are expected to be lower than the average prices in H1.
- Demand for metals: Expected to be strong overall.

Net Sales & Ordinary Income

Billion yen (Amounts less than 100 million yen are rounded down.)



《Major Product Trends》

(FY2020/H1 = 100)

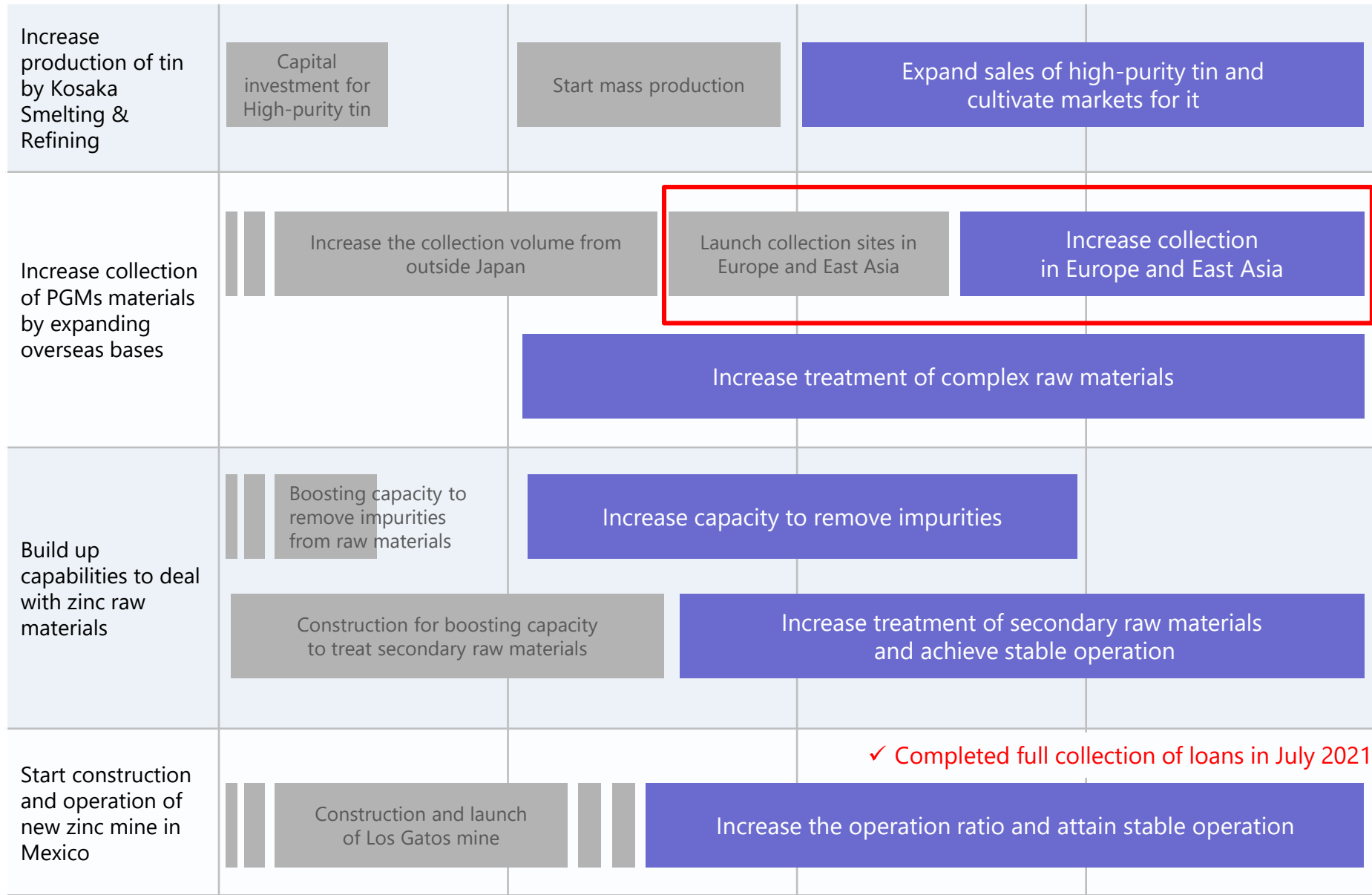
	FY2020		FY2021	
	H1	H2	H1	H2
Copper Production (Kosaka・Onahama)	100	99	90	100
Gold Production (Kosaka)	100	98	108	96
Zinc Production (Akita)	100	124	108	124

Overview of FY2021/H2 (comparison with H1)

- Processing volume of spent catalysts decreased due to the facility renewal.
- Free metal income related to gold will fall in H2 due to periodical maintenances in Kosaka Smelting & Refining.
- Revenue will decline due to the worsening of zinc raw material purchasing conditions.
- Electricity cost and the unit prices of materials will be on an upward trend.

The Progress of Major Actions on Midterm plan

Changes



✓ Completed full collection of loans in July 2021

FY2019

FY2020

FY2021

FY2022

Expansion of PGM Recycling Business

In FY2021/H1, the collection and treatment volume exceeded the target of the Midterm Plan owing to strong recycling demand.

- The PGM price fell sharply from the second quarter of FY2021.
 - > The Company will keep the collection and treatment volume at a high level, while assessing the effects of falling prices.
- Strengthen and expand overseas sampling sites.

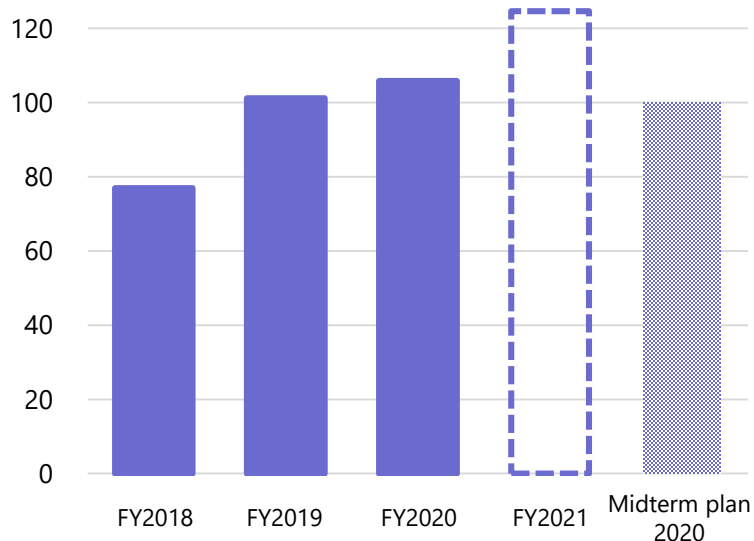
(Strengthen the U.S.-based one and increase those in Spain and South Korea).

U.S.A.: Expansion and relocation were completed in early 2020. Collection and sampling capacity is being expanded.

Spain and South Korea: Commercial operation started in November 2021.

 - > Maintain a stable collection volume by expanding collection channels.

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



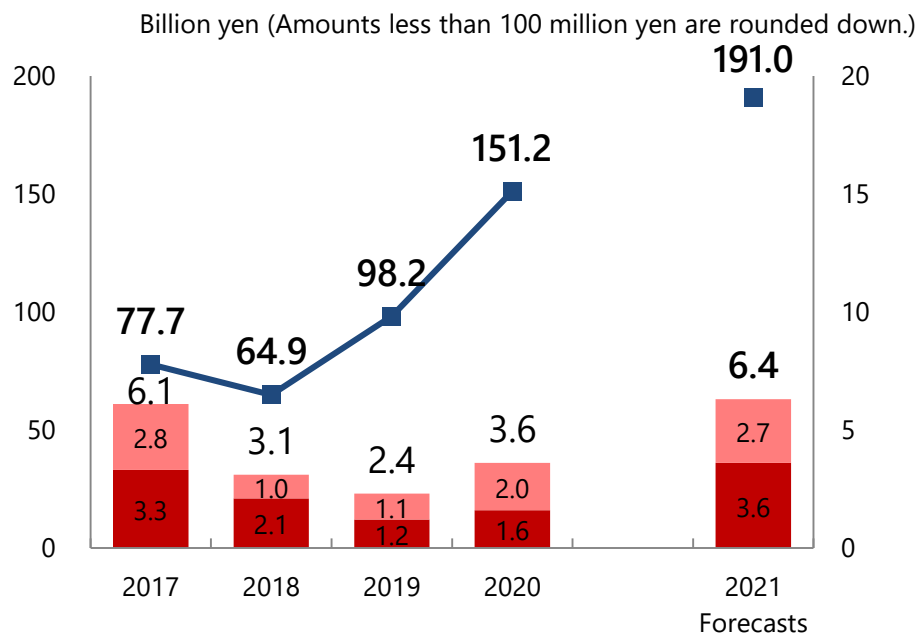
Overseas PGM sampling sites

Business Overview

Business Environment (FY2021/H2)

- The smartphone sales volume will be recovering trend.
- The sales volume of wearable devices will increase.
- Solar panels to be installed will likely continue to increase, reflecting increasing demand for new forms energy.

Net Sales & Ordinary Income



《Major Product Trends》

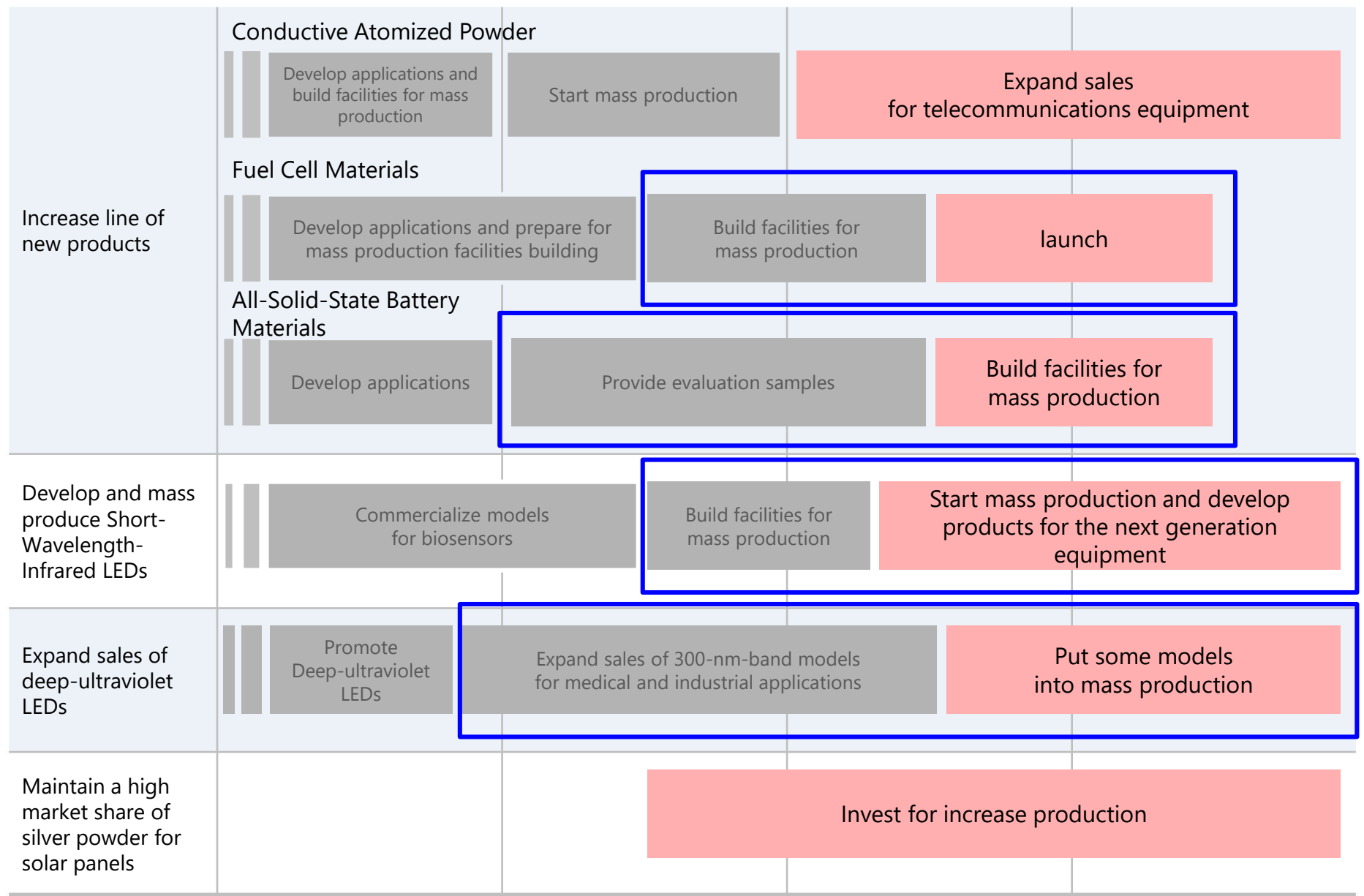
(FY2020/H1 = 100)

	FY2020		FY2021	
	H1	H2	H1	H2
LED Sales Volume	100	96	121	135
Silver Powder Sales Volume	100	105	102	113
Income from new products (e.g. evaluation sample incomes)	100	76	76	95

Overview of FY2021/H2 (comparison with H1)

- Mass production of short-wavelength-infrared LEDs and photo diodes (PD) will continue.
- Demand for silver powder at customers, which declined in H1 chiefly due to the shortage of raw materials, will recover. Sales of silver powder will expand in H2.
- Among new products, Fuel cell materials and Deep-ultraviolet LEDs will earn higher sample revenues.

Progress of Key Measures in Midterm Plan



FY2019

FY2020

FY2021

FY2022

Conductive atomized powder

- Orders from the existing users are increasing as demand for automotive and telecommunications applications is rising.
- Expanding applications for new MLCC users.
- > Expand sales for circuit board substrates and electronic components of telecommunications equipment with a view to stabilizing revenue.

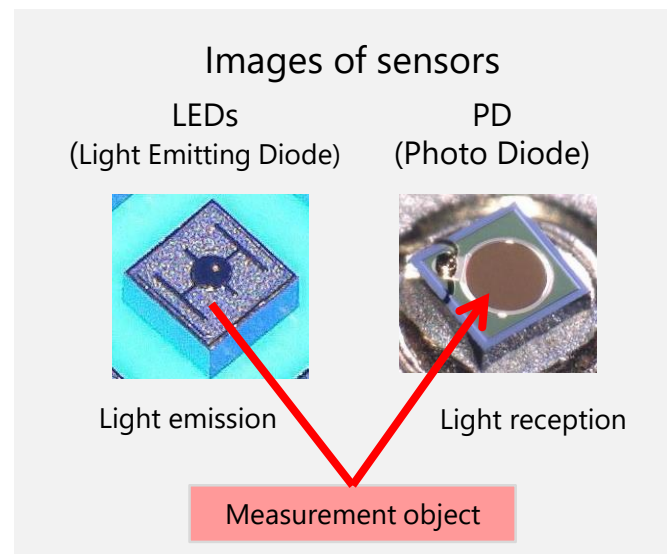
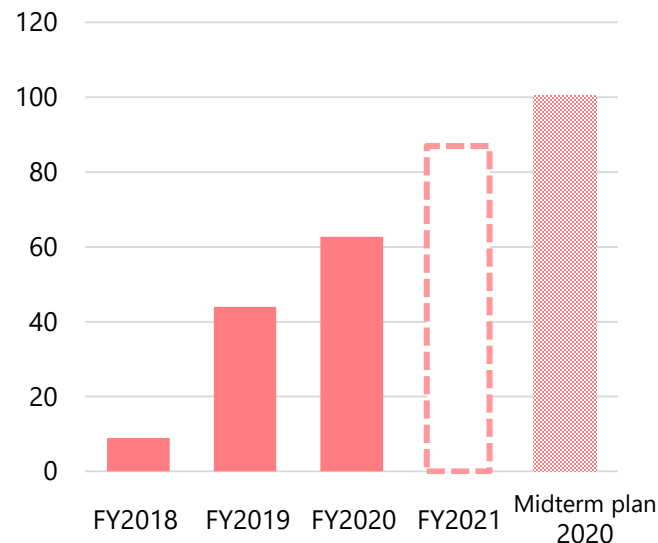
Short-Wavelength-Infrared LEDs, Photo diode

- Developed a photo diode (PD) using short-wavelength-infrared LEDs technologies.
- Combined the short-wavelength-infrared LEDs and PD and started mass production and sales for sensors of wearable devices.
- > Started development for next generation equipment.

Deep-Ultraviolet LEDs

- The provision of evaluation samples for resin curing is partially completed. The Company is waiting for users to start to use the product.
- > Applications are being expanded to medical devices and analytical instruments.

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



Expansion to New Energy Fields

■ Silver powder

Strong demand for solar panels due to new energy policies for carbon neutrality in many different countries.

- > Step up activities for developing Silver powder answering demand for finer wiring and for higher efficiency.
- > Start to build facilities for a production increase to eliminate bottlenecks.

■ Fuel Cell Materials

*SOFCs: Solid Oxide Fuel Cells

The market for SOFCs*, which have high power generation efficiency, for business applications and for industrial use is expected to expand from FY2022.

- > The construction of facilities for mass production has been completed. They are starting to operate.

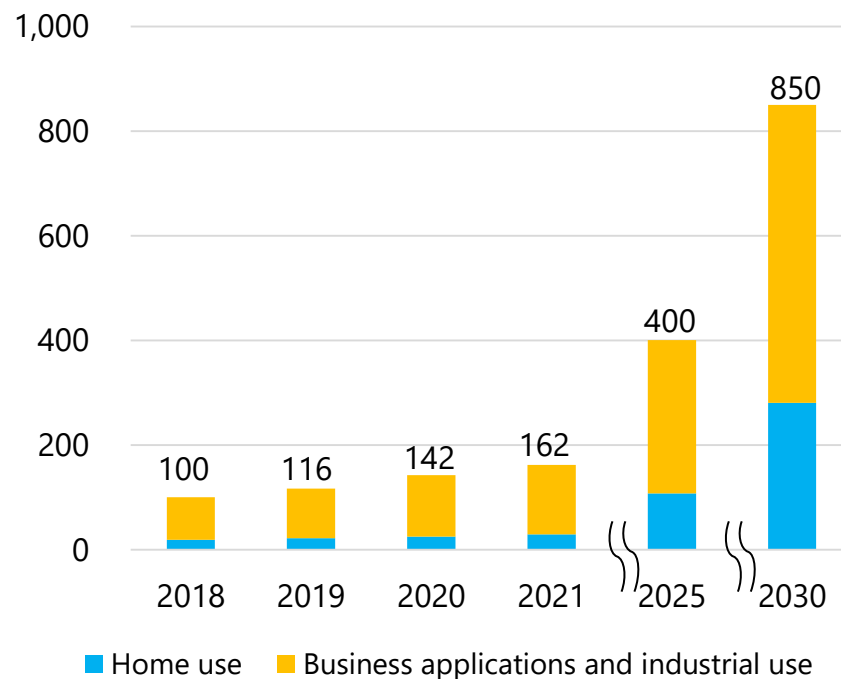


Fuel Cells for Industrial Use

Fuel Cell Market

(2018 = 100)

A survey of the Company (excluding fuel cells for automobiles)

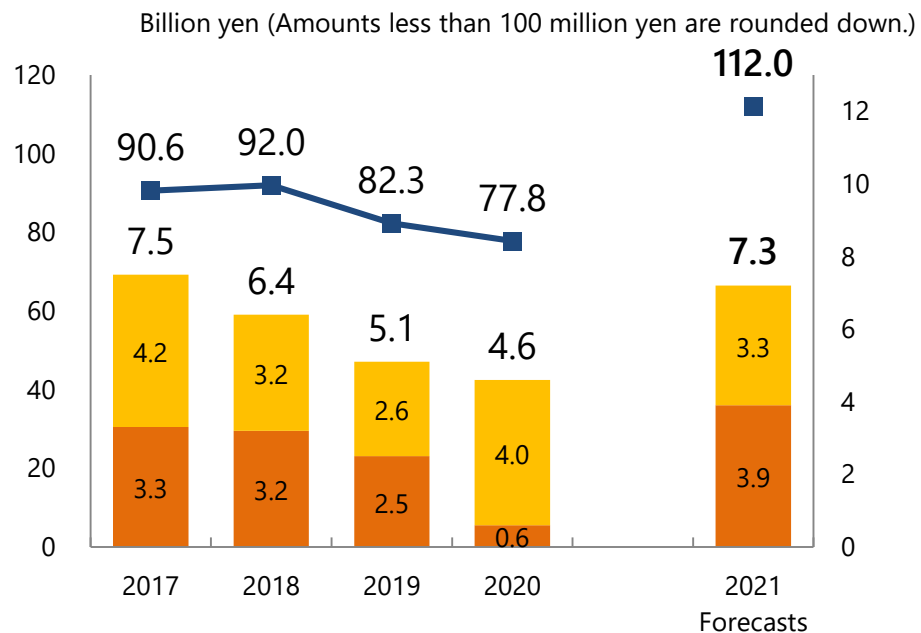


Business Overview

Business Environment (FY2021/H2)

- Automotive production will increase. The shift of automobiles to electric power and intelligence advances.
- Telecommunication devices will support increasing functions and faster communication.
- The global shortage of semiconductors will continue.

Net Sales & Ordinary Income



《Major Product Trends》

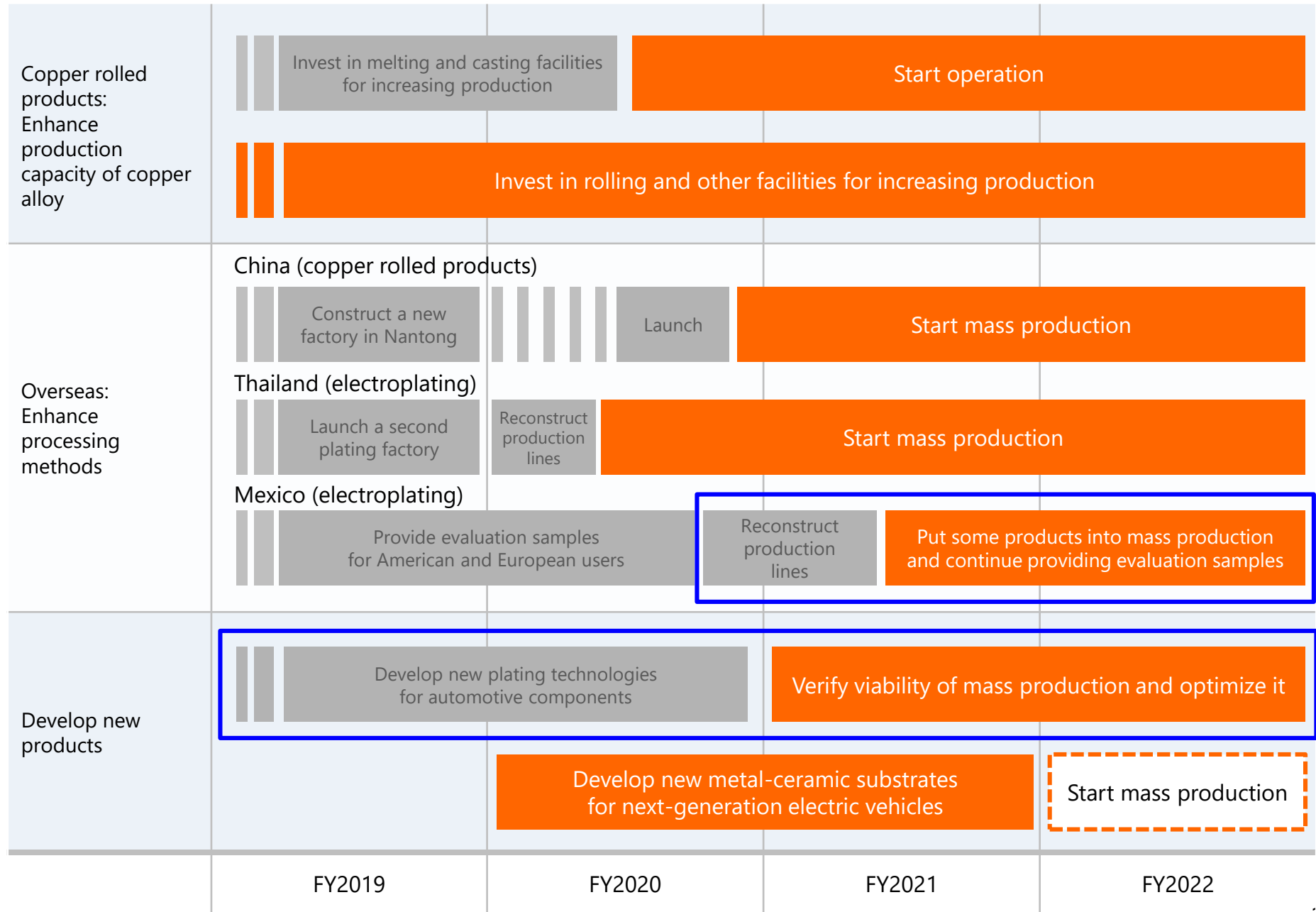
(FY2020/H1 = 100)

	FY2020		FY2021	
	H1	H2	H1	H2
Copper Alloy Sales Volume (For Automobile)	100	151	147	149
Copper Alloy Sales Volume (For information and communication equipment)	100	113	114	116

Overview of FY2021/H2 (comparison with H1)

- Sales of copper rolled products and precious metal electroplating for automobiles will continue to be strong, but future sales are uncertain.
- The capacity utilization for the production of copper rolled products for semiconductors will remain high.
- Sales of metal-ceramic substrates for industrial use will be firm, but sales of them from railway operators will remain weak.

Progress of Key Measures in Midterm Plan



Actions in Anticipation of Medium- and Long-Term Market Growth

■ Copper rolled products

For automobiles:

Demand is increasing, reflecting a shift to electric power and EVs.

Needs for materials that can respond to high current and high performance is increasing

-> the Company is increasing production using new melt casting facilities.

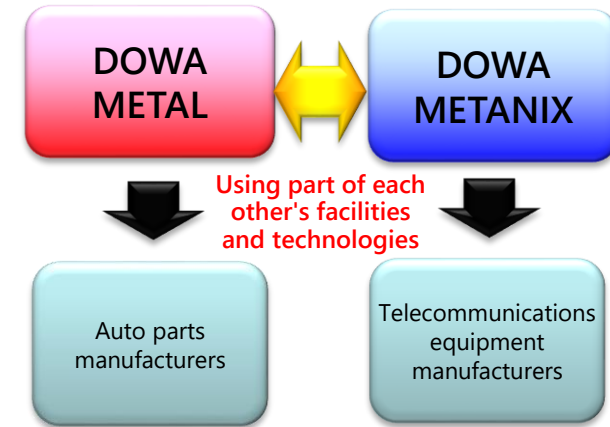
For telecommunications equipment:

Demand for miniaturization and densification is increasing.

Needs for materials that can be used for miniaturization and densification are increasing.

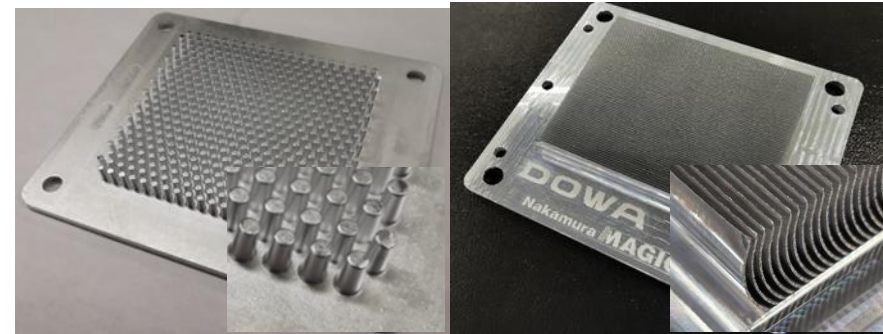
-> The Company will introduce new rolling facilities that will start to operate in 2022 to manufacture thinner copper rolled products.

- The Company has also started to build a system where two factories of DOWA METAL and DOWA METANIX will cooperate, using each other's facilities and technologies and manufacturing each other's products to enhance the Company's ability to respond to changes in demand.



■ Metal-ceramic substrates

The Company has developed an aluminum integrated substrate with fine shape fins, which has better cooling performance than the existing product and starts to provide evaluation samples.



Existing substrate

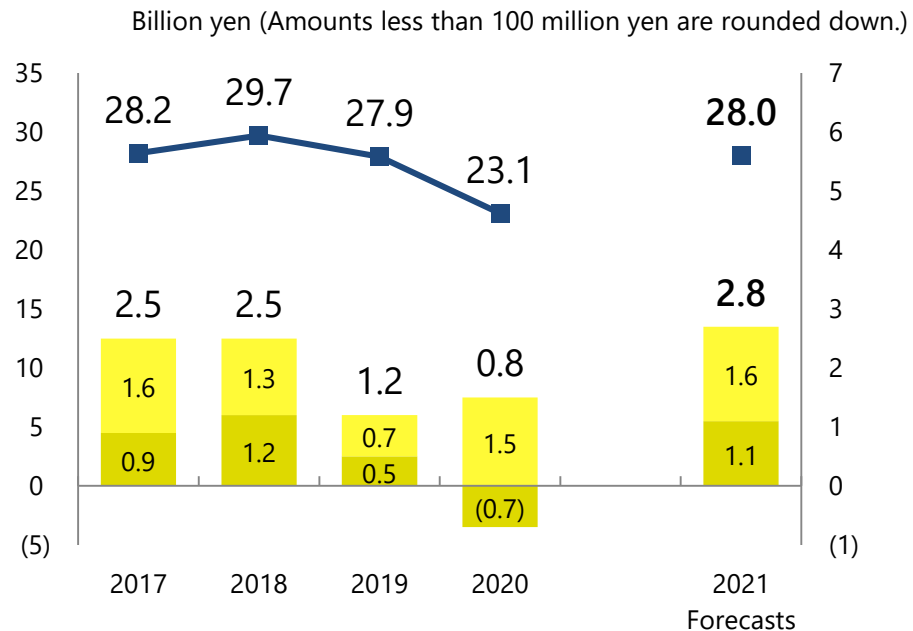
Newly developed substrate

Business Overview

Business Environment (FY2021/H2)

- The effect of production cutbacks at automobile manufacturers will likely become apparent in part of the business, but the effect is expected to be minor due to a recovery in demand overseas.
- Equipment sales and demand for maintenance will be firm.

Net Sales & Ordinary Income



ordinary income in H2 ordinary income in H1 Net sales

《Major Product Trends》

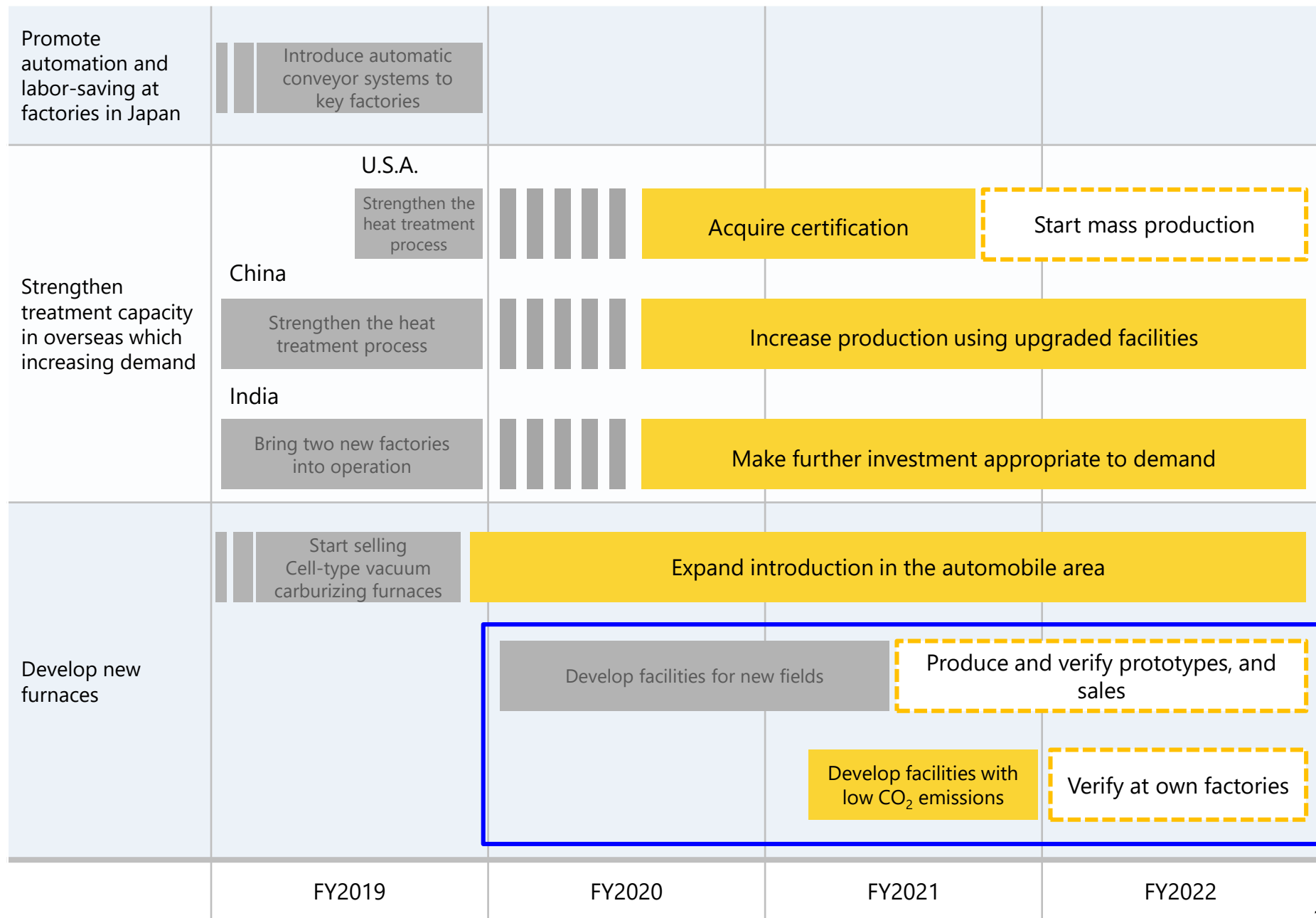
(FY2020/H1 = 100)

	FY2020		FY2021	
	H1	H2	H1	H2
Heat Treatment Sales Amount	100	154	152	156
Industrial Furnaces Sales Amount	100	109	84	165

Overview of FY2021/H2 (comparison with H1)

- Heat treatment processing to meet demand will continue.
- The Company will maintain the effect of cost reduction and ensure profitability.
- In the industrial furnaces business, the Company will steadily proceed with maintenance work that has been postponed and will implement projects towards the end of the fiscal year.

Progress of Key Measures in Midterm Plan



Transformation to a Business That Can Respond to Changes in Demand

Outlook for demand for heat treatment processing

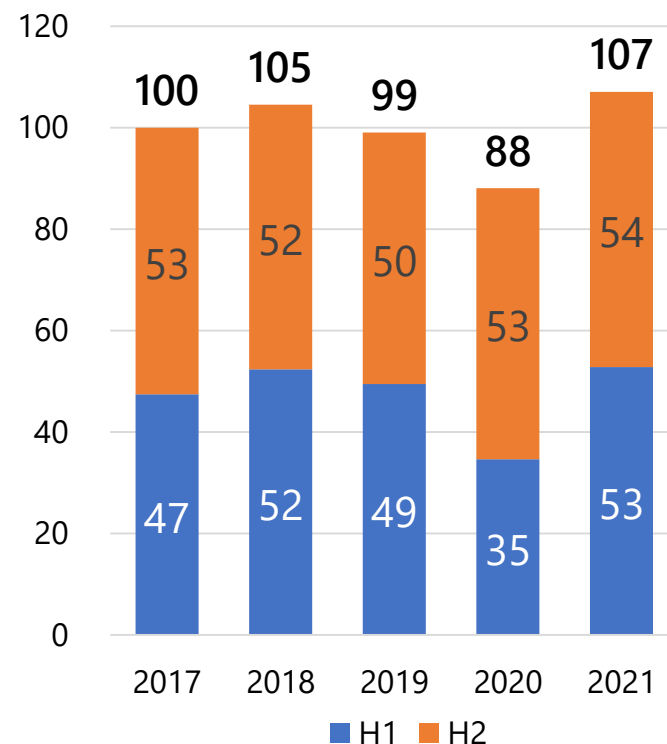
- Demand in FY2021 is expected to be at the same level as in FY2018.
- The effect of production cutbacks at automobile manufacturers is limited. The outlook for production is uncertain.



Transforming to a business that can respond to changes in demand and maintaining high profitability

- Maintain and increase the effect of cost reduction (Japan).
- Tap into strong demand (China, Thailand).
- Gain new customers to remain in the black (Mexico).
- Improve profitability by increasing productivity (U.S.A.).
- Stable operation in all heat treatment factories (India).

Trends in sales amounts of Heat treatment (FY2017=100)



Response to new demand trends

- Develop heat treatment facilities that will reduce CO₂ emissions and propose parts having lower environmental impacts to customers in response to the global trend to carbon neutrality.
- Developing new facilities for fields other than the automobile field.

Next Midterm Plan

- In the next midterm plan (FY2022-FY2024), DOWA will also focus not only on measures to evolve our core businesses, but also on ESG-related initiatives, such as addressing climate change and strengthening our risk management system.
- DOWA have positioned this as a three-year period to solidify the foundation for the realization of the vision of the DOWA Group (our goal in 2030).
- The details of the next midterm plan will be announced around the beginning of FY2022.

Vision: The vision of the DOWA Group (our goal in 2030)

Contribute continuously to building a sustainable future through our core business, the promotion of resource recycling, and the provision of excellent materials and technologies.

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.