Business Strategy IR Meeting

May 17, 2023

MITSUBISHI MATERIALS

INDEX

Executive Summary

Business Environment for the 4Q of FY March 2023	● In the automotive market, the North American market was robust, and the Chinese market recovered rapidly from the slump caused by the COVID-19 pandemic in the first half of the fiscal year. On the other hand, the Japanese market, including xEV-related markets, was in a stagnant phase. Thus, the overall pace of recovery was moderate. ● The semiconductor market was sluggish due to lower demand for end products from the second half of the fiscal year. The same situation is expected to continue at least through the first half of FY March2023. ● Due to the prolonged high cost of raw materials and energy, some of these costs were added to the selling price, however, this was a factor in the decline in profit.
FY March 2023 Results	● Operating profit decreased due to the impact of high raw material prices and high energy costs, as well as sluggish semiconductor and automobile markets in the Copper & copper alloy Business and the Electronic materials & components Business. (¥52.7 billion to ¥50.0 billion) ● Ordinary profit decreased due to a decrease in dividend income from the Los Pelambres mine and a significant loss on equity in earnings attributable to a rise in coal prices at Mitsubishi UBE Cement Corporation (MUCC). (¥76.0billion to ¥25.3 billion) ● In addition to ordinary profit, net income decreased due to the recording of loss on business restructuring, the recording of extraordinary income from the sale of investment securities, etc., and the decrease in tax expense due to the impact of the partial transition to the group relief system. (¥45.0 billion to ¥20.3 billion)
FY March 2024 Forecast	● Operating profit is expected to increase due to improved earnings in the Copper & copper alloy Business. However, this profit is expected to remain at the same level as in FY March 2023 due to a decrease in volume in the Electronic materials & components Business. (¥50.0 billion) ● Ordinary profit is expected to increase significantly from FY March 2023 results due to an increase in dividend income from the Los Pelambres mine and an improvement in equity in earnings of MUCC. (¥58.0 billion) ● Net income is expected to roughly double from FY March 2023 due to an increase in ordinary profit. (41.0 billion) ● As a result, the dividend amount is expected to be 94 yen/share (+ 44 yen), compared to 50 yen/share in FY March 2023.
Future Outlook	● As the first year of Phase 1 of the Medium-Term Management Strategy 2031(FY2031 Strategy) (released on Feb. 10), which aims to strengthen our competitiveness, we plan to focus on improving the yield of the Copper & copper alloy Business and improving earnings by reducing variable costs in the Electronic materials & components Business, investing in the supply of high-performance materials and products, and expanding our tungsten business. ● We expect a company-wide ROIC of 4.1% and ROE of 6.8% in FY March 2024.

Performance Overview on FY23 Strategy

- Net sales and operating profit achieved the target of FY23 Strategy, and ordinary profit fell short due to a decrease in dividends received from mines and a loss on equity method investments.
- As a result, the ROIC, ROA and ROE financial indicators fell short of the target of FY23 Strategy .
- By business category, the ROIC target of FY23 Strategy was achieved except for the Copper & copper alloy business.
- Regarding EBITDA/ROA, the Copper & copper alloy business and the Electronic materials & components business did not meet the target, and the Metalworking solutions business, the Metals business and the Environment & energy business achieved the target of the FY23 Strategy .

(Unit：Billions of yen)

Company-wide		FY23 Strategy Target	FY March 2023 Result	Difference
ROIC (%) (after deducting non-risk inventories)		4.0	2.6	-1.3
ROA (%) (Excluding metal costs)		2.0	1.3	-0.7
ROE (%)		6.0	3.5	-2.5
PL	Net sales	1,410.0	1,625.9	+215.9
	Net sales (excluding metal)	600.0	604.0	+4.0
	Operating profit	29.0	50.0	+21.0
	Ordinary profit	38.0	25.3	-12.7
BS	Total assets	1,820.0	1,891.7	+71.7
	Net interest-bearing debt	360.0	391.4	+31.4
	Shareholders' equity	560.0	593.3	+33.3
Net D/E ratio (times)		Less than 1.0	0.7	-
Assumptions	Exchange rate (yen/$)	110	135	
	Exchange rate (yen/€)	130	141	
	Copper price (¢/lb)	330	388	

Financial outlook and targets by business		ROIC		EBITDA / ROA	
		FY2023 Strategy target	FY March 2023 Result	FY2023 Strategy target	FY March 2023 Result
Advanced Products Business	Copper & Copper alloy	3.0%	0.8%	14.0	10.0
	Electronic materials & components	4.2%	8.3%	11.0	9.8
Metalworking Solutions Business		5.3%	7.1%	22.0	22.5
Metals Business (ROA excludes metal costs)		12.9%	13.5%	7.2%	7.8%
Environment & energy business	Environmental recycling	2.4%	7.1%	2.8%	8.1%
	Renewable energy	2.6%	3.4%	3.3%	4.2%

Resource allocation on FY23 Strategy

- Cash inflow was ¥286.6 billion, down ¥98.4 billion from the planned ¥385.0 billion, due to a slump in operating cash flow.
- While cash outflow plan was ¥397.0 billion, the dividend was mostly as planned, but the investing cash out decreased to ¥22.1 billion due to the assessment of investment. The total cash outflow was ¥375.3 billion, down ¥21.7 billion.
- Regarding returns to shareholders, the average dividend payout ratio during the FY23 Strategy was 27.8%, totaling ¥190 per share (cumulative total for 3 years).

(Unit：Billions of yen)

Investment Policy

Cash in	FY23 Strategy Target	FY23 Strategy Result	difference
Operating CF	240.0	130.5	-109.5
Others*1	145.0	156.1	+11.1
Total	385.0	286.6	-98.4

*1 Business restructuring and sales of strategic holdings

Cash out		FY23 Strategy Target	FY23 Strategy Result	difference
Investing Cash out	Investment for growth	90.0	78.5	-11.5
	Investment for maintenance and upgrading	160.0	155.1	-4.9
	Investment and financing	105.0	99.3	-5.7
	Sub total	355.0	332.9	-22.1
Dividends*		42.0	42.4	+0.4
Total		397.0	375.3	-21.7

*2 Dividends paid, share buybacks, and cash dividends paid to non-controlling shareholders

Shareholder Return Policy

	FY March 2021 Result	FY March 2022 Result	FY March 2023 Result	FY23 Strategy per year
Dividends	50	90	50	50
Dividends payout ratio	26.8%	26.1%	32.1%	

Unit: yen/share

the average dividend payout ratio during the FY23 Strategy was 27.8%

INDEX

Outline of FY2031 Strategy

- Strengthen metal resource recycling and promote the integration of the Metals business and the Environmental recycling business. (Strengthening E-Scrap processing, recycling of LIB/xEV materials and tungsten, and strengthening recycling of wrought copper products)
- Supply of products to growing markets such as semiconductors and xEVs, and expansion of carbide tools and tungsten business.
- Promotion of renewable energy projects such as geothermal power generation (efforts to achieve 100% self-sufficiency in renewable energy power by FY March 2051).
- Implementing GHG reduction measures to achieve carbon neutrality by FY March 2046.

For people, society and the earth, circulating resources for a sustainable future

Resource procurement → Decomposition and separation → Smelting → Material processing and product manufacturing → Sales and use

Expansion of the resource recycling

Metals Company

Resources Business, Smelting & Resource Recycling Business

- E-Scrap information network with recyclers in more than 60 countries around the world
- Base for highly efficient collection of used products (collection sites)
- Advanced decomposition and separation technologies cultivated through home appliance recycling
- Highly efficient recycling technology using smelting systems

Enhancing the supply of high-performance materials and products

Advanced Products Company

Copper & Copper Alloy Business, Electronic Materials and Components Business

- High-performance materials and processed products (copper alloy, oxygen-free copper, silicon precision processed products, etc.)
- Global expansion of EV connectors and superconducting wires for MRI

Metalworking Solutions Company

Carbide Tool Business, Tungsten Business, and Solutions Business

- Ability to cope with difficult-to-cut materials and new materials
- Materials and coating technologies, and technical proposals

Implementing GHG reduction measures to achieve carbon neutrality

Recovery

Supply of renewable electricity

Supply of renewable electricity

Renewable Energy Business

Geothermal, hydroelectric, solar, and wind power generation Business

- Technology based on abundant achievements and experience in the geothermal power generation business

*From April 2023, the environmental recycling business will be integrated into the Metals Company, and the renewable energy business will be organized under the direct control of the strategic headquarters

Financial Plan, Targets and forecast on FY 2031 Strategy

- The FY March 2023 outlook is as follows:
- Net sales will decrease slightly due to the impact of business restructuring.
- Operating profit expects higher sales prices in the Copper & copper alloy business and the Metalworking solutions business, but it is expected to remain unchanged from the previous fiscal year due to a further increase in energy costs in each business and a backlash from increased inventories in the Metalworking solutions business.
- Ordinary profit is expected to increase due to an increase in mine dividends and an improvement in equity in earnings of affiliates.
- Based on dividend payout ratio's policy of around 30%, the dividend is expected to be ¥94 (+ ¥44), compared to ¥50 in FY March 2023.

		FY March 2023 Result	FY March 2024 Forecast	FY March 2026 Plan	FY March 2031 Target
Net sales (Net sales excluding metal)	Billions of yen	1,625 (604)	1,670 (706)	1,940 (690)	2,000 (850)
Operating profit	Billions of yen	50	50	70	130
Ordinary profit	Billions of yen	25	58	87	180
ROIC ※1 (before deducting non-risk inventories)	%	1.4%	4.1%	5.5%	9.0%
ROE	%	3.5%	6.8%	10.0%	13.6%
EBITDA	Billions of yen	75	113	150	260
Net D/E ratio	times	0.7	0.7	0.7	less than 0.5
Net interest-bearing debt /EBITDA ratio	times	5.2	4.1	3.5	less than 2.0
Dividends	Yen	50	94		

Assumptions for FY2024 and beyond: Exchange rates: 135 Yen/ $, 135 Yen/€ , Copper price: 360 ¢/lb

*1 Calculate ROIC by deducting the amount of inventories (non-risk inventories) that were previously risk-free due to price hedged from invested capital
From the FY2031 Strategy, the calculation method will be changed prior to the non-risk inventory deduction mainly due to the shift to management based on the ROIC spread based on the WACC of each business

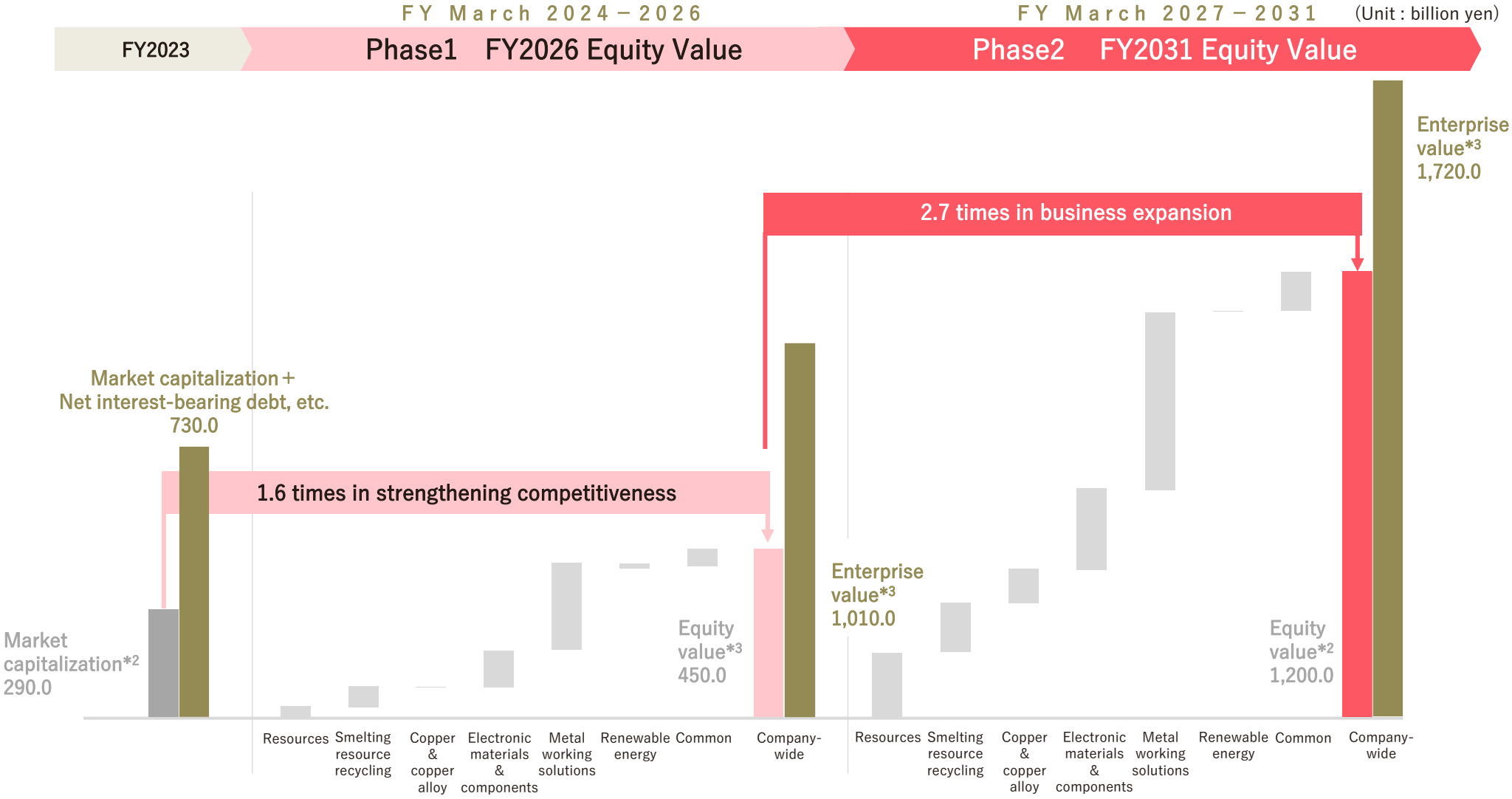
Financial Plan, Targets and forecast on FY 2031 Strategy (Segment)

Segment			Unit	FY March 2023 Result	FY March 2024 Forecast	FY March 2026 Plan	FY March 2031 Target
Metals Company	Resources Business WACC:9.7%	Ordinary Profit	Billions of yen	2.4	13.0	11.4	48.3
		ROIC	%	1.1%	9.2%	9.0%	18.6%
	Smelting & Resource Recycling Business * WACC:5.4%	Ordinary Profit	Billions of yen	25.9	21.1	27.0	35.0
		ROIC	%	8.3%	5.3%	7.1%	7.6%
Advanced Products Company	Copper & copper alloy Business WACC:2.7%	Ordinary Profit	Billions of yen	-0.0	6.7	12.4	16.4
		ROIC	%	0.6%	2.8%	4.0%	5.0%
	Electronic Materials & Components Business WACC:7.4%	Ordinary Profit	Billions of yen	7.7	6.3	8.6	20.4
		ROIC	%	8.7%	6.5%	7.8%	14.2%
Metalworking Solutions Company WACC:6.5%		Ordinary Profit	Billions of yen	14.5	15.2	25.0	52.7
		ROIC	%	6.9%	6.5%	8.6%	13.1%
Renewable Energy Business WACC:1.6%		Ordinary Profit	Billions of yen	0.9	0.4	2.3	4.3
		ROIC	%	3.8%	2.4%	3.7%	4.7%
Total WACC:4.1%		Ordinary Profit	Billions of yen	25.3	58.0	87.0	180.0
		ROIC	%	1.4%	4.1%	5.5%	9.0%

＊ Figures for FY March 2023 Result in the Metals Company are after segment reclassification.

Enhancing Equity Value and Enterprise Value (by SOTP*1 Analysis)

- Under FY2031 Strategy, the company aims to grow EBITDA and improve its balance sheet to increase its equity value and enterprise value, and to achieve approximately four times its equity value by FY March 2031.



※1 Sum-of-the-Parts
※2 Equity value for FY2023 is as of the end of January 2023
※3 Enterprise value is calculated by multiplying EBITDA for each business by a multiple that takes into account the same industry, and net interest-bearing debt is deducted from enterprise value to calculate equity value
Enterprise value and equity value are figures calculated independently by the Company using SOTP analysis based on the business performance forecast of the FY2031 Strategy and the Company does not guarantee the stock price

Business Strategies on FY 2031 Strategy (Segment)

Metals Company

Resources Business

- Promotion of technological development to recover rare metal resources contained in copper deposits
- Acquisition of copper mining interests and securing copper concentrates through continuous investment in mines
- Expansion of electrolytic copper supply through SX-EW operations at copper mines

Smelting & Resource Recycling Business

- Strengthening and expanding the networks to promote resource recycling
- Expansion of electrolytic copper production capacity
- Increasing the recycling rate by expanding the treatment of recycled products containing metal resources
- Creation of rare earths and rare metals recycling businesses
- Accelerating business developments in Japan and overseas (E-Scrap, home appliances, automobile recycling)

Advanced Products Company

Copper & Copper Alloy Business

- Improve the recycling rate of wrought copper products and establish a scrap platform base
- Overseas (Luvata): Rapid entry into growing markets (xEV, healthcare, and environment)
- Expand sales and strengthen services to overseas customers with establishes a new overseas plant which carries out a downstream process, with the domestic plants as a mother ones

Electronic Materials & Components Business

- Highly capital-efficient management through continual restructuring of the business portfolio
- Strategic investment in focused products in growth areas
- Developing and securing human resources for the creation of new businesses and the promotion of business alliances
- Enhancing manufacturing capabilities and DX to enhance production sophistication and profitability
- Providing business and social value (SDGs) for carbon neutrality

Metalworking Solutions Company

Carbide tools business

- Stable supply of the world's top quality, high-efficiency products utilizing the strength of materials and coating technology

Tungsten business

- Expansion of business scale for rechargeable batteries in addition to carbide tools, etc.
- Strengthening environmental responsiveness

Solution business

- Commercialization of solution sales to manufacturing sites

Renewable Energy Business

Geothermal

- New development at one location every three years to expand business

Wind

- New entrants into wind power generation where power generation costs are expected to decline in the future

Biogas

- Further development of new biogas plants

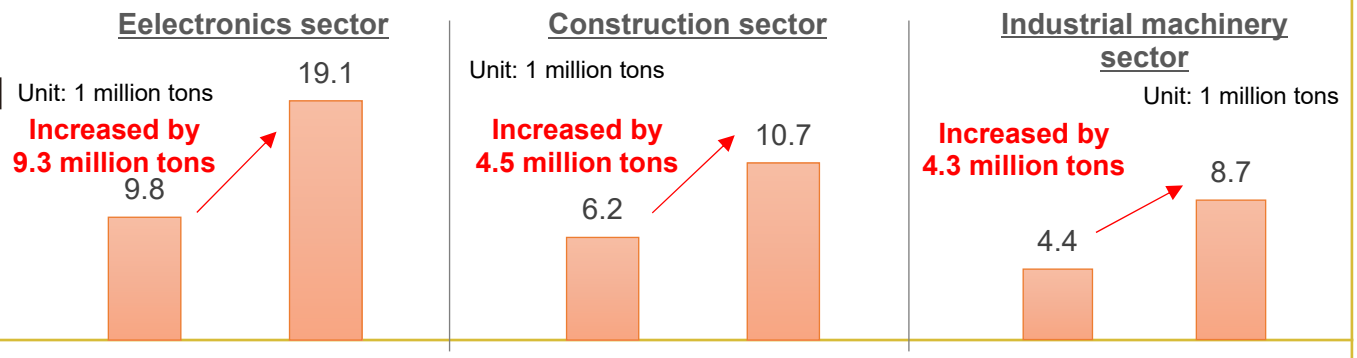
INDEX

Business overview

Business	Business overview	Strengths	Revenue structure	Market opportunities and prospects
Resource Business	☐ Investment in overseas copper mines for stable procurement of clean copper concentrates	☐ Years of experience in operating mines ☐ Long-lasting friendly relations with giant resource corporations	3.9 billion yen Ordinary profit in FY March 2023	<Market opportunities> ☐ Review strategies according to the willingness of giant resource corporations to develop copper mines and decarbonization <Market prospects> ☐ Increase in taxes, more stringent regulations, and opposition to development due to resource nationalism and raised environmental awareness ☐ New ore deposits that are deeper, located in isolated districts, deteriorated in quality, and contain more impurities
Smelting & Resource Recycling Business	☐ Smelting of non-ferrous metals from copper concentrates, scrap metal and waste, etc. ☐ Sales of electrolytic copper, gold, silver, PGM(*), tin, lead and by-products (sulfuric acid/gypsum, etc.) (*) Platinum-group metals ☐ Home appliance recycling, automobile recycling	☐ Utilizing Mitsubishi's continuous copper smelting process boasting high efficiency and low environmental impact ☐ World's No. 1 E-Scrap processing capacity ☐ Advanced recycling technology and business foundation ☐ Consistent manufacturing system from raw materials to products ☐ Diverse production bases (copper, lead, tin, precious metals, PGM) ☐ Recycling technology ☐ Technology to recover rare earth metals, etc	25.8 billion yen Ordinary profit in FY March 2023	<Market opportunities> ☐ Enhance recovery and commercialization of trace constituents in production processes ☐ Transition to a recycling-oriented and decarbonized society ☐ Expansion of E-Scrap market in line with growing environmental awareness ☐ Copper consumption that is on the rise in the medium to long term ☐ Depletion of mineral resources: Increase in demand for recycled resources <Market prospects> ☐ Intensifying competition for the collection of E-Scrap ☐ Strong sulfuric acid market, weak copper slag market ☐ Trends and emergence of competitors ☐ Reorganization of manufacturers ☐ Municipal trends

Business Environment
Environment surrounding copper mines

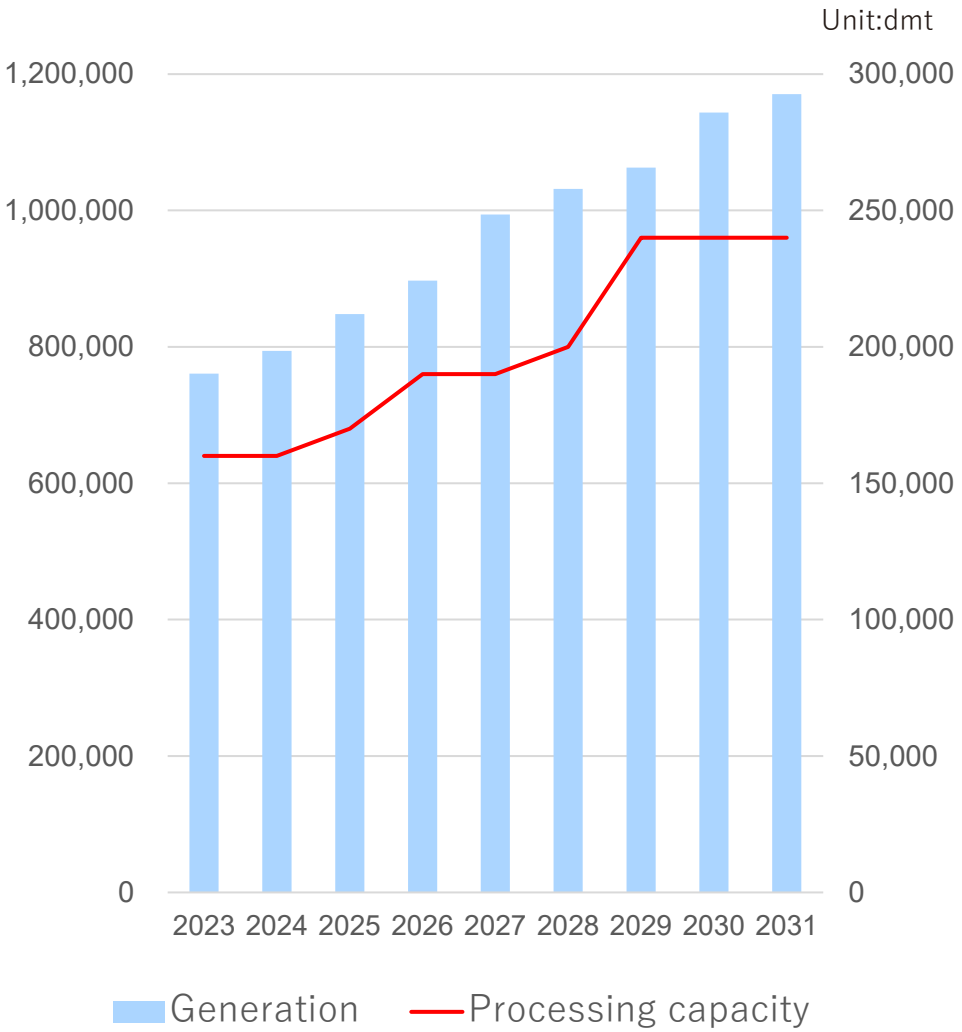
Item	Business environment
1 Global Copper Demand	●Copper demand is expected to be more than double the level of 2021 by 2051 (25Mt→57Mt)
2 Global Copper Supply Outlook	●Copper production from copper mines is expected to decline after peaking around 2026 ●Mine production costs are expected to rise ●Copper concentrate grade is expected to further decline (there is already a downward trend)
3 Copper Mine Development	●Rise of resource nationalism ・Increase in royalties, taxes, etc. ・Nationalization of mines, mining contracts with governments. ●Strengthening of environmental regulations ・Glacier Protection Law ・Limited Resource Protection Act ●Social License ・Suspension of operations due to road blockades



Source：
ICA GCDR Task Force Meeting document（July 20, 2022）

Business Environment
Trends in E-Scrap market size and competitors

Estimated E-Scrap generation and Mitsubishi Materials' processing capacity



Source: Company's own estimation

World top level share of approximately 21% in the E-Scrap business

※Our processing capacity：160Kdmt/Y(2022)→240Kdmt/Y(2028)

<Trends in competitors to increase E-Scrap processing capacity>

Company A
Construction of a dedicated E-Scrap furnace (Processing capacity) 60Kdmt/Y to 100Kdmt/Y

Company B
Expansion of the smelters processing capacity (Processing capacity) 30Kdmt/Y to 43Kdmt/Y

Company C
E-Scrap processing capacity: 120,000 tons per year

Company D
Plans to introduce pretreatment furnace

Company E
Announcement to rise the ratio of recycled materials in their raw materials to 50% by 2040

Company F
Operation of sampling facilities

Resources Business

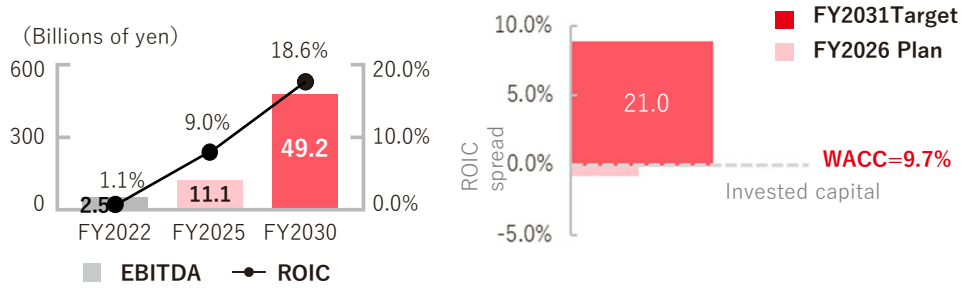
FY2031 Target: Leader in Resource Recycling of Nonferrous Metals

- Securing at least 500,000 tons of copper concentrate from mines owned by the Company
- Establishing supply chains for electrolytic copper (SX-EW*1)

Business environment

- Demand for copper will continue to increase, but supply will not keep up with demand growth from FY2026, resulting in a supply shortage of 5.5 million tons by FY2031
- The amount of copper concentrate collected from mines owned by the Company currently remains at 150,000 tons
- Mine production costs will rise further
- Demand for rare metals such as cobalt is also growing, while supply will be running short

EBITDA・ROIC、EP



Business strategy

FY2024－FY2031

- Promotion of technological development to recover rare metal resources contained in copper deposits
- Acquisition of copper mining interests and securing copper concentrates through continuous investment in mines
- Expansion of electrolytic copper supply through SX-EW operations at copper mines

Important measures

FY2024－FY2031

- Promotion of the Mantoverde Sulfide Mine Project
  (including development of new technologies such as cobalt recovery)
- New participation in medium-scale copper mines
- Participation in hydrometallurgy operations at copper mines
- Increasing amount of copper concentrate collected from the current 150,000 tons to 500,000 tons or more in FY2031
  (Increasing the ratio in the amount of copper concentrate processed in the Naoshima Smelter & Refinery and the Onahama Smelter & Refinery from the current 10% to 30% in FY2031)

*1 Solvent extraction and electrowinning: A two-step hydrometallurgical process consisting of solvent extraction and electrolysis collection

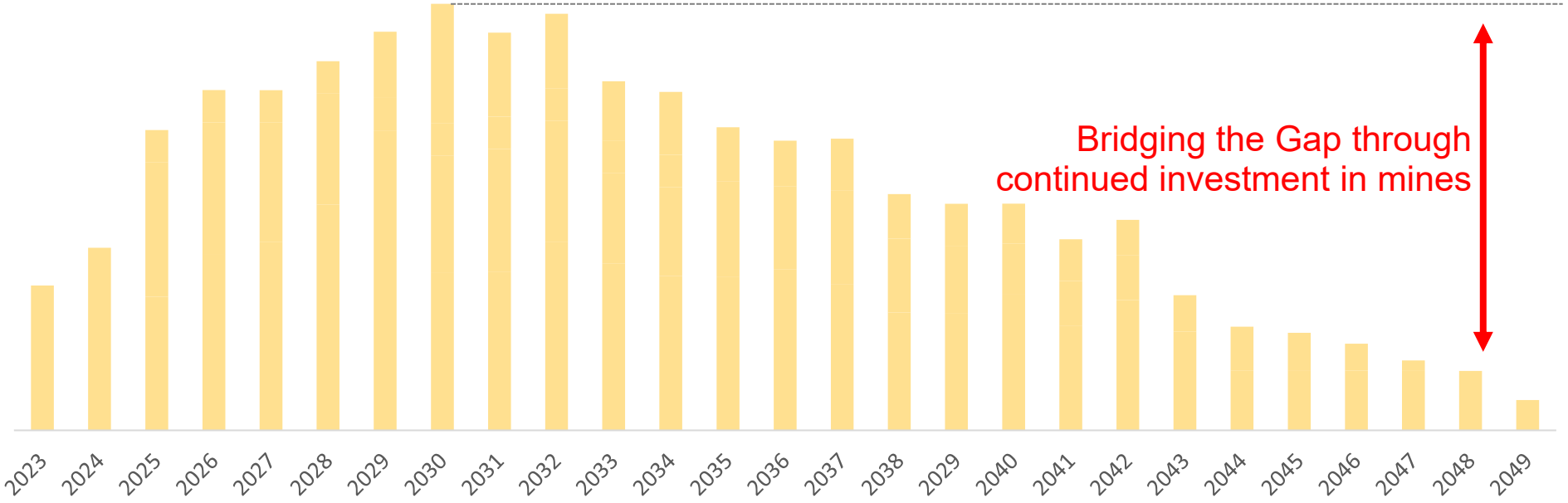
Necessity for continued investment in mines

Amount of copper concentrates we need to secure without continuous investment in mines

The amount of copper concentrates from mines for which we own mining concessions will continue to fall.

⇒

To meet the demand for copper, which is expected to expand over the medium to long term, we need to invest in mines continuously.



FY 2031 target

Ensuring more than 500,000 tons of copper concentrates from mines for which we own mining concessions

Participation in the Casino Project

RioTinto

MITSUBISHI MATERIALS

Join the Casino Copper Mine Project by acquiring a stake in Western Copper and Gold Corporation

western COPPER AND GOLD

Owns 100%

CASINO BUILDING OUR FUTURE TOGETHER

Owns 100%

Casino Copper Mine Project

Figure: Project location

Purposes

- Strategy to “acquire mining concessions and ensure a stable amount of copper concentrates through continued investment in mines” in the next Medium-term Management Strategy.
- Verification of the feasibility and economy of the Casino copper mine project through a technical committee with Western Copper and Gold Corporation .

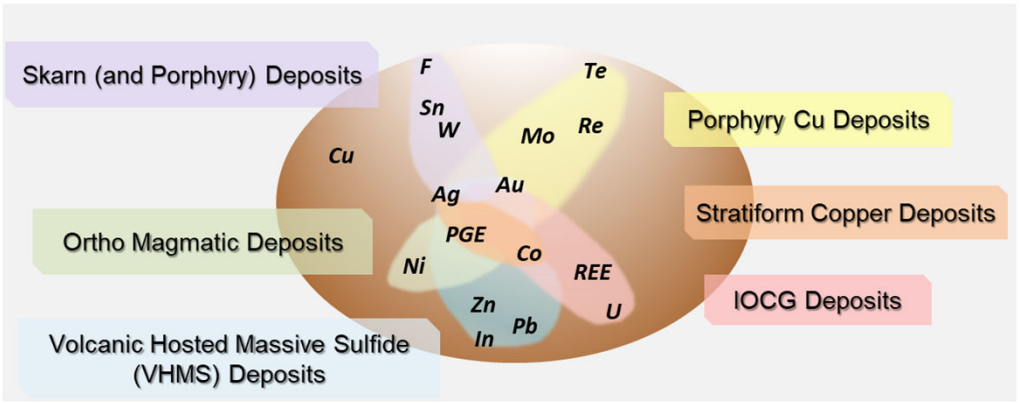
Casino Copper Mine Project

- Location: Yukon Territories of northwestern Canada
- Startup cost: C$ 3,617 million
- Production to start: 2031
- Lifespan of the mine: 27 years

Industrialization of the recovery of valuable metals from copper deposits

Purposes

- To recover valuable metals unique to each deposit type of mines we have invested in



Initiatives for the future

- Develop elemental technologies through joint research between Mitsubishi Materials' Institute of Mining and Technology and other domestic and overseas research institutes including universities
- Implement pilot-scale demonstration tests to start commercial production (use of subsidies)
- Implement FS on the recovery of valuable metals in cooperation with partners of the mines, etc. we have invested in and venture companies possessing the necessary technologies

Case example at Mantoverde copper mine

- At the Mantoverde copper mine, both sulfide ore and oxide ore contain trace amounts of cobalt. Technologies are being developed to establish a process to separate and recover this as cobalt and nickel tailings.
- Commercial production is scheduled to begin around 2027.
- Efforts are also planned to be made to promote the valuable metals recovery business at other mines for which our company owns mining concessions in the future.

Smelting & Resource Recycling Business

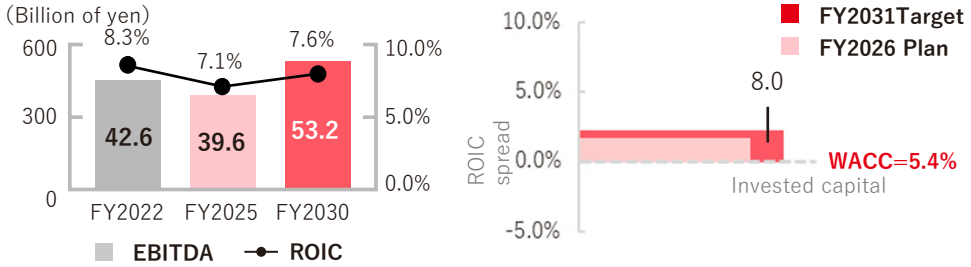
FY2031 Target: Leader in Resource Recycling of Nonferrous Metals

- Major and leading-edge operator in the resource recycling of nonferrous metals
- Expanding processes of nonferrous metal resources not limited to E-Scrap
- Becoming a core supplier in the resource recycling loop based on the world's top-class electrolytic copper supply capacity

Business environment

- Growing needs for recycling scarce resources (rare earths, cobalt/nickel, PGM*1, etc.) from the viewpoint of economic security
- Growing customer interest in the cyclical economy

EBITDA・ROIC、EP



Business strategy

FY2024－FY2031

- Strengthening and expanding the networks to promote resource recycling
- Expansion of electrolytic copper production capacity
- Increasing the recycling rate by expanding the treatment of recycled products containing metal resources
- Creation of rare earths and rare metals recycling businesses
- Accelerating business developments in Japan and overseas (E-Scrap, home appliances, automobile recycling)

Important measures

FY2024－FY2031

- Enhancement of copper concentrate and E-Scrap treatment capacity in Naoshima Smelter & Refinery (up 25%)
- Enhancement of E-Scrap treatment capacity by introducing pretreatment facility in Onahama Smelter & Refinery (up 120%)
- Enhancement of the MEX functionality
- Commercialization and expansion of LIB recycling (black mass: 6,000 t/year*2)
- Building, strengthening and expanding metal resource recycling from EVs
- Expansion of the scope and scale of rare metal recovery
- Establishment of domestic recycling centers *3
- Promotion of alliances and M&As to develop resource recycling businesses in global markets

*1 Platinum Group Metals: Platinum group metals such as platinum, palladium, and rhodium
*2 Concentrated slag of lithium, cobalt, and nickel discharged, dried, crushed, and sorted LIBs
*3 A base where parts disassembled from home appliances and automobiles are collected and processed to make them suitable for recycling

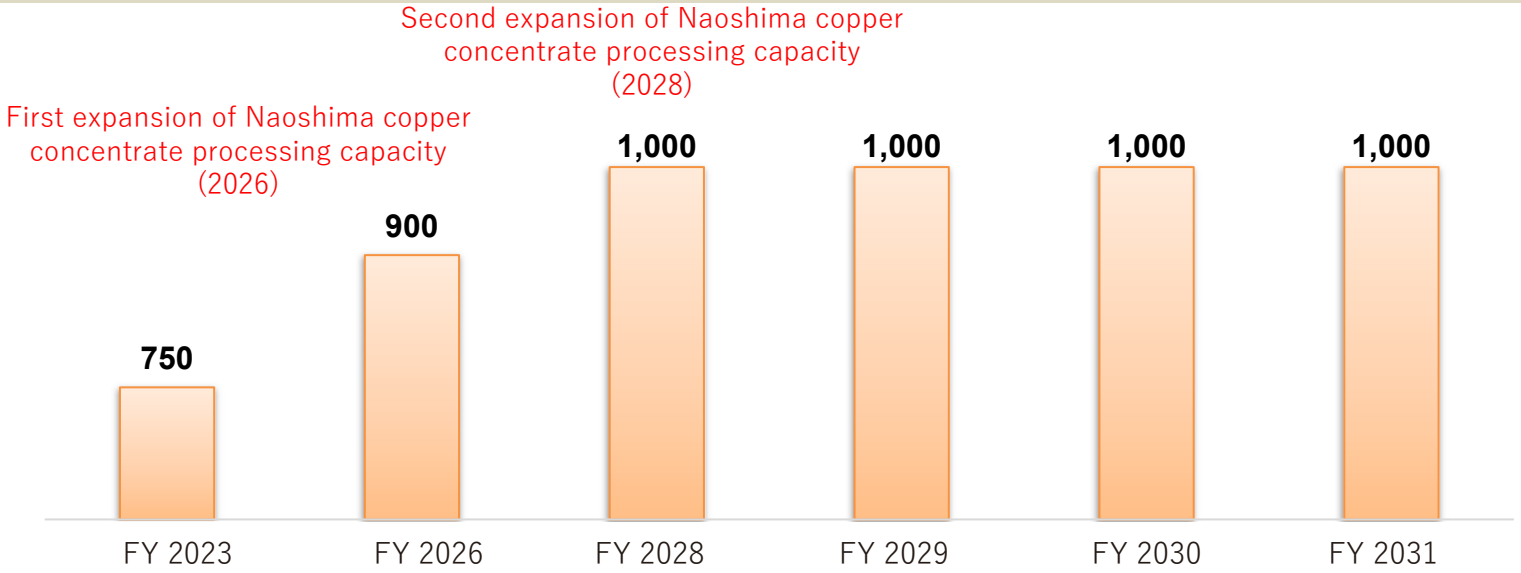
Expanding the arterial and venous industries

Increase both copper concentrate processing capacity and E-Scrap processing capacity in the next Medium-term Management Strategy.

Arterial industry

Naoshima copper concentrate processing capacity

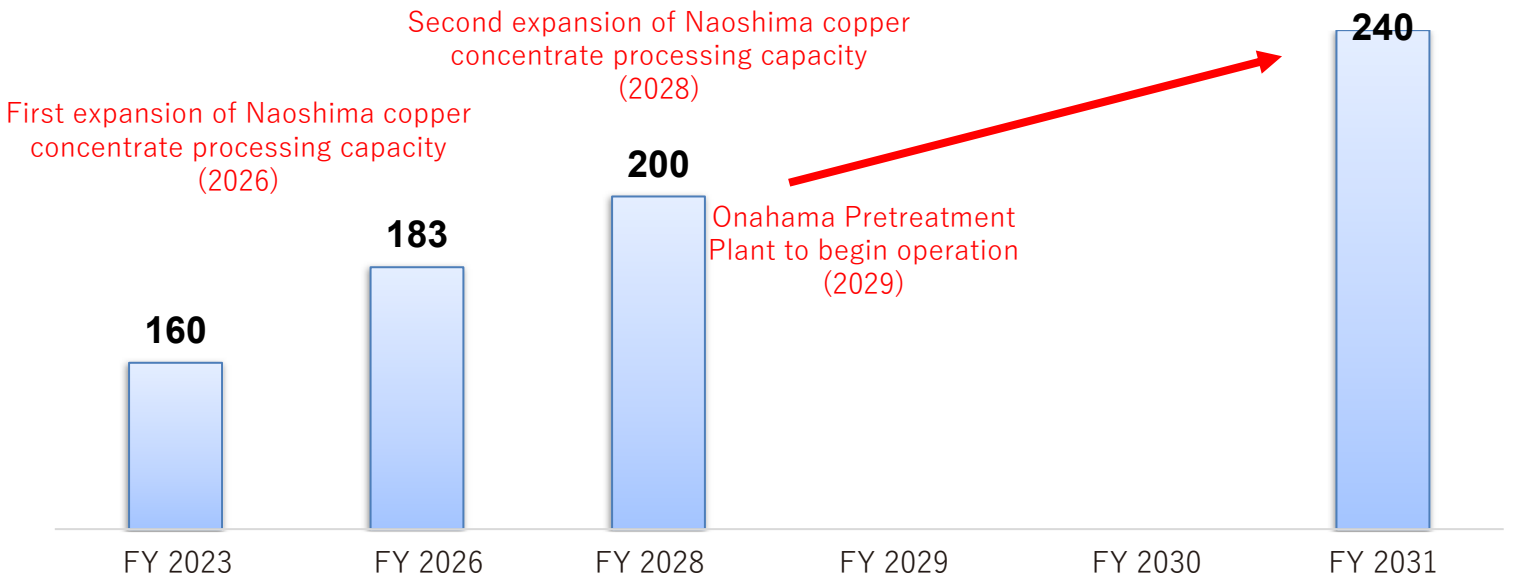
Unit: thousand tons



Venous industry

E-Scrap processing capacity

Unit: thousand tons



TOPICS Copper Recycling

- Achieving increased competitiveness and business expansion at an early stage through expanding the scope of resource recycling by strengthening cooperation in our value chain centered on copper as well as improving the efficiency of resource recycling by developing new processes

Recovery of metal resources → Decomposition and separation → Smelting and recycling process → Material processing Product manufacturing

Enhancement of copper scrap recovery

- Reinforcement of home appliance recycling plants
  (Increasing domestic share to 30%, establishing new overseas bases)
- Construction of new automobile recycling plants
- Construction of new recycling centers
- E-Scrap information network with business partners in more than 60 countries around the world

Increase of processing capacity of E-Scrap to 240,000 t/year

- Naoshima: Reinforcement of copper smelting facilities, increasing the processing capacity of copper concentrate and E-Scrap
- Onahama: Construction of pretreatment facilities (Commencement of operation in FY2029, Total construction cost: approx. ¥20 billion)

Use of recycled copper

- Expansion of products with a high ratio of recycled materials
- Establishment of high-efficiency recycling technology

Home appliance recycling plants
Automobile recycling plants
Recycling Centers
Copper & Copper alloy plants (in-process scrap, etc.)
E-Scrap Collection Centers

→

Naoshima Smelter & Refinery

Collected as copper scrap and processed at domestic smelters

Onahama Smelter & Refinery

→

Participation in the Exurban Project

Announced investment in Exurban, UK in March 2023.

MITSUBISHI MATERIALS

Katsuyoshi Isaji, Managing Executive Officer, and President Metals Company MMC responded:
"We would like to contribute to Exurban with our technical expertise in technology for non-ferrous metals and E-scrap. We are interested in expanding our business with Exurban in the US, Asia, Europe and other regions worldwide. We think we have a lot to share in know-how and expertise for our common goals."

exurban

Welcoming today's announcement, Stefan Boel, Chairman of Exurban said:
"Today's announcement represents a major vote of confidence in our business. Mitsubishi Materials Corporation is a world leader in recycling. We agree on the scale of the global challenge of E-scrap and share a commitment to providing innovative regional solutions."

Purpose

- Aiming to provide solutions for the establishment of a resource recycling system with Exurban.
- To gain a foothold in the U.S. and other areas through this investment.

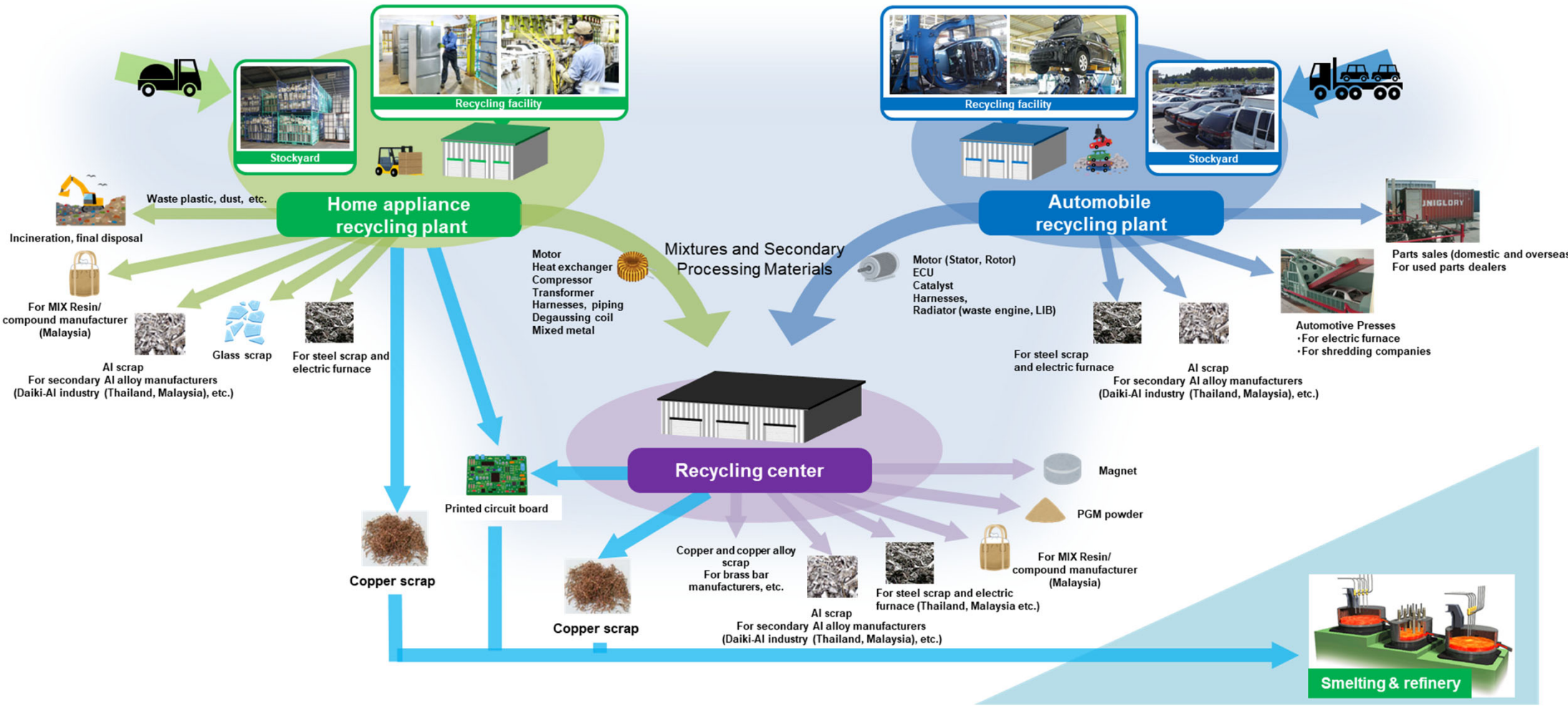
Investment Amount

Feasibility Study for a new recycling plant project in Indiana, USA, is expected to be completed by the end of the year.
Capital expenditures during the Pre-Feasibility Study phase are expected to be US$350M.

Recycling Center design concept

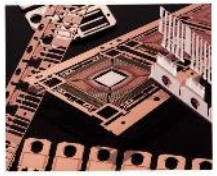
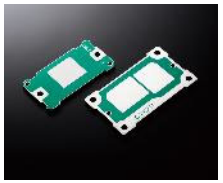
Construct a recycling center as a base for consolidating parts from disassembled home appliances and automobiles and processing them in a manner suitable for recycling.

(Image of the Recycling Center)



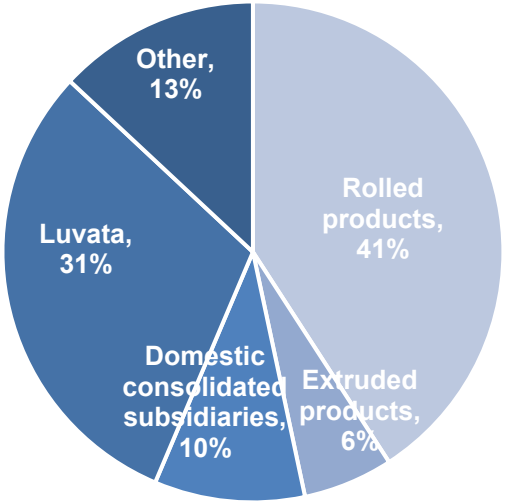
INDEX

Business Overview (Copper & Copper Alloy)

Key markets	Uses	Main product groups		Strengths
Automobiles Transport equipment	Terminals and connectors	In-vehicle terminals Copper strips for busbars		High-performance copper alloy casting/processing technologies
		Plating		Development capabilities
	Automotive parts	Lead-free brass		Development capabilities
Semiconductors Electronics	Semiconductors	Lead frames		High-performance copper alloy casting/processing technologies
	Electronics	Copper strips for heat sink		High-quality oxygen-free copper casting/processing technologies
Infrastructure Industrial equipment Medical equipment	Equipment parts	Copper rods Busbars		Oxygen-free copper/copper alloy casting and processing technologies
	MRI parts	Superconducting wires		Manufacturing/processing technologies

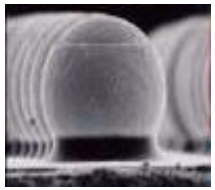
Sales composition and market prospects

[2023 Results]: Copper & copper alloy_Percentage of Sales



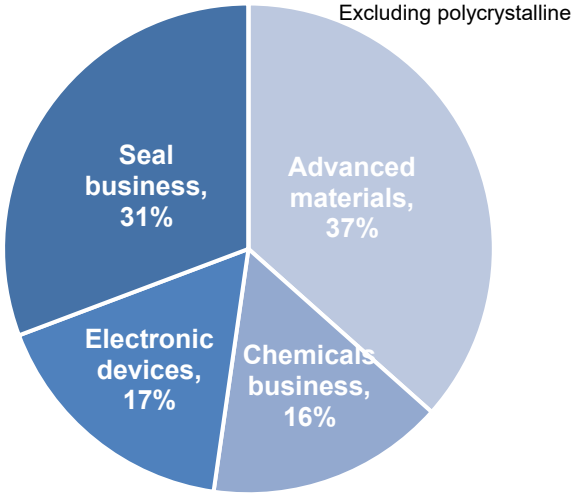
- Demand for automobiles and semiconductors is expected to continue to grow over the medium to long term due to the spread of next-generation automobiles and high-capacity communications.
- In response to past disruptions in their supply chains, major customers are increasingly aware of the importance of the concept of local production and local consumption. Furthermore, as a measure to deal with rising transportation and energy prices, we will work to optimize our value chain.

Business Overview (Electronic Materials & Components)

Key markets	Uses	Main product groups		Strengths
Automobiles Transport equipment	Automotive glass interlayers	Heat-ray shielding paints		・Characteristic raw materials ・Dispersion technologies
	Automotive parts	Thermistor sensors		・Device development capabilities ・Customization capabilities (Injection molding technologies)
Semiconductors Electronics	Semiconductor element bonding materials	Low alpha solders		・Characteristic raw materials ・Evaluation technologies
	Semiconductor manufacturing equipment parts	Silicon processed products		・Material technologies ・Production processes (microfabrication technologies)
		Sealing products		・Material compounding technologies ・Custom shape designs ・Analysis/analytical technologies

Sales composition and market outlook

FY 2023 Results: Electronic Materials_Percentage of Sales



- The market for next-generation automobiles is expected to continue to grow, and we will continue to work to make our way into the market with a focus on thermistor sensors.
- Although the market for semiconductor materials is currently in a downturn phase, it is expected to expand in the medium to long term. Therefore, we will establish systems to increase production with future increase in demand in view, and develop products and business to gain new orders.

Key initiatives of FY2031 Strategy

Goal : Global First Supplier

Growth strategy of FY2031 Strategy

- Pursue concept-in to seize business opportunities.
- Enhance and combine our core competencies to create new products and businesses.
- Continuously enhance earning capacity through digitization.
- Restructure our supply chain in light of recycling processes.

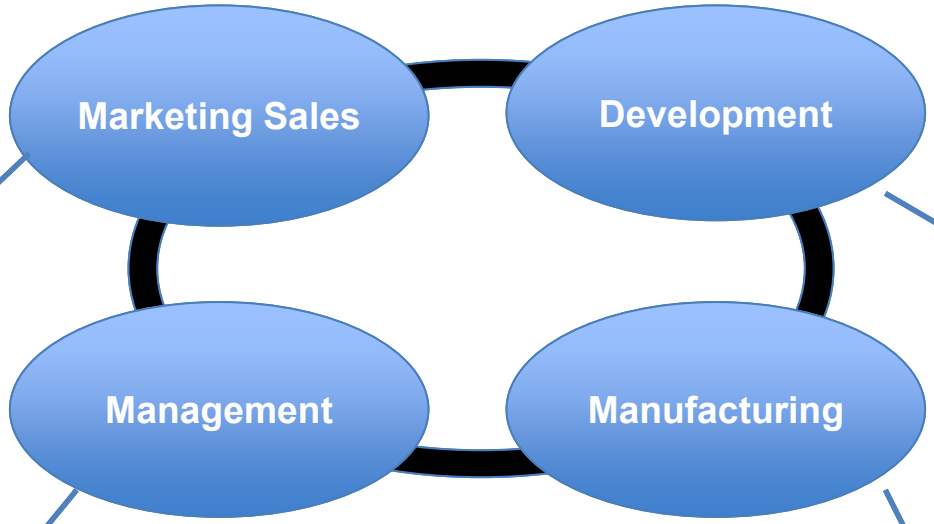
	Key initiatives of the 2030 Medium-Term Management Plan	FY 2023 results	Plan for FY2024 and beyond
Copper processing	➢ Formulate plans for rolled products business—expanding domestic sales, enter into overseas markets ➢ Streamline extrusion processes ➢ Expand our LUVATA individual business ➢ Reduce costs by improving productivity and streamlining organizations	➢ Formulated plans for the installation of equipment to increase production. ➢ Rolled: New installation project was promoted as follows: slitter and packing machine at Wakamatsu Works; **washing machine, slitter and packing machine at Sambo Works** ➢ **Promoted project to increase copper cakes production** at Sakai Plant. ➢ Extrusion: **Considered plans to streamline extrusion processes**	➢ Rolled: Push ahead with the plan toward **full-scale operation from 2024 to 2025.** ➢ Project to increase copper cakes production at Sakai Plant: **Scheduled to start operation in June 2023** ➢ Extrusion: **Increase production of copper and copper alloy products and promote streamlining**
Electronic materials	➢ Expand and grow business for precision silicon workpieces/columnar crystals, seals and thermistor sensors	➢ Established partnerships with major customers ➢ Established **base to increase production of seals** ➢ **Developed** thermistor sensors for **xEV**	➢ Expand sales to major customers and win orders for new products ➢ **Commence operation of equipment to increase production of columnar crystals and seals, and enhance production efficiency** ➢ **Bring to market and expand sales** for thermistor sensors for xEV
	➢ Create new businesses ➢ Advance manufacturing skills ➢ Enhance cost competitiveness ➢ Strengthen earning capability by promoting DX	➢ Established organizational structure to create new businesses ➢ **Automated system was introduced** in production processes. ➢ Sales management system was introduced and put into operation.	➢ Accelerate initiatives to create new businesses **under new organizational structure** ➢ Save manpower and achieve stabilized quality through automation ➢ Fully utilize our sales management system and enhance customer touch points

Development/Marketing (Organization leading concept-in)

- Strengthen marketing capabilities and promote innovation, creation of new products and new businesses
- Transform the organization to be able to link “sales,” “development,” “manufacturing,” and “management” and provide “function and value” needed by customers efficiently and promptly

- Propose concepts
- First call vendor contact point
- Lead market intelligence
- Visualize the relationship with KA *(DX)

*KA：Key Account



- Share roadmap with customers
- Demonstrate solutions to issues before suggesting them
- Research and study competitive and complementary technologies (reinforce market intelligence)
- Establish an IP strategy that supports the business model

- Make accurate decisions to roll out management strategies
- Develop human resources and foster corporate culture
- Develop business models

- Advance production technology
- Improve manufacturing efficiency (DX)
- Prototype functions required by customers
- Develop manufacturing processes with low environmental impact

Transfer authority to account managers (centralized)

Copper Smelting Business and Copper & Copper Alloy Business

While the copper & copper alloy business alone has a low ROIC, when looking at the entire copper supply chain from the Copper smelting business to the Copper & copper alloy business, the ROIC targets are 5.5% in FY2026 and 6.2% in FY2031.
About half of the smelting business's sales volume of copper goes to the Copper & copper alloy business, and the copper cathodes supply chain has been established to ensure a stable business.

		unit	FY2023 Result	FY2024 Outlook	FY2026 Plan	FY2031 Target
Copper Smelting / Copper & Copper Alloy	Ordinary Profit	Billion of yen	24.1	26.8	37.9	47.3
	ROIC	%	4.2%	4.1%	5.5%	6.2%

Smelting and recycling process → Material processing / Product manufacturing

Smelting Business

Naoshima Smelter & Refinery

Onahama Smelter & Refinery

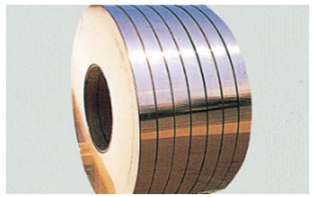
Copper & Copper Alloy Business

Casting

- Sakai Plant
- Onahama Smelter & Refinery

Rolling

- Wakamatsu Plant
- Sambo Plant



Profitability improvement plan for Copper & Copper Alloy Business (rolled products)

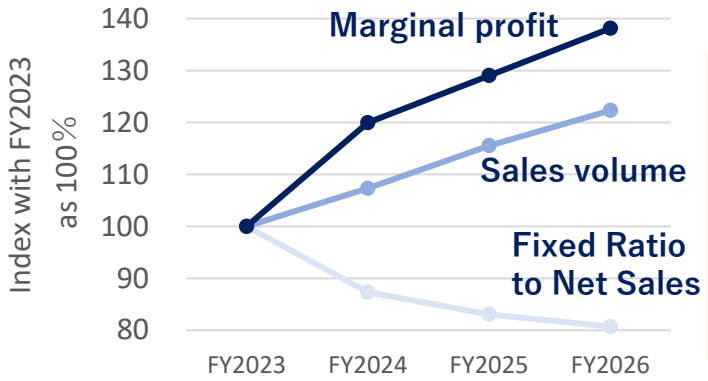
In order to improve ROIC, improvement measures will be taken mainly for core rolled products.
While there are some factors contributing to the deterioration of ROIC, such as the increase in depreciation expenses, we will achieve the FY 2025 ROIC target of 4.0% for the Copper & copper alloy business by improving earnings related to Luvata and others.

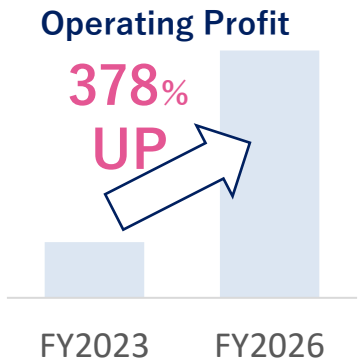
Profitability improvement plan for rolled products

		ROIC improvement effect	Major Improvements
variable cost	Yield rate improvement, etc.	+0.2 %	◆Improvement of production efficiency and stable production measures ◆Improvement and optimization of production process, etc.
variable cost	Product composition, etc.	+1.0 %	◆Replacement of product mix (increase in ratio of high value-added products), Price optimization, etc.
variable cost / fixed cost	Increase production, sales, etc.	+1.4 %	◆Increase production of cakes and billets ◆Increase production of rolled products ・Reinforcement of rolling facilities at Sambo and Wakamatsu plants ・Establishment of a sales and marketing expansion system that integrates manufacturing, sales, and development, etc.
fixed cost	Cost reduction, etc.	+0.1%	◆Review of some large investments (under consideration)

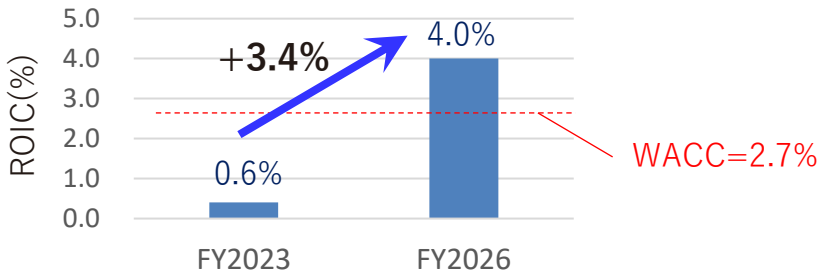
※Achieve the FY2026 ROIC target for the copper processing business by improving profitability related to other products.

Earnings Indicators for Rolled Products in the Copper & Copper Alloy Business





ROIC for Copper & Copper Alloy Business



Profitability improvement plan for Copper & copper alloy business -Strengthening of production system (increased production)-

Advanced Products Company

Augmenting production systems for copper molds and rolled products

To further grow our rolled products business

Cakes

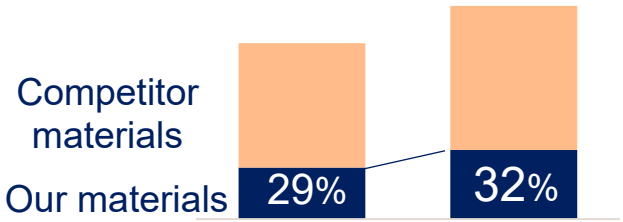
Increase the production of copper cakes (castings), which are used as raw materials

Copper plates and strips

Increase production of copper plates and strips

Objectives of increasing production

- To grow and expand core businesses (copper plates, strips)
- To make our way into global markets
- To expand market share



Impact of increased production of copper plates and strips on our share in the domestic market (estimate)*1

		Sakai Plant	Sambo Plant	Wakamatsu Plant
Location		Sakai City, Osaka	Sakai City, Osaka	Aizu-Wakamatsu City, Fukushima Prefecture
Plan	Increase in production	Increase 30% from current level		
	Investment	Enhance casting equipment	Adding washing machines, slitters and packing machines	Adding slitters and packing machines Augmenting reflow tin plating lines
	Schedule	Scheduled to be put into operation in June 2023	Scheduled to be put into operation in August 2024	Scheduled to be put into operation in May 2024*2
Progress		95%	55%	60%

*1) The share of our materials is estimated by us based on various publicly available documents.

*2) The augmented reflow tin plating lines are scheduled to be put into operation in September 2023.

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Profitability improvement plan for Copper & copper alloy business (Luvata Group's growth investment)

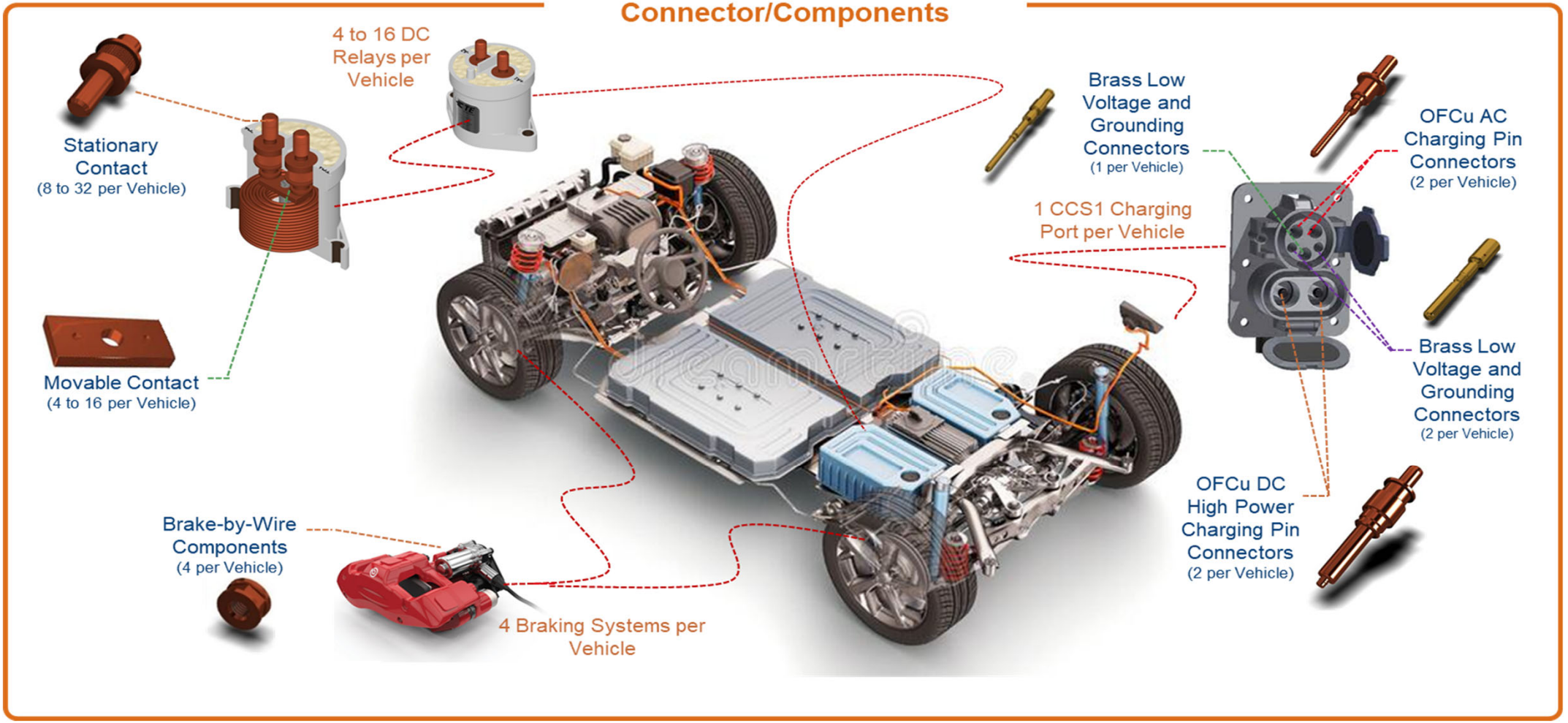
Luvata Group's profit improvement plan (FY2024 to FY2026).

Main Improvements

◆Investment in increased production and sales
In addition to expanding business and increasing sales in existing businesses, enter and increase production in areas where future market growth is expected, such as EVs, Superconductors and copper-alloy wires/rods.

Effectiveness of ROIC improvements. ＋1.0 %

Target Market - BEV Power Connector/Components

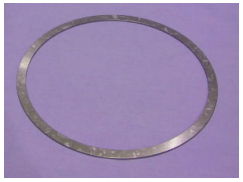


Strengthening of the production system in the electronic materials business (increased production)

Augmenting production systems for columnar crystal silicon (Mitsubishi Materials Electronic Chemicals)

Increasing the production of components for replacement parts for semiconductor manufacturing equipment

Columnar crystal silicon (prismatic ingot)



Finished workpiece (ring) (semiconductor manufacturing equipment component)

- One of the world's largest silicon crystals, with a maximum outer diameter of 1,200 mm
- High purity, high strength and good thermal properties and workability.
- High purity silicon is used for components to prevent contamination.
- Polycrystalline silicon with a columnar crystal structure grown and solidified in one direction.

Augmenting production systems for seal business (Kumagaya Plant, Mitsubishi Cable Industries, Ltd.)

Increasing production of seals for semiconductor manufacturing equipment

- Seals for semiconductor manufacturing equipment (plasma resistant seals for dry etching equipment, etc.)
- In addition to the resistance to plasma, PFOA** free
  * Abbreviation for perfluorooctanoic acid.
  Subject to the content restrictions of REACH regulations.

Akita City, Akita Prefecture	Location	Kumagaya City, Saitama Prefecture
Increase ingot production to 1.3 times current levels as of 2026	Increase in production	Increase sales of the above products by Approx. 1.5 times as of 2025.
Expansion of building, augment casting equipment	Investment	Renovation of existing buildings, clean rooms, etc.
Construction to be completed in FY 2024, operation to start in FY 2025	Schedule	**Mass production is scheduled to start in September 2023**
Construction work to increase production is pushed ahead as planned	Progress	Construction work to increase production is pushed ahead as planned

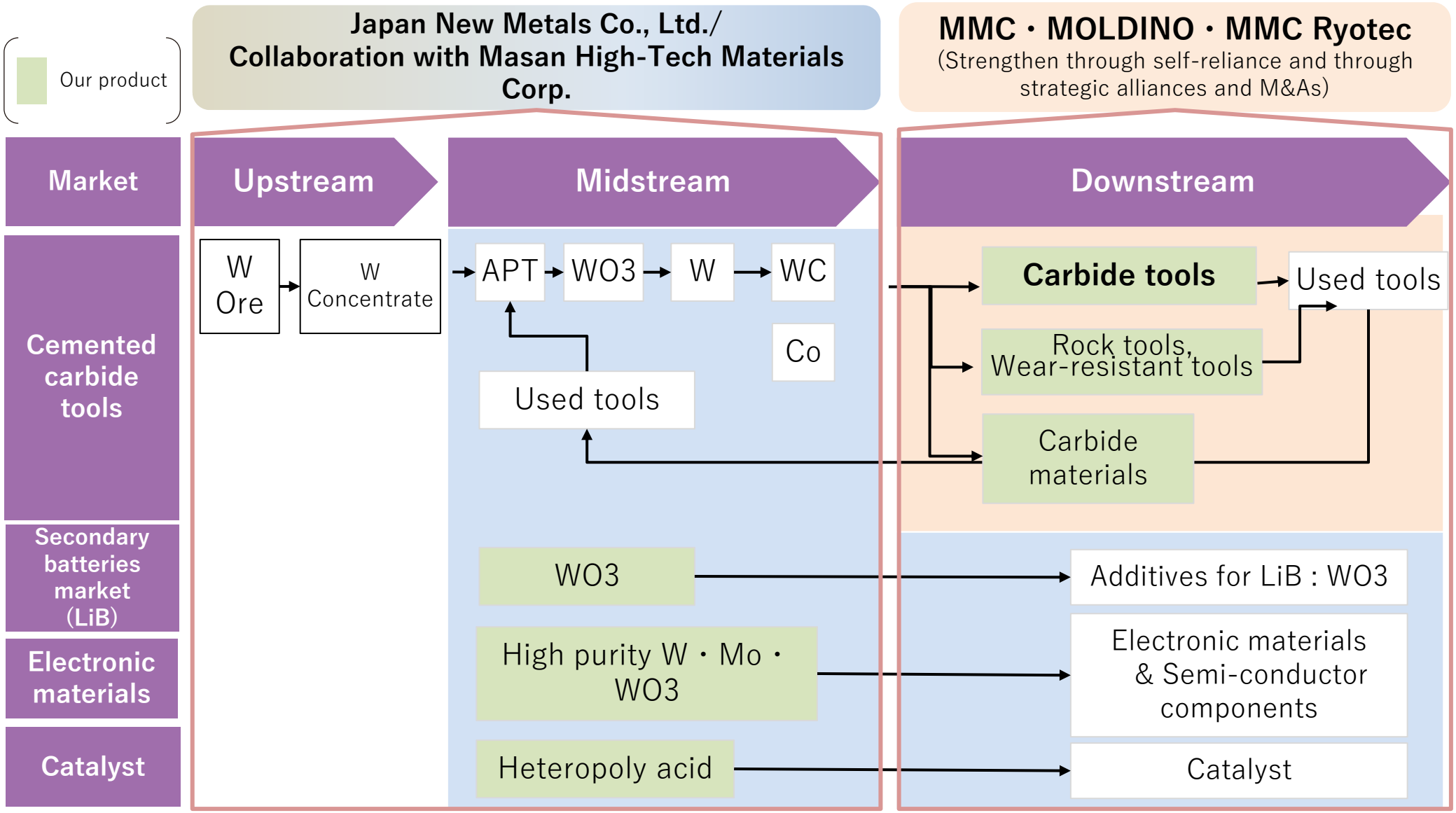
INDEX

Metalworking Solutions Business Overview

Major industry	Main product group		Company	Strengths	Sales composition	Market outlook
Automobiles Transport equipment Aerospace Medical Die & Mold	Cutting tools		Mitsubishi Materials MOLDINO Tool Engineering	・Cemented carbide material manufacturing technologies ・Coating technologies (CVD/PVD) ・Extensive lineup (indexable tools to solid tools)	80%	・Despite concerns about the pandemic and global supply chain disruptions, the gradual recovery trend continues
Mine excavation Secondary batteries Steel	Rock tools Wear-resistant tools		MMC Ryotec	・Cemented carbide material manufacturing technologies ・Design capabilities as strength in wear-resistant and rock tools	11%	・Mine excavation, construction, and secondary battery markets all continue to recover
Cemented carbide Semiconductors Secondary batteries	Tungsten powder Advanced matal powder		Jan New Metals	・Integrated production, from tungsten recycling to smelting	9%	・Growing demand for high melting point materials due to the growth in electronic components

Metalworking Solutions Business Overview

✓ **Operate business from upstream to downstream areas, with the focus on downstream areas**



W/WC: Tungsten/Tungsten carbide

Business Strategy and Policies of the Material working Solutions Business

✓ FY 2031 target: A leading company in tungsten products accepted by global customers

Carbide tools business

[Strategy]

Stable supply of high-efficiency products taking advantage of materials and coating techniques

⇒ Achieve global share of 10% by FY 2030, and become No.1 in quality and cost in the world

[Key initiatives]

- ✓ Further increase overseas sales
- ✓ Strengthen capability to develop products and find solutions in the processing of hard-to-cut and hard-to-process materials
- ✓ Promote smart factories using DX
- ✓ Augment supply chains by introducing S & OP globally

Carbide tools business

- ✓ Cutting tools
- ✓ Construction tools
- ✓ Wear resistant tools

Tungsten business

- ✓ W/WC for carbide tools
- ✓ W for LIB
- ✓ W for electronic components
- ✓ Recycling (carbide/LIB)

Solutions business

- ✓ Cutting tool solutions

Tungsten business

[Strategy]

Expand business for rechargeable batteries in addition to products for carbide tools, and strengthen environmental capabilities

[Key initiatives]

- ✓ Facilitate research and development and promote cross-selling through collaboration with partners
- ✓ Enhance processing capacity by increasing recycling sites globally

Solutions business

[Strategy]

Sell services to manufacturing sites

[Key initiatives]

- ✓ Further develop machining solutions utilizing DX, and build business foundation through M & A

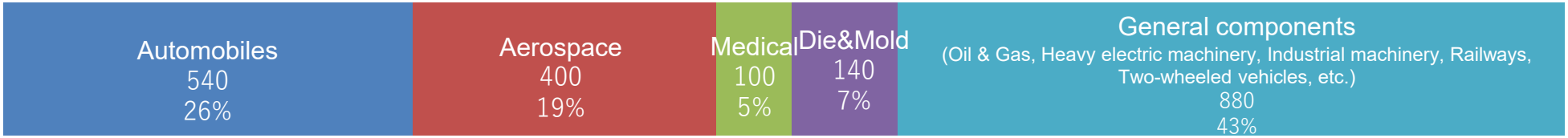
W/WC: Tungsten/Tungsten carbide

LIB: Lithium ion battery

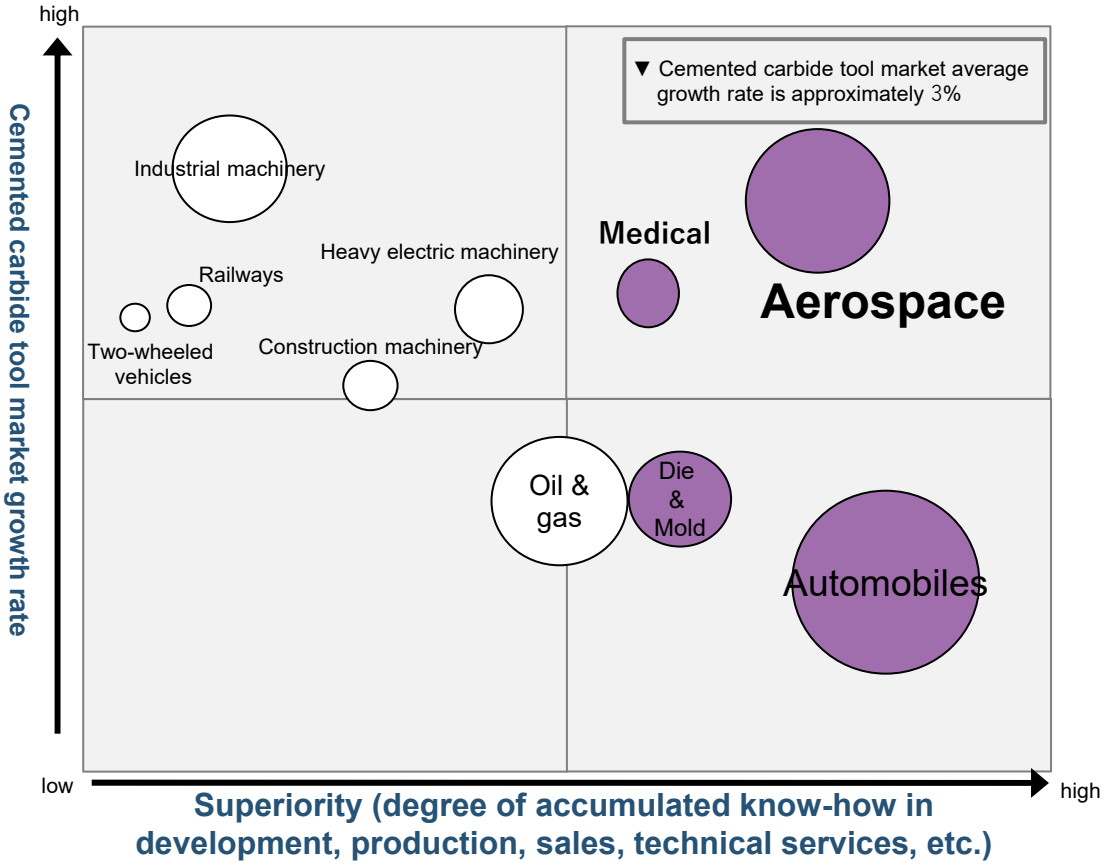
Cemented Carbide Cutting Tool Market Outlook

✓ **Demand for cemented carbide cutting tools is expected to grow at an annual rate of about 3%, reaching approximately 2.6 trillion yen per year in 2031.**

[Unit: Billions of yen]



Note: our estimate.



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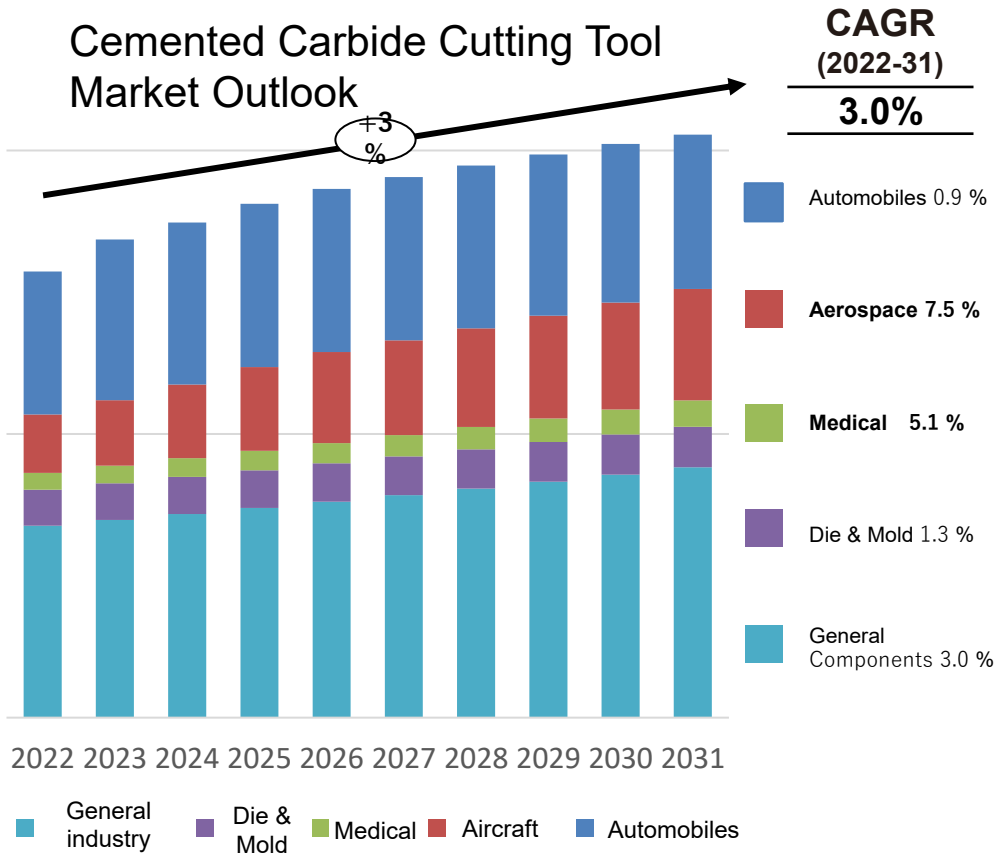
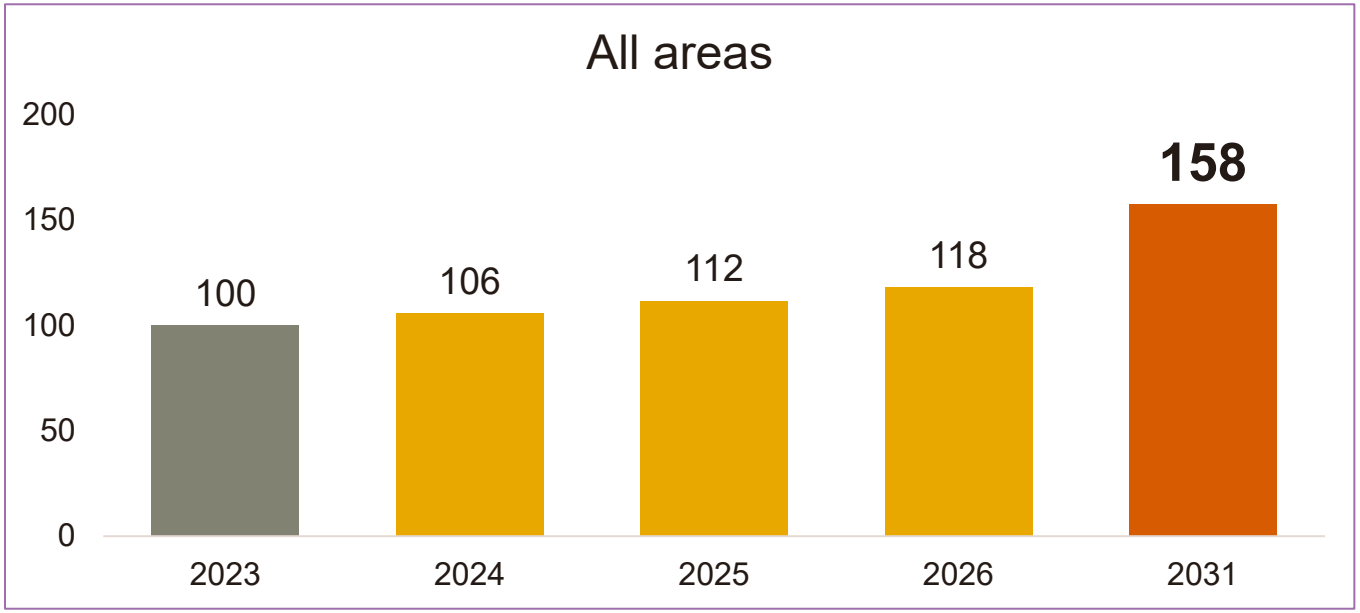
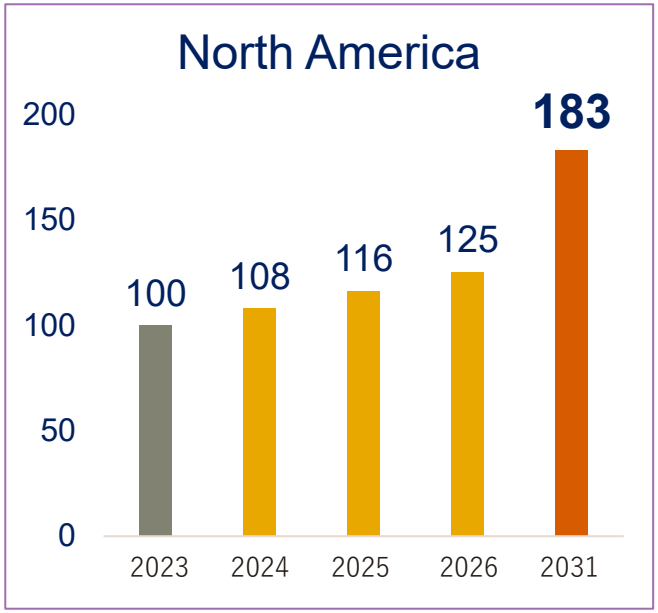


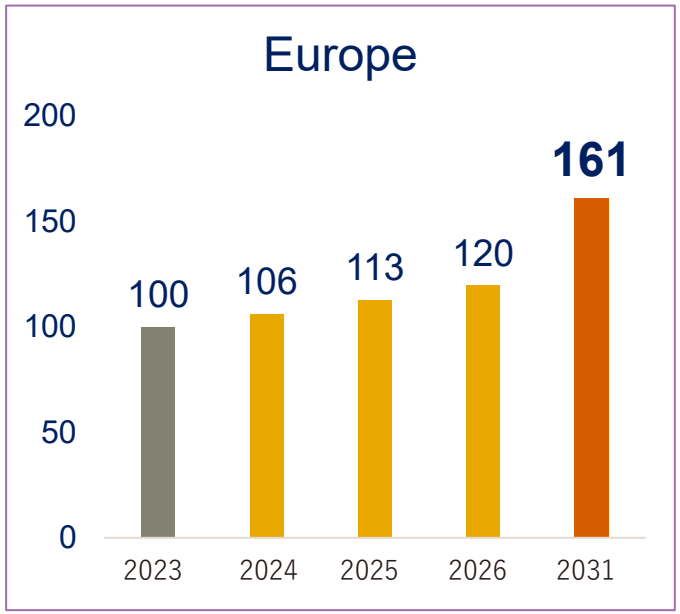
Note: Market size in 2023: ¥1.69 trillion/year (our estimate).

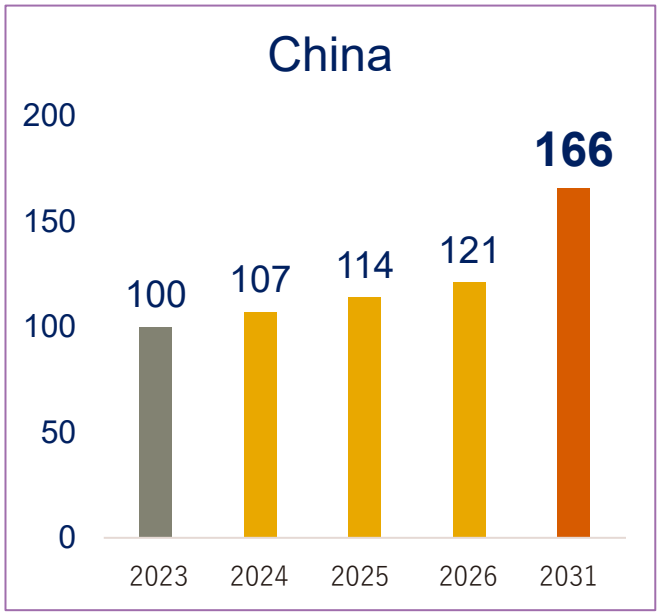
Cemented Carbide tools business -DIAEDGE cutting tool sales plan

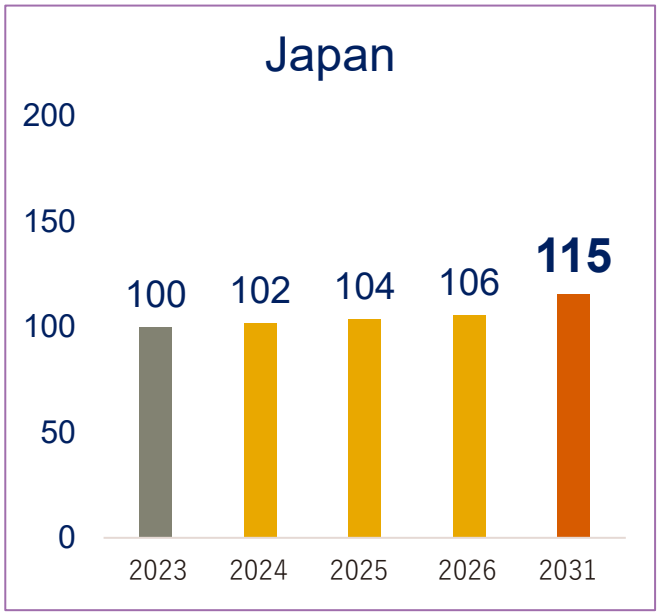
✓ Sales functions are planned to be augmented, especially in North America, Europe and China to expand sales.









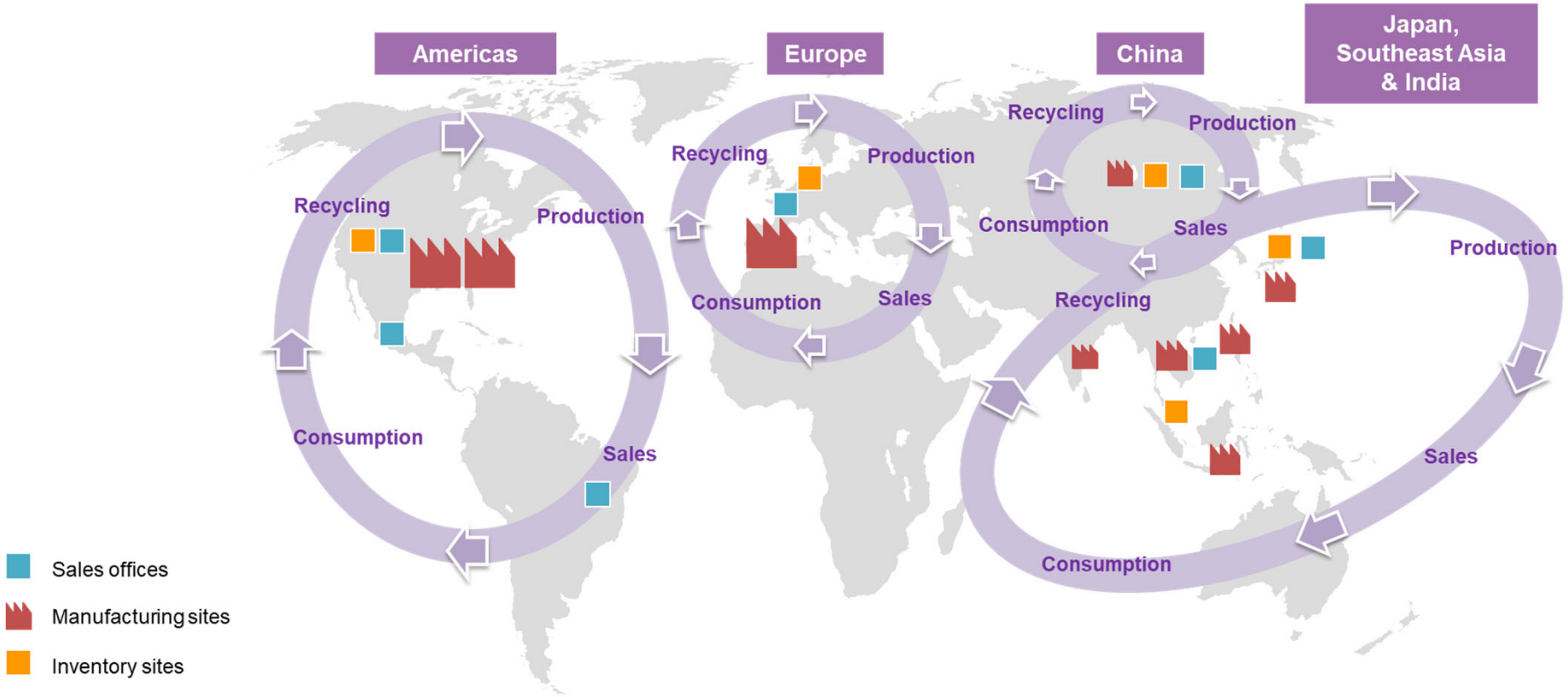


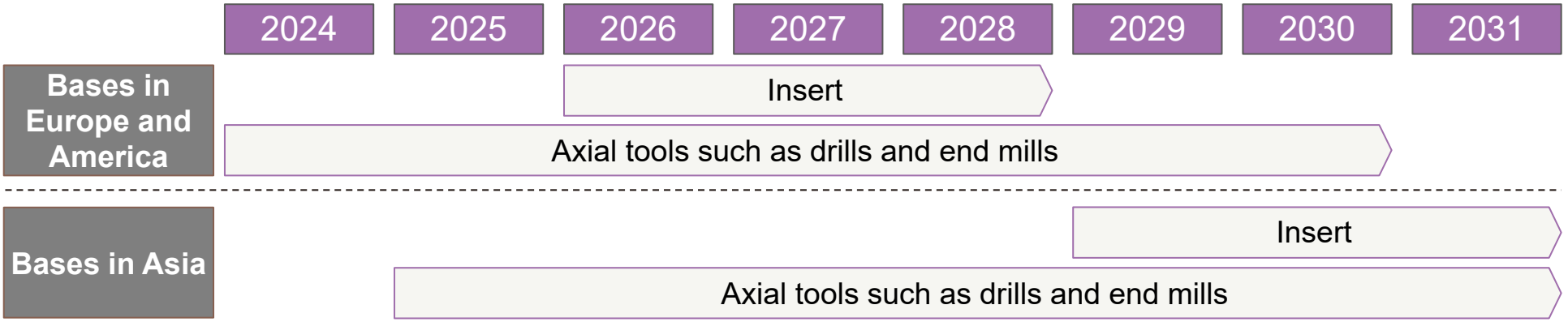
* Comparison using an index in which sales in FY 2023 is set to 100

* Excluding precision/wear resistant/construction tools

Cemented Carbide tools business -Autonomous business development in strategic markets

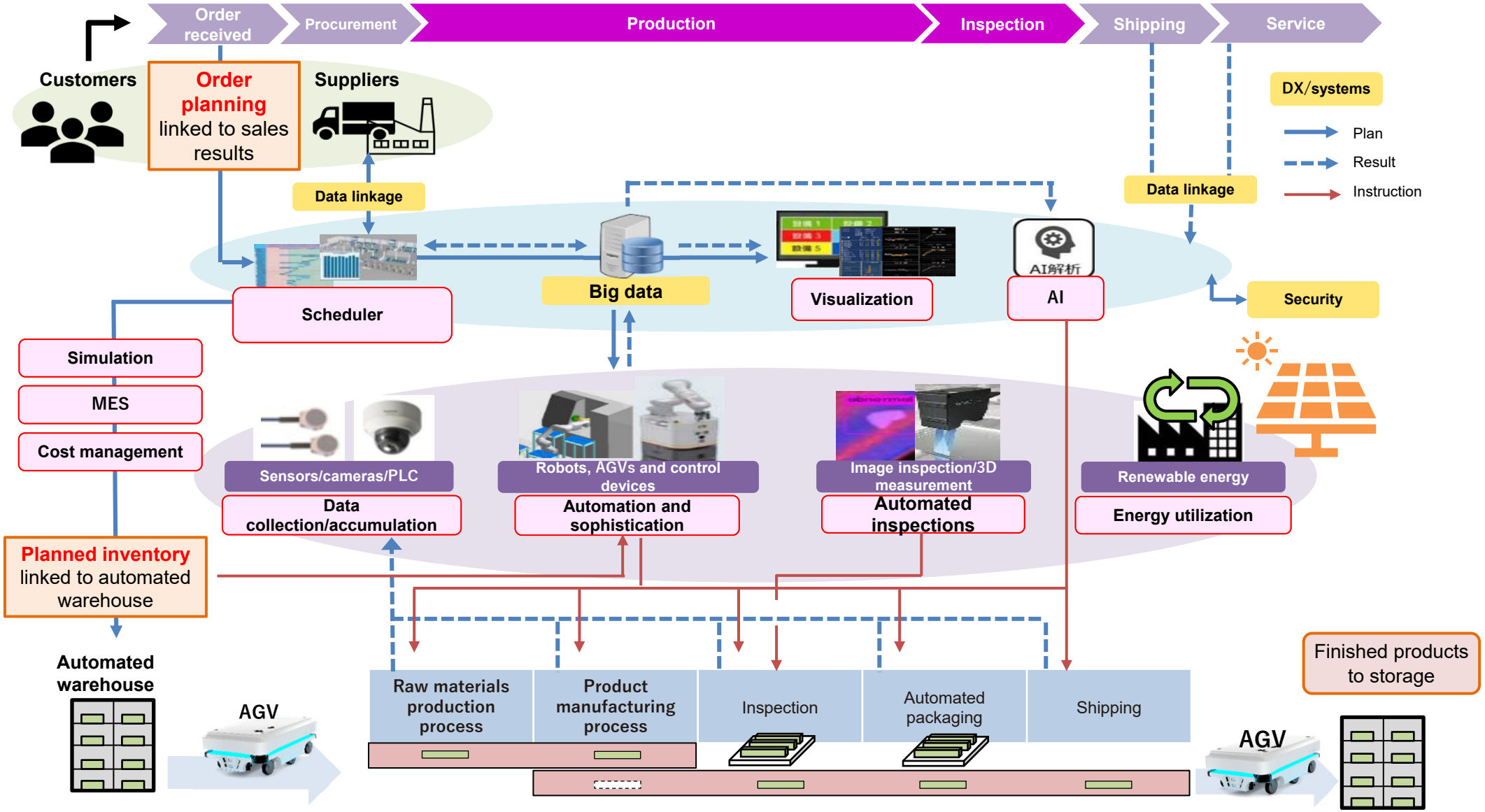
- ✓ Invest 15 billion yen in Europe and America and 9.5 billion yen in Asia by FY 2031 to boost overseas production capacity.
- ✓ Enhance development functions that meet the needs of each area and expand base inventories.





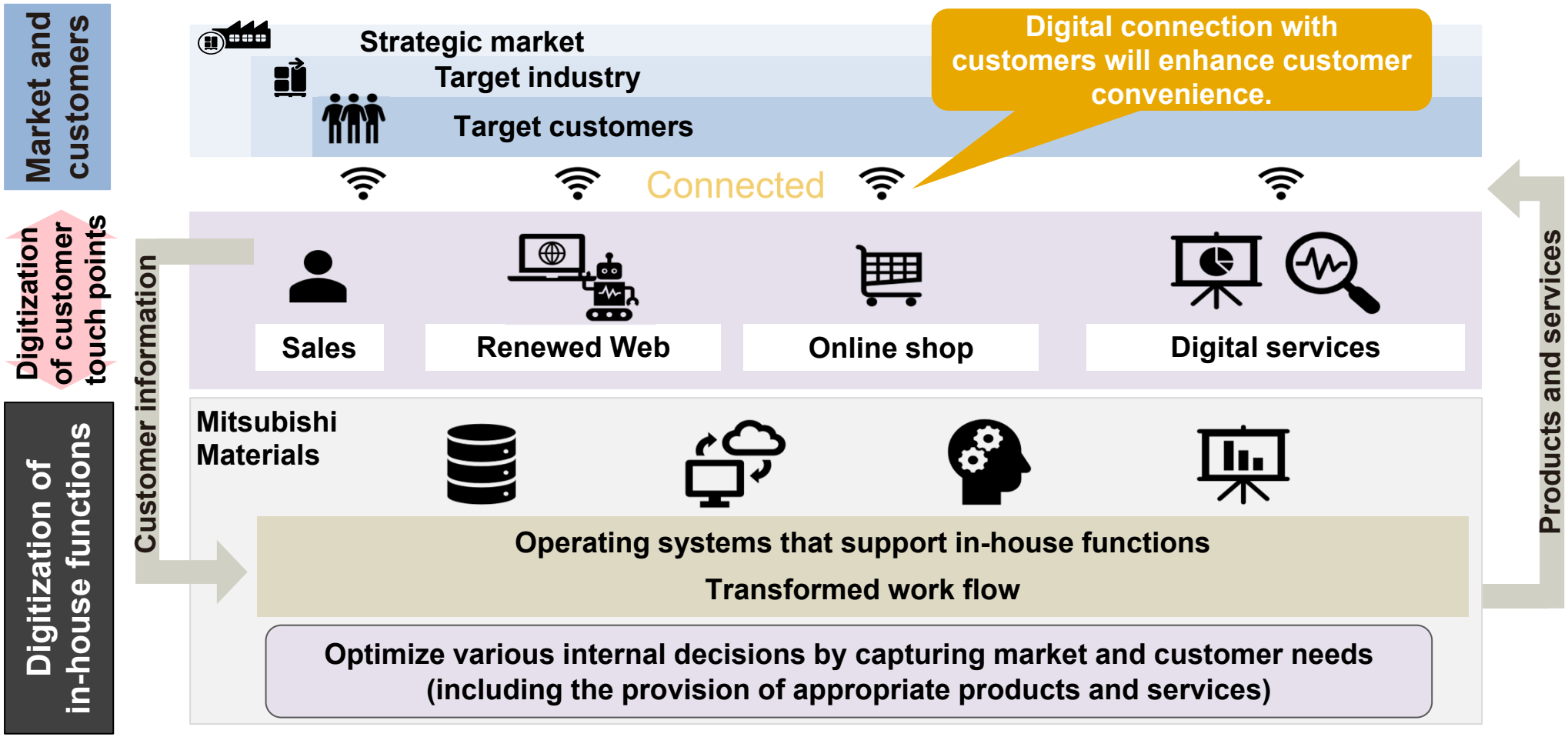
Carbide tools business
DX Initiatives

- ✓ Shorten manufacturing lead times and reduce manpower through smart factories to enhance cost competitiveness
- ✓ Improved efficiency through automation in the production process and improved quality through the use of data in the inspection and packaging processes



Carbide tools business
DX Initiatives

✓ Digitize touch points in all customer activity scenes and promote digitization of in-house functions in order to promote real-time provision of needed information, products, services and solutions.



Tungsten business

✓ Achieve collaboration with Masan High-Tech Materials to expand business.

Expand tungsten production and recycling capacity.

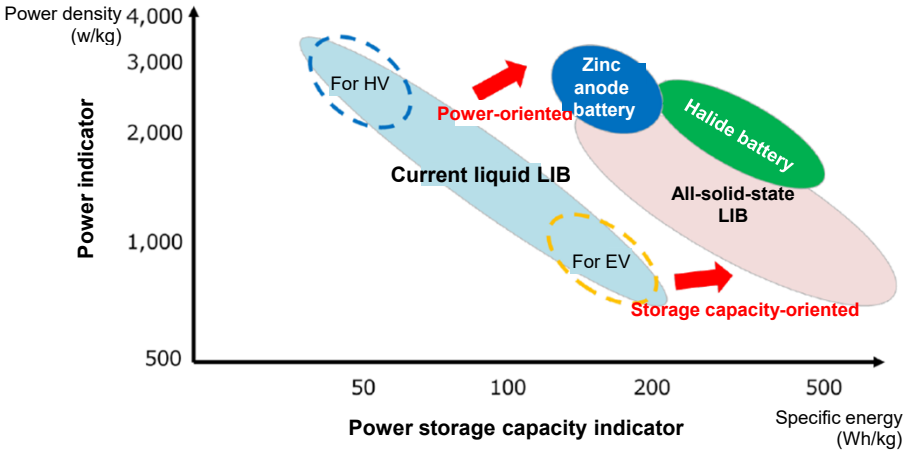
Increase the production of advanced powders for rechargeable batteries.

- Increase production by 1.9 times from FY 2021 levels by FY 2031.

Growing demand for tungsten powder due to increase in EV batteries and stationary storage batteries

- Demand for EV batteries is expected to grow Approx. 21 times by FY 2031 compared to FY 2021.
- The number of stationary storage batteries is expected to increase Approx. 20 times by FY 2031 compared to FY 2021.

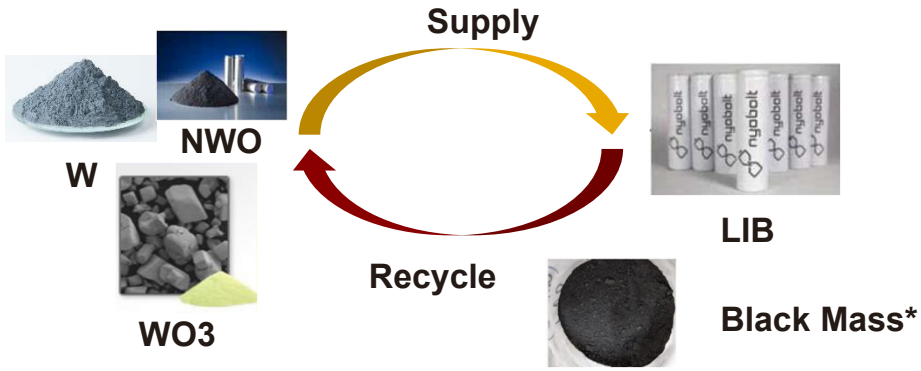
Evolution of battery technology



* The batteries described are examples.

Source: Ministry of Economy, Trade and Industry "Directions for R & D and social implementation of the Next-Generation Batteries and Next-Generation Motors Development Project."

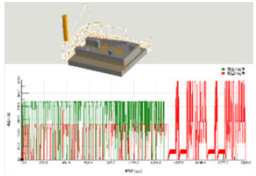
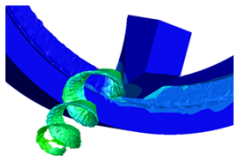
Establishing a base for the supply and recycling of tungsten in the battery market



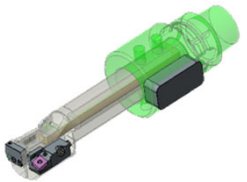
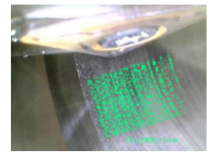
* Black mass produced through LIB recycling (contains precious metals such as cobalt, nickel and lithium)

Solutions business

✓Expand solution services to cutting work utilizing digital solutions and approach “solution sales”.

Machining path/chip shape/tool stiffness
↓
Examination of countermeasures without prototyping, etc.

Tool with built-in mutation sensor and camera
↓
Measurement and automatic correction of dimensions and machined surface photography

Sensor tools

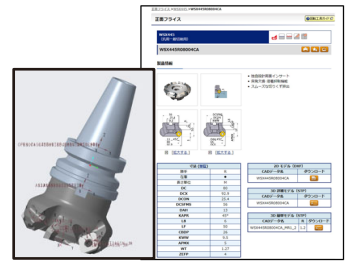
CAE analysis

Tool database

Extensive cutting experience

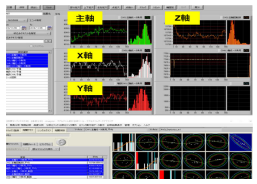
MICS

CAM digital twins

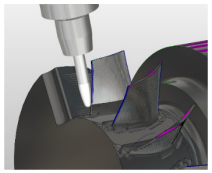


ISO 13399 compliant data and CAM tool data
↓
Selection of tools, checking for interferences, etc.

Mitsubishi Materials **I**ntelligent **C**utting Test **S**ystem



Collection and analysis of machine load values
↓
Proposals to optimize processing conditions, etc.

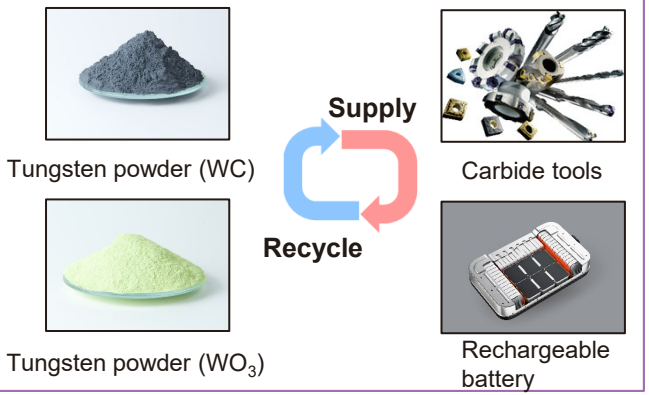


Linkage between CAM simulation and actual machine processing data
↓
Avoiding manufacturing problems in advance, etc.

Sustainability management

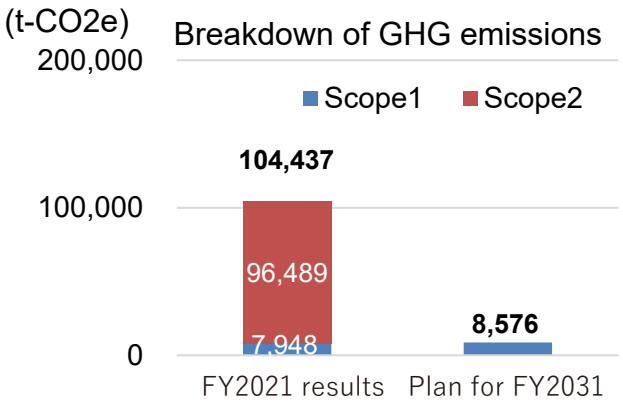
Recycling carbide contributes to a recycling-oriented society

- Target ratio of recycled materials: **80% or more by FY 2031**
  - ⇒ Facilitate the collection of used carbide tools globally.
  - ⇒ Maintain a steady recycling capacity.
  - ⇒ Achieve collaboration with Masan High-Tech Materials (Vietnam) for recycling.



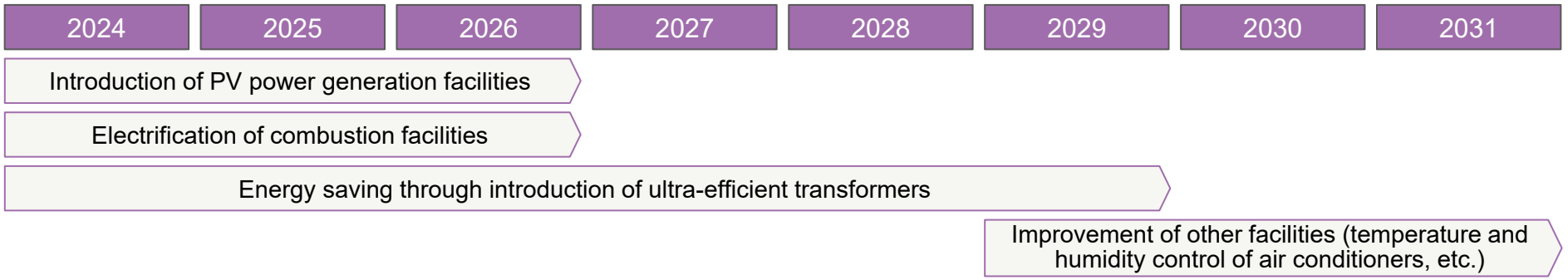
Targets and initiatives to reduce GHG emissions

- GHG emissions reduction target toward FY 2031:
  96,000 t - CO2e (compared to FY 2021 level)
- We plan to make all electricity used in manufacturing virtually CO2-free by FY 2031.
  - ⇒ Domestic manufacturing sites started to purchase renewable energy in FY 2023.
  - ⇒ The shift will be promoted by increasing the rate by 11% each year.



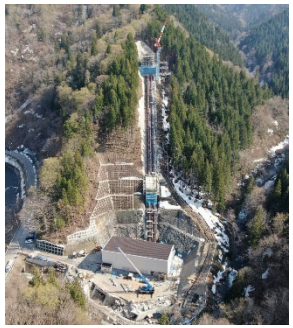
Investment plan

- Cumulative investment between 2024 and 2031: 3.59 billion yen
  (Scope 1: 90 million yen, Scope 2: 3.5 billion yen)



INDEX

Business overview

Business	Business overview	Strengths	Revenue	Market opportunities and prospects
Renewable Energy Business	**Geothermal power generation** **Hydroelectric power generation** 	Since the Onuma Geothermal Power Plant opened in 1976, we have developed a power generation business based on our extensive experience in geothermal development and operation, including the supply of steam to the Sumikawa Geothermal Power Plant.  We also possess many years of experience in the operation of hydropower generation since its introduction in Japan.	0.9 billion yen Ordinary profit in FY 2023	● Opportunities Economic: Environmental value enhanced due to increasing demand for renewable energy Political: Contribution to national policies for the introduction of renewable energy Social: Increased social demand on companies to introduce renewable energy and reduce CO2 emissions ● Risks Technological: Decline in competitiveness of facilities due to rapid technological innovation Environmental: Decline in power generation due to change in weather patterns associated with climate change over a long period of time Investment: Increased investment costs due to increase in construction costs
	PV power generation	Supply of electricity and extensive development and operating experience utilizing the Group's idle land		
	Biogas	Waste plastic and sludge generated during the treatment process are used as raw materials and as an alternative to thermal energy at the cement plants of affiliated companies.		
	Wind power generation **Storage batteries, etc.**	Idle land, including Approx. 14,000 ha of forest land which we own in Japan, is utilized as new power source development sites.	—	

Renewable Energy Business

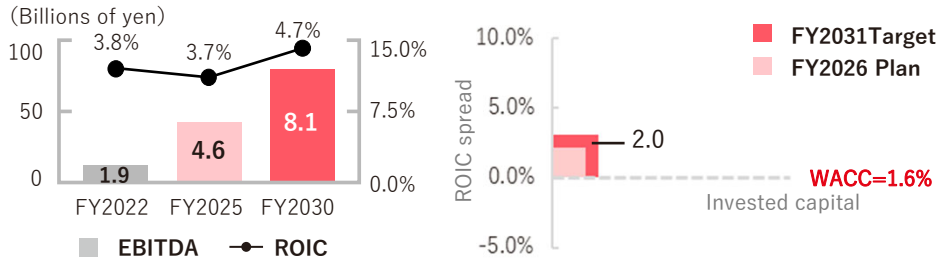
FY2031 Target: Expansion of Renewable Power Generation to Achieve 100% Self-sufficiency in Renewable Power Electricity

- Further expansion of geothermal power generation business
- Expansion of business areas (wind power generation and power generation-related businesses)

Business environment

- Increasing importance of using renewable energy and reducing the environmental impact of manufacturing as measures against climate change
- Setting of high national targets and various support systems for making renewable energy a major power source

EBITDA・ROIC、EP



Business strategy

FY2024－FY2031

Consolidate the renewable energy business in the Strategic Headquarters as a company-wide effort to expand the business from a long-term perspective

Geothermal

- New development at one location every three years to expand business

Wind

- New entrants into wind power generation where power generation costs are expected to decline in the future

Biogas

- Further development of new biogas plants

Important measures

FY2024－FY2026

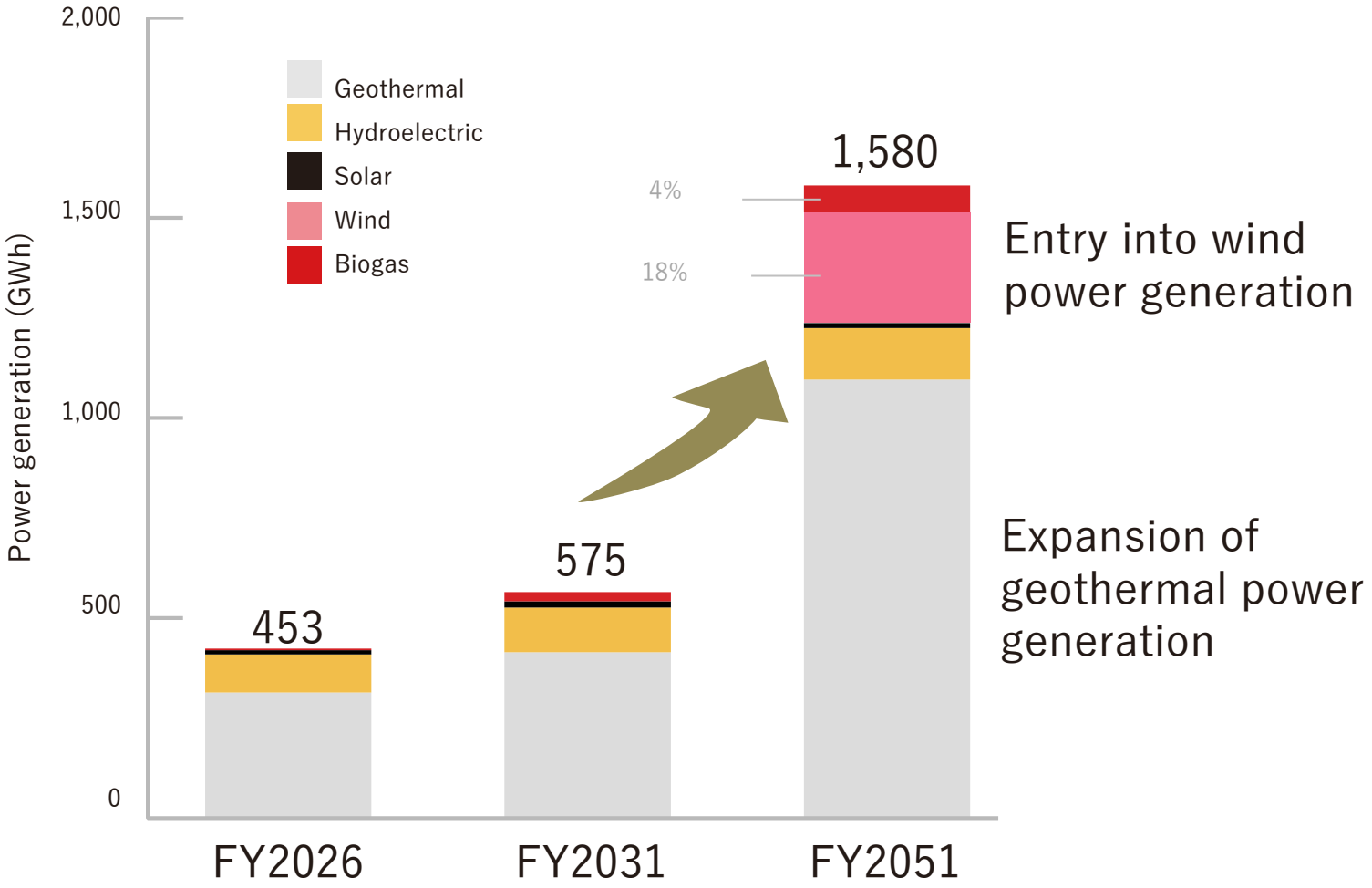
- Business expansion utilizing proven geothermal technology (3 investigations, 1 operation started)
- Development of geothermal power generation projects in new locations (Esan area in Hokkaido, etc.)
- Conducting overseas surveys utilizing survey technology for geothermal resources
- Survey of wind power generation projects in cooperation with other companies

FY2027－FY2031

- Continued expansion of geothermal power generation business (2 investigations, 1 operation)
- Launch of onshore wind power generation project utilizing company-owned land
- Strengthening cooperation with waste generators to maximize the amount of raw material waste collected for biogas plants

Renewable Energy Generation Targets

- Accelerate establishment of geothermal power development system and business expansion, with the aim of generating power equivalent to our electricity consumption in FY2051. Expand into new renewable energy generation, mainly wind power



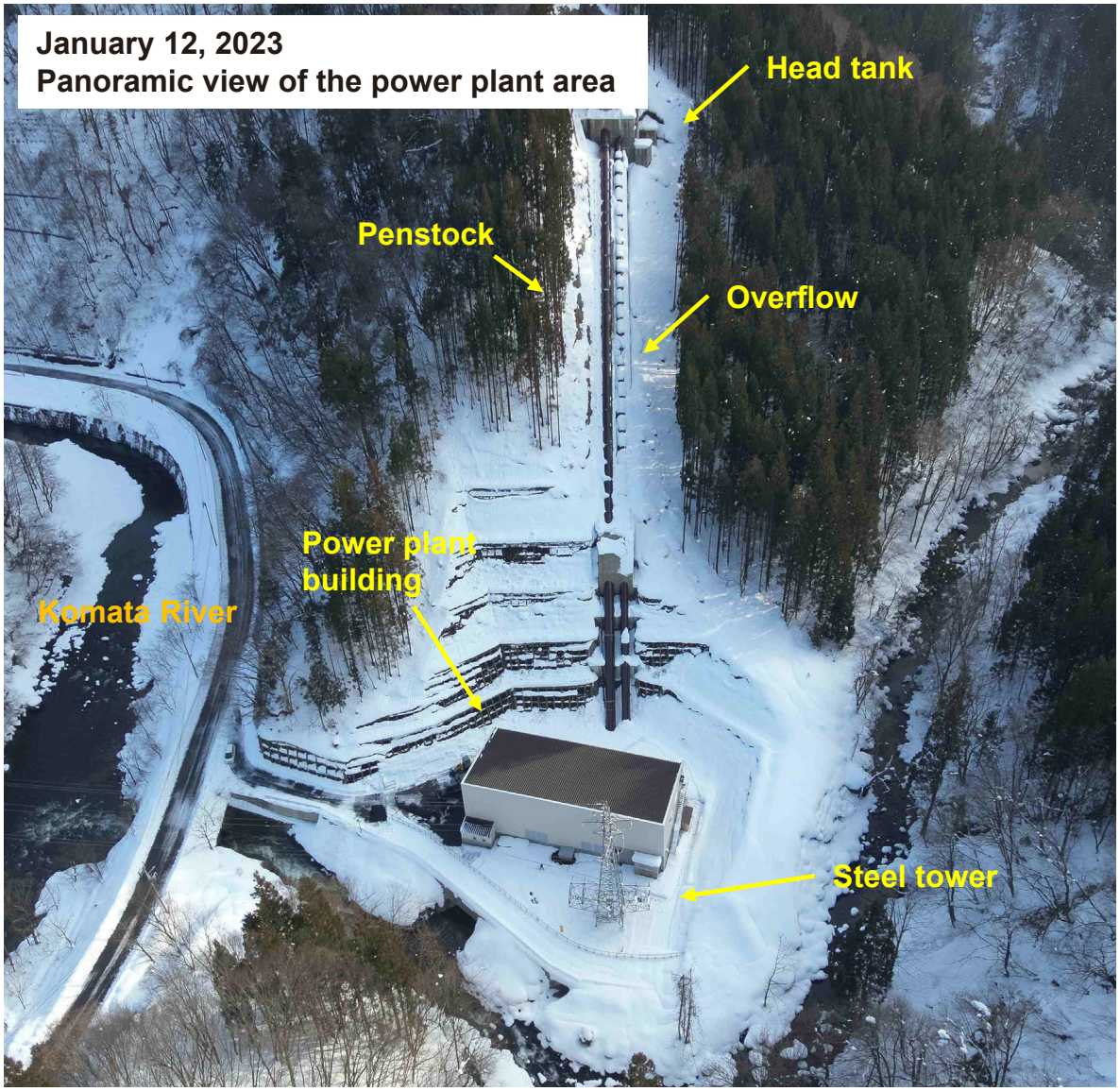
Expand equity-based renewable energy sources, centered on the geothermal business where we have strengths, to a level equivalent to our own electricity consumption.

Promoting research and development of renewable energy

	FY 2024 to FY 2026 Phase 1 Enhancing competitiveness	FY 2027 to FY 2031 Phase 2 Business expansion
Geothermal power generation	• Additional production well drilling (Onuma, Sumikawa) • **Construction and operation of new geothermal power plant (Appi)** • New geothermal development survey (Komonomori, Moriyoshi, Upstream of Appi River) • Participation in other companies' geothermal development (Esan and others)	• Measures to maintain and increase power generation at existing power plants (Sumikawa Binary, etc.) • **Construction and operation of new geothermal power plants (Komonomori, Esan)** • New geothermal development survey (Moriyoshi, Upstream of Appi River and others) • Participation in other companies' geothermal development • Overseas geothermal surveys
Wind power generation	• Onshore wind power survey (Hokkaido and others)	• **Survey and construction of onshore wind power (Hokkaido and others)**
Hydroelectric power generation	• Survey on new small-scale hydropower generation (Kazuno area of Akita Prefecture)	• Construction and operation of new small-scale hydropower plants (several locations around Kazuno area)
Other	• Development of PV power generation under CPPA, etc. • Stabilized operation of biogas business	• CPPA and expansion into energy storage business • Expansion of biogas business

Construction and start of operation of new hydroelectric power plant

Komatagawa new hydroelectric power plant
(commenced commercial operation on December 23, 2022)



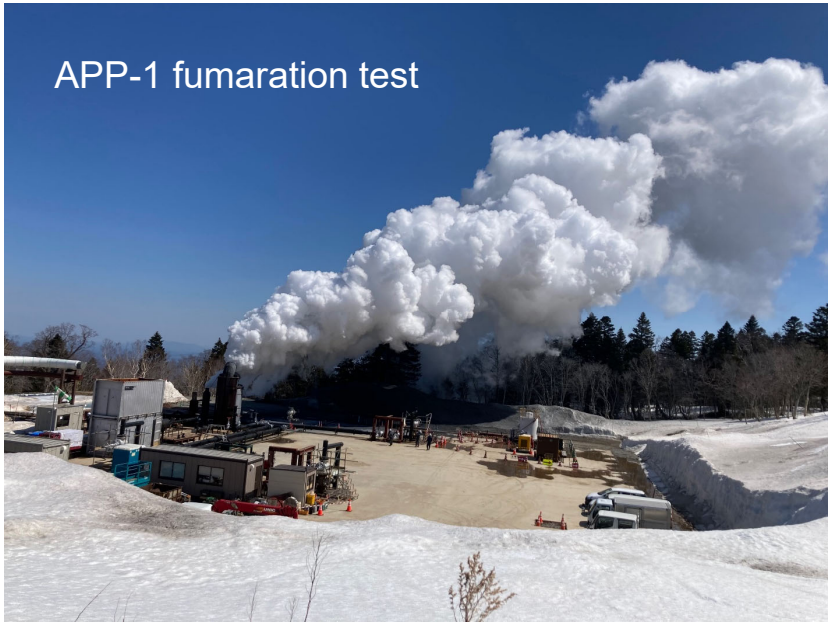
Name	Komatagawa New Power Plant
Location	Kita-akita City, Akita Prefecture
Method	Run-of-river
Water used	Maximum: 13.0 m^3/s Normal: 4.17 m^3/s
Effective head	91.50m
Maximum output	10,326kW
Annual power generation	Approx. 48,500 MWh
Hydraulic turbine	Horizontal axis Francis turbine 5,339 kW (two units)

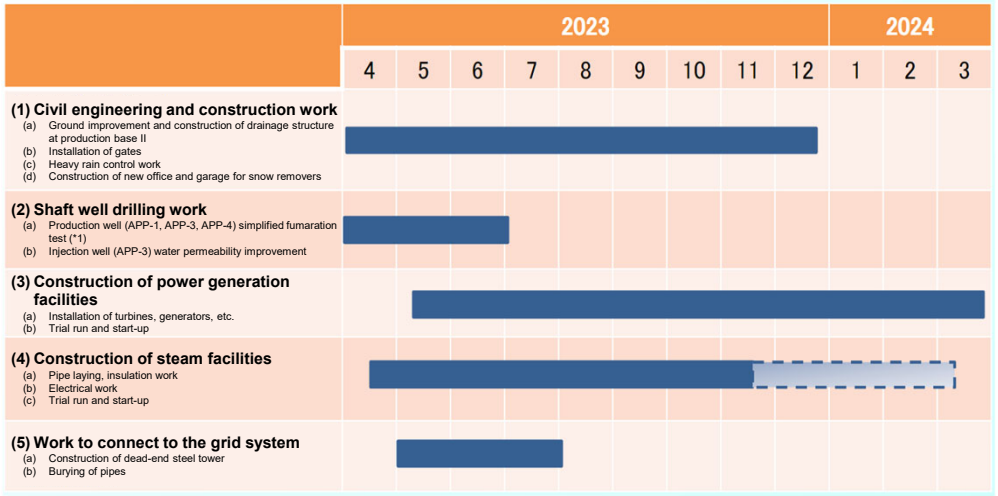
The plant has been running smoothly since the commencement of operations

Planned construction and operation of new geothermal power plant

【Appi Geothermal Power Plant】

Construction of the Appi Geothermal Power Plant is underway for **operation to begin in spring 2024.** In FY 2023, civil engineering and construction work, steam facilities installation work and well drilling work were carried out. In FY 2024, construction of power generation facilities is scheduled to begin, and a simultaneous fumarolic test is scheduled to begin in September (the picture on the right shows a simplified fumarolic gas test conducted in April).



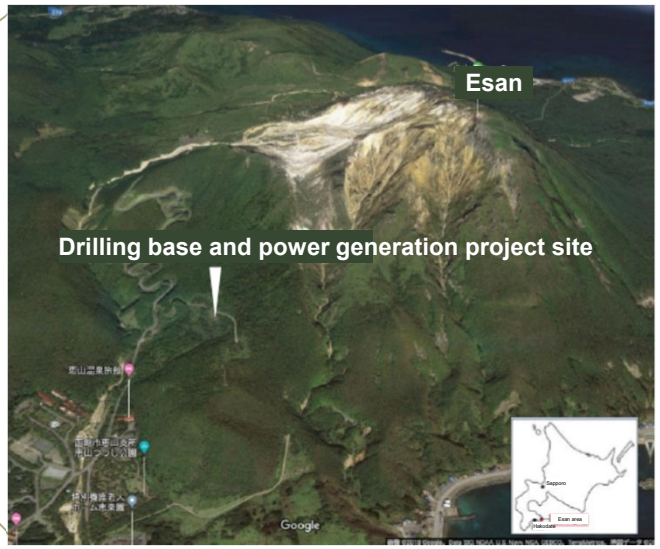


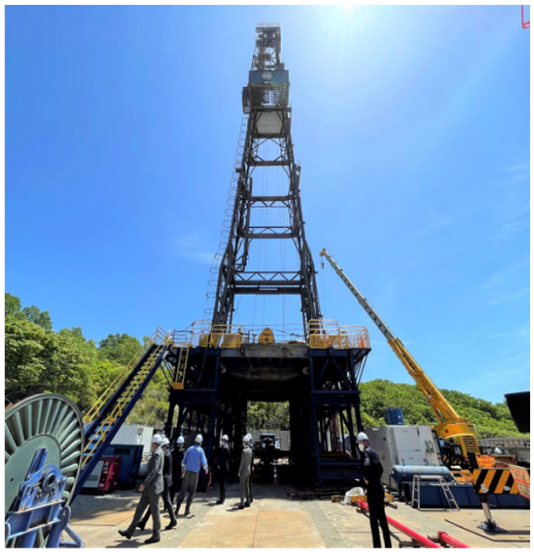
Facility name	Appi Geothermal Power Plant
Rated output	14,900kW
Business site	Hachimantai City, Iwate Prefecture
Site area	Approx. 180,000 m^2
Investment ratio	Mitsubishi Materials 51% Mitsubishi Gas Chemical 34% Electric Power Development Co.,Ltd. 15%

Participation in other companies' geothermal development projects

【Project to survey the amount of geothermal power generation resources in the Esan area】

We have invested in "Hakodate Esan Geothermal LLC. (hereinafter, Esan Geothermal)" as a new business partner of RENOVA, Inc. and Daiwa Energy & Infrastructure Co., Ltd. Since its establishment in 2016, Esan Geothermal has been working to develop a new geothermal power plant in the Esan area of Hakodate City, Hokkaido.



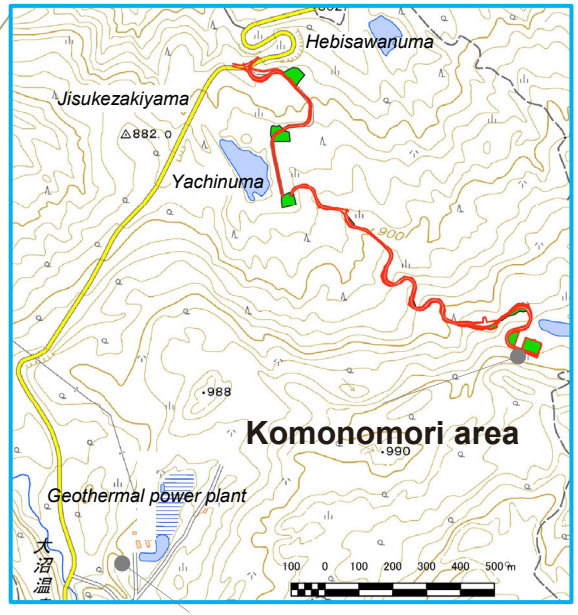


Survey location	Esan area, Hakodate City, Hokkaido
FY2023 Survey summary	Drilling survey with large-diameter survey well (well drilling and ancillary work)
FY2024 Survey summary (Plan)	Long-term fumaration test, reservoir evaluation
Start of operation	Scheduled for FY2029

In-house geothermal development

【Progress of geothermal resources survey in Komonomori area】

In FY 2023, logging and uprooting were carried out for the construction of new forest roads and site for the drilling of research wells. Main construction work for land development is scheduled for FY2024, and drilling of survey wells for FY2025. Efforts are being made to communicate with local communities (Kazuno City, hot spring operators, etc.), and the continuous hot spring monitoring facility provided by us is also in operation as planned.



Our Onuma Geothermal Power Plant

Work road construction and root removal (October 2022)

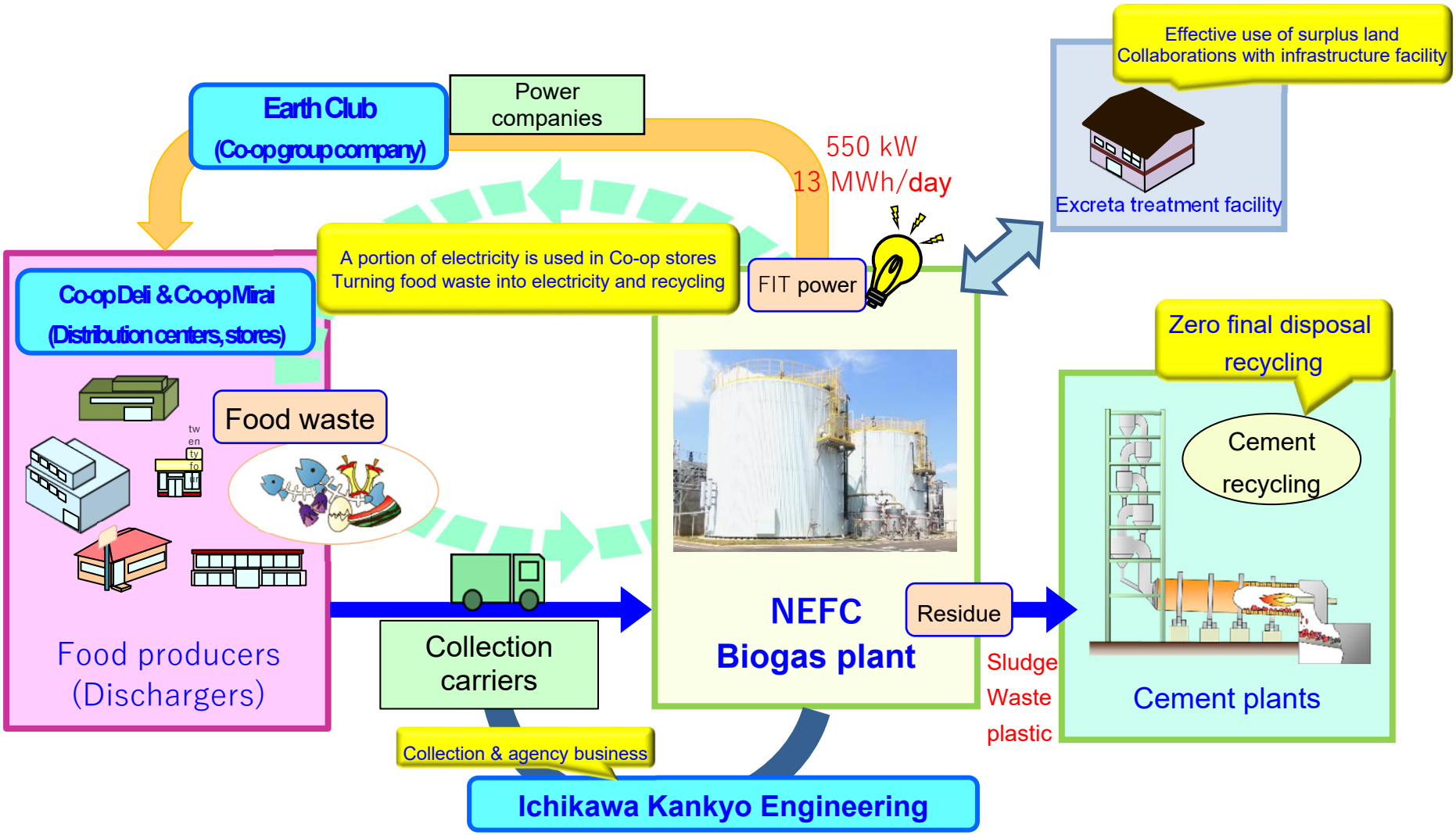
Snow removal (March 2023)

Location	Komonomori area
FY 2023 Survey summary	Logging and uprooting were carried out for new forest road and site development work.
FY 2024 Survey summary (Plan)	Construction of forest roads and survey sites
FY 2025 Survey summary (Plan)	Survey well drilling

Biogasification business initiatives

【Food Waste Biogasification Business Model】

The food waste biogasification business was integrated into the renewable energy business. Sales are being strengthened and facilities improved to ensure stable operations at New Energy Fujimino Co., Ltd. (NEFC), which began commercial operation in September 2020.



【 Reference 】 FY March 2020 Results by Quarter

(Billions of yen)

項目		FY March 2020 Results						
		1Q	2Q	1H	3Q	4Q	2H	Full Year
Metals ＊1	Net sales	152.5	165.4	317.9	165.5	184.2	349.8	667.8
	Operating profit	1.1	4.0	5.2	3.6	9.7	13.3	18.6
	Ordinary profit	9.8	3.6	13.5	6.9	7.3	14.2	27.7
Advanced Products ＊2	Net sales	97.6	94.2	191.8	93.3	90.1	183.5	375.3
	Operating profit	1.2	0.3	1.5	0.7	0.9	1.6	3.2
	Ordinary profit	1.6	1.2	2.8	0.5	1.0	1.5	4.4
Copper & Copper alloy	Net sales	67.1	63.8	130.9	61.9	60.0	121.9	252.9
	Operating profit	1.2	0.2	1.5	0.4	0.4	0.8	2.4
	Ordinary profit	1.3	-0.1	1.1	0.0	0.0	-0.1	1.0
Electronic materials & Components	Net sales	30.6	30.4	61.1	31.7	30.4	62.1	123.2
	Operating profit	0.0	0.0	0.0	0.3	0.5	0.8	0.8
	Ordinary profit	0.3	1.3	1.6	0.6	1.0	1.6	3.3
Metalworking Solutions	Net sales	40.4	37.7	78.1	36.9	35.1	72.0	150.2
	Operating profit	3.4	2.1	5.5	1.1	1.1	2.2	7.7
	Ordinary profit	3.0	1.7	4.7	0.9	0.5	1.4	6.2
Renewable Energy	Net sales	0.7	0.5	1.3	0.6	0.6	1.2	2.6
	Operating profit	0.2	-0.1	0.1	0.1	0.2	0.3	0.5
	Ordinary profit	0.4	0.2	0.7	0.4	0.5	0.9	1.6
Others	Net sales	130.4	137.9	268.4	141.6	144.3	285.9	554.4
	Operating profit	3.6	3.2	6.8	3.6	4.8	8.4	15.3
	Ordinary profit	4.5	3.6	8.1	4.9	4.5	9.5	17.6
Adjustment Amount	Net sales	-55.6	-53.7	-109.4	-61.9	-63.0	-125.0	-234.4
	Operating profit	-0.7	-1.7	-2.4	-2.2	-2.9	-5.1	-7.6
	Ordinary profit	-0.3	-2.4	-2.8	-1.6	-3.7	-5.3	-8.1
Total	Sales	366.2	382.1	748.4	376.2	391.4	767.7	1,516.1
	Operating profit	8.9	7.9	16.9	6.9	14.0	20.9	37.9
	Ordinary profit	19.1	8.0	27.2	12.1	10.1	22.3	49.6

＊1:The reportable segments have been changed in accordance with the reorganization implemented on April 1, 2023. Accordingly, the segmentation has been reclassified to conform to the new classification. These figures are for reference only, as they are not audited by an auditing firm.
＊2:The total amount of advanced products includes transactions among the copper & copper alloy business and the electronic materials & components business, which are common to all advanced products.

【 Reference 】 FY March 2021 Results by Quarter

(Billions of yen)

項目		FY March 2021 Results						
		1Q	2Q	1H	3Q	4Q	2H	Full Year
Metals ＊1	Net sales	158.4	201.3	359.7	164.3	207.2	371.6	731.4
	Operating profit	1.4	5.9	7.3	3.2	8.4	11.7	19.0
	Ordinary profit	1.5	13.9	15.5	7.3	10.7	18.0	33.6
Advanced Products ＊2	Net sales	79.9	76.1	156.0	95.3	105.6	201.0	357.1
	Operating profit	-0.1	-1.6	-1.7	1.0	3.5	4.6	2.8
	Ordinary profit	-0.7	0.7	0.0	1.9	4.2	6.1	6.1
Copper & Copper alloy	Net sales	50.5	48.4	99.0	61.9	70.6	132.6	231.6
	Operating profit	-0.7	-1.4	-2.2	0.4	1.4	1.8	-0.3
	Ordinary profit	-1.7	0.0	-1.7	1.0	1.5	2.5	0.8
Electronic materials & Components	Net sales	29.6	27.9	57.5	33.6	35.4	69.0	126.6
	Operating profit	0.6	0.0	0.6	0.8	2.0	2.9	3.5
	Ordinary profit	1.1	0.8	1.9	1.0	2.6	3.7	5.6
Metalworking Solutions	Net sales	27.9	28.7	56.6	31.8	30.8	62.7	119.3
	Operating profit	-1.2	-1.8	-3.0	-0.3	2.2	1.9	-1.1
	Ordinary profit	-1.3	-1.4	-2.8	-0.3	2.3	2.0	-0.7
Renewable Energy	Net sales	0.8	0.7	1.5	0.7	0.5	1.2	2.7
	Operating profit	0.2	0.0	0.1	0.0	0.2	0.3	0.5
	Ordinary profit	0.4	0.0	0.5	0.3	0.5	0.8	1.4
Others	Net sales	116.4	123.3	239.8	126.3	136.7	263.0	502.8
	Operating profit	2.6	3.8	6.4	5.3	4.7	10.1	16.5
	Ordinary profit	3.1	2.7	5.9	6.6	4.0	10.6	16.5
Adjustment Amount	Net sales	-39.2	-49.1	-88.3	-64.3	-75.8	-140.1	-228.4
	Operating profit	-0.3	-1.8	-2.2	-0.7	-8.2	-9.0	-11.3
	Ordinary profit	0.0	-2.7	-2.7	-0.3	-9.3	-9.7	-12.4
Total	Sales	344.3	381.2	725.5	354.3	405.2	759.5	1,485.1
	Operating profit	2.5	4.3	6.8	8.7	10.9	19.6	26.5
	Ordinary profit	3.1	13.3	16.4	15.5	12.5	28.0	44.5

＊1:The reportable segments have been changed in accordance with the reorganization implemented on April 1, 2023. Accordingly, the segmentation has been reclassified to conform to the new classification. These figures are for reference only, as they are not audited by an auditing firm.
＊2:The total amount of advanced products includes transactions among the copper & copper alloy business and the electronic materials & components business, which are common to all advanced products.

【 Reference 】 FY March 2022 Results by Quarter

(Billions of yen)

項目		FY March 2022 Results						
		1Q	2Q	1H	3Q	4Q	2H	Full Year
Metals ＊1	Net sales	238.2	233.4	471.6	243.4	286.2	529.7	1,001.4
	Operating profit	7.3	8.0	15.4	2.2	8.5	10.7	26.2
	Ordinary profit	17.1	8.8	26.0	15.2	10.8	26.1	52.1
Advanced Products ＊2	Net sales	115.7	114.8	230.5	126.2	129.1	255.3	485.9
	Operating profit	3.2	2.6	5.8	3.9	4.8	8.8	14.7
	Ordinary profit	4.2	3.0	7.2	4.4	5.2	9.6	16.9
Copper & Copper alloy	Net sales	86.5	86.4	172.9	94.6	99.0	193.6	366.6
	Operating profit	0.9	0.4	1.4	1.6	1.5	3.2	4.6
	Ordinary profit	1.7	0.2	1.9	1.8	1.5	3.3	5.3
Electronic materials & Components	Net sales	29.5	28.7	58.3	31.9	30.4	62.3	120.7
	Operating profit	2.2	2.1	4.3	2.3	3.3	5.6	10.0
	Ordinary profit	2.5	2.7	5.3	2.5	3.7	6.3	11.6
Metalworking Solutions	Net sales	33.4	32.0	65.4	33.4	33.6	67.1	132.6
	Operating profit	2.1	3.7	5.8	4.2	3.9	8.2	14.1
	Ordinary profit	2.1	3.6	5.7	4.2	4.5	8.7	14.5
Renewable Energy	Net sales	0.9	0.6	1.5	0.8	0.7	1.6	3.2
	Operating profit	0.2	-0.2	0.0	0.0	0.1	0.2	0.1
	Ordinary profit	0.2	0.0	0.1	0.2	0.3	0.6	0.8
Others	Net sales	112.4	111.6	224.0	119.0	126.7	245.8	469.9
	Operating profit	3.4	2.8	6.3	2.5	2.8	5.3	11.6
	Ordinary profit	3.1	1.8	5.0	1.5	1.1	2.6	7.7
Adjustment Amount	Net sales	-73.0	-60.3	-133.3	-69.1	-78.9	-148.0	-281.3
	Operating profit	-1.5	-2.7	-4.3	-2.7	-7.0	-9.8	-14.2
	Ordinary profit	-1.9	-4.1	-6.1	-2.7	-7.1	-9.9	-16.1
Total	Sales	427.6	432.3	860.0	453.9	497.7	951.7	1,811.7
	Operating profit	14.8	14.1	29.0	10.2	13.3	23.6	52.7
	Ordinary profit	25.1	13.0	38.2	22.9	14.8	37.8	76.0

＊1:The reportable segments have been changed in accordance with the reorganization implemented on April 1, 2023. Accordingly, the segmentation has been reclassified to conform to the new classification. These figures are for reference only, as they are not audited by an auditing firm.
＊2:The total amount of advanced products includes transactions among the copper & copper alloy business and the electronic materials & components business, which are common to all advanced products.

【 Reference 】 FY March 2023 Results by Quarter

(Billions of yen)

項目		FY March 2023 Results						
		1Q	2Q	1H	3Q	4Q	2H	Full Year
Metals ＊1	Net sales	289.9	277.7	567.7	272.0	249.4	521.5	1,089.3
	Operating profit	6.1	10.2	16.3	2.5	9.3	11.9	28.2
	Ordinary profit	12.0	9.1	21.1	0.3	8.3	8.7	29.9
Advanced Products ＊2	Net sales	133.2	127.0	260.3	136.8	129.2	266.0	526.3
	Operating profit	3.7	2.4	6.1	1.3	.6	2.0	8.1
	Ordinary profit	3.8	2.3	6.1	1.3	-0.2	1.0	7.1
Copper & Copper alloy	Net sales	103.7	96.3	200.1	104.0	98.0	202.0	402.1
	Operating profit	1.0	1.4	2.4	0.0	0.2	0.2	2.6
	Ordinary profit	0.7	0.5	1.2	-.3	-0.9	-1.3	-.0
Electronic materials & Components	Net sales	29.9	30.4	60.4	32.9	31.2	64.2	124.6
	Operating profit	2.5	1.2	3.8	1.6	0.4	2.1	5.9
	Ordinary profit	3.0	2.0	5.0	1.8	0.7	2.6	7.7
Metalworking Solutions	Net sales	36.2	35.5	71.8	35.3	34.3	69.7	141.6
	Operating profit	4.3	3.5	7.8	3.4	2.7	6.2	14.1
	Ordinary profit	5.0	3.7	8.8	2.9	2.7	5.7	14.5
Renewable Energy	Net sales	0.9	0.8	1.7	0.7	0.9	1.7	3.4
	Operating profit	0.2	0.0	0.1	0.0	0.1	0.1	0.2
	Ordinary profit	0.3	0.0	0.3	0.2	0.3	0.6	0.9
Others	Net sales	38.0	41.0	79.1	44.0	47.3	91.4	170.6
	Operating profit	1.2	2.2	3.5	1.9	3.4	5.4	9.0
	Ordinary profit	-3.3	-6.3	-9.7	-1.3	-4.9	-6.2	-15.9
Adjustment Amount	Net sales	-75.9	-72.9	-148.8	-77.5	-75.2	-152.7	-305.4
	Operating profit	-1.7	-2.7	-4.4	-0.9	-4.2	-5.2	-9.6
	Ordinary profit	-0.7	-2.9	-3.7	-1.5	-6.0	-7.5	-11.3
Total	Sales	422.6	409.3	831.9	411.5	382.3	793.9	1,625.9
	Operating profit	13.9	15.6	29.5	8.4	12.1	20.5	50.0
	Ordinary profit	17.0	5.9	23.0	1.9	0.3	2.2	25.3

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＊2:The total amount of advanced products includes transactions among the copper & copper alloy business and the electronic materials & components business, which are common to all advanced products.

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