

Investor Conference

Mitsubishi Materials aims to optimize business portfolio with the focus on improving ROIC through enhancing business competitiveness

【Speaker】

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This document transcribes the contents of Mitsubishi Materials Corporation's Investor Conference held on November 15, 2022.

<Business Environment for the First Half of the Fiscal Year Ending March 31, 2023>

1. Financial Results for the First Half of the Fiscal Year Ending March 31, 2023, and FY2023 Full-Year Forecast

Business Environment for the First Half of the Fiscal Year Ending March 31, 2023

- The global economy is experiencing a wide-ranging sense of stagnation, with price rises and monetary tightening in response to Russia's invasion of the Ukraine and other factors, the European energy crisis, and the collapse of the Chinese real estate market.
- By industry, uncertainty remained in automobile-related demand due mainly to the effect of the shortage of semiconductors, and demand for semiconductors seemed to be pausing. Nevertheless, there was virtually no negative impact on our first-half results, and all of them remained steady.
- By region, China was affected by the restriction of economic activities due to urban blocking as a measure to combat infectious diseases, but in other regions, the economy remained on a recovery trend.
- Other factors included soaring energy prices, higher commodity prices, instability in metal prices, and the depreciation of the yen due to rising interest rates, particularly in developed countries. These factors had a significant impact on our results of operations. We will continue to closely monitor these economic trends, which will have a significant impact on our operations.

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 MITSUBISHI MATERIALS

Naoki Ono ("Ono"): Well then, I will explain matters while following the materials. First, I will tell you about the business environment in the first half.

As shown in the second item from the top of the slide, by industry, there was uncertainty in the automobile-related businesses due to the continued impact of the shortage of semiconductors. In the semiconductor-related businesses, there was a lull in demand.

By region, China had adopted the zero-COVID policy as a measure against the pandemic, resulting in sluggish economic activities. On the other hand, there was a recovery trend in other regions, especially in North America.

Other factors significantly affecting the business environment included soaring energy prices, higher commodity prices, and the depreciation of the yen due to rising interest rates, particularly in developed countries.

<Financial Results for the First Half of the Fiscal Year Ending March 31, 2023>

1. Financial Results for the First Half of the Fiscal Year Ending March 31, 2023, and FY2023 Full-Year Forecast	
Summary of the Financial Results for the First Half of the Fiscal Year Ending March 31, 2023	
FY2023 1H	<ul style="list-style-type: none"> Operating income increased by ¥0.5 billion year-on-year due to higher sales in the Copper & copper alloy business and the Metals business, and the impact of the weaker yen. Ordinary income decreased by ¥15.1 billion year-on-year mainly due to a decrease in dividends received from the Los Perambres Mine and an extraordinary loss due to a restructuring of the manufacturing structure of Mitsubishi UBE Cement Corporation(MUCC).
FY2023 Full-year Forecast	<ul style="list-style-type: none"> Upward revision of sales due to the impact of yen depreciation, etc. Slight downward revision of operating income. <ul style="list-style-type: none"> ✓ Earnings in the Copper & copper alloy business, the Metalworking Solution business, and the Environment & Energy business are expected to exceed the previous forecast. ✓ In the Electronic materials & components business, sales for semiconductors and automobiles are robust, but growth will not be as high as the previous forecast in light of the current situation. ✓ The Metals business is implementing various cost measures, but its earnings will be lower than the previous forecast mainly due to an increase in energy costs and sluggish sulfuric acid prices. Ordinary income has been significantly downwardly revised due to extraordinary losses in MUCC recorded as equity in earnings of affiliates. Net income has been downwardly revised significantly due to extraordinary losses in the Polycrystalline silicon business and other factors.
Outlook for the next fiscal year and beyond	<ul style="list-style-type: none"> The Company expects a large amount of one-time losses in this fiscal year, including equity-method losses and restructuring losses. However, it expects MUCC to become profitable from next fiscal year onward due to a restructuring of production and the effect of price hikes. As part of the FY2023 Strategy, the Company has been focusing on optimizing its business portfolio, and with the transfer of its polycrystalline silicon business, it has largely completed the reorganization of its problem businesses (selection of businesses). The Medium-Term Management Plan from the Next Fiscal Year will be presenting growth strategies.
Approach to ROIC Management	<ul style="list-style-type: none"> ROIC target of 4.0% in the FY2023 Strategy has been downwardly revised from the initial target (6.0%). Full-year ROIC forecast for the current fiscal year is 2.1%, which is significantly below the target (Excluding cement business:5.7%) Currently, in order to improve ROIC, the Company has established drivers to improve ROIC, such as expanding sales of products and reducing the cost of sales ratio and is making improvements.

This is an overview of our financial results. This is as I mentioned at the financial results briefing; please allow me to explain again.

In the financial results for the second quarter, operating income increased ¥0.5 billion year-on-year due to higher sales in the Copper & copper alloy business and the Metals business, and the impact of the weaker yen.

Regarding ordinary income, in addition to the decrease in dividends received from copper mines, we announced at the end of September that Mitsubishi UBE Cement Corporation (MUCC), a new integrated cement company that commenced operations in April, would incur an extraordinary loss due to a restructuring of the manufacturing structure. As a result, ordinary income decreased ¥15.1 billion year-on-year to ¥23 billion in the six months ended September 30, 2022.

This is the full-year forecast for the current fiscal year. Net sales were revised up ¥50 billion to ¥1,690 billion partly due to the weaker yen. Operating income was revised downward slightly from ¥45 billion to ¥44 billion.

Earnings are expected to rise in the Copper & copper alloy business, the Metalworking solutions business, and the Environment & energy business, while demand for semiconductor-related products is expected to stagnate in the future in the Electronic materials & components business, and this resulted in a slight downward revision.

On the other hand, the Metals business is affected by a slump in sulfuric acid prices in addition to rising energy costs and repair of furnaces. In the phase of ordinary income, the extraordinary loss at MUCC, the new integrated cement company, was recorded as a significant deterioration in equity in earnings of affiliates. This is ¥26.4 billion, and the final forecast for ordinary income is ¥18 billion.

The phase of net income is expected to be ¥3 billion, a significant downward revision mainly due to the extraordinary loss in the polycrystalline silicon business announced at the end of October.

As the outlook for the next fiscal year and beyond, we expect that equity in losses of affiliates and losses on business restructuring will be temporary ones. MUCC is expected to become profitable in the next fiscal year as a result of efforts to find lower-cost coal in addition to the expectation that the effect of reducing fixed costs including the restructuring of the manufacturing structure and the effect of price increase we are currently working on will contribute throughout the fiscal year.

We have been working to optimize the overall business portfolio, and the reorganization of our problem businesses, necessary at the moment, has almost been completed with this transfer of the polycrystalline silicon business. Based on it, by the end of this fiscal year, we will announce our growth strategy for the businesses we need to focus on in the future. We believe that this will be an important point in our next Medium-Term Management Strategy starting in FY2024.

We are committed to ROIC management, and our initial ROIC target of 6% was lowered to 4% at the beginning of FY2021 considering the impact of the COVID-19 pandemic.

However, the full-year forecast for the current fiscal year is 2.1%, far below the target. On the other hand, the Cement business has a very large impact. If this is excluded, ROIC will be 5.7%. Details for each business will be explained later.

<First-half FY2023 Results (compared to the previous fiscal year)>

1. Financial Results for the First Half of the Fiscal Year Ending March 31, 2023, and FY2023 Full-Year Forecast			
First-half FY2023 Results (Compared to the previous fiscal year)			
Compared to the previous fiscal year			
Net sales: Decreased due to the negative impact of business transfers, etc., despite higher sales in the Copper & copper alloy business and the Metals business and the impact of the depreciation of the yen.			
Operating income: Increased due to higher sales and the impact of the weaker yen, despite higher raw material costs and high energy costs.			
Ordinary income: Decreased due to equity in losses of Mitsubishi UBE Cement Corporation and decrease in dividends received.			
Net income ※: Decreased due to decrease in ordinary income, despite gain on change in equity (recorded in 1Q)			
Unit: Billion yen	Year ended March 31, 2022 1H results (a)	Year ending March 31, 2023 1H results (b)	Increase/Decrease (b)-(a)
Net sales	860.0	831.9	-28.1
Operating income	29.0	29.5	+0.5
Ordinary income	38.2	23.0	-15.1
Net income ※	38.1	23.6	-14.5
Net income per share, yen	292.24	180.80	-111.44
Cash Dividends Per Share, yen	40	25	-15
Exchange rates (vs. US\$)	109.80 yen	133.97 yen	24.17 yen
Copper Price (LME)	432.78¢/lb	391.64¢/lb	-41.14¢/lb
※Profit attributable to owners of parent			

This slide shows the results for the first half. This is a comparison with the same period of the previous fiscal year.

<FY2023 Full-Year Forecast (Compared to the Previous Forecast)>

1. Financial Results for the First Half of the Fiscal Year Ending March 31, 2023, and FY2023 Full-Year Forecast			
FY2023 Full-Year Forecast(Compared to the Previous Forecast)			
Compared to the Previous Forecast			
Net sales: Increased due to the continuing trend of further yen depreciation. Operating income: Decreased due to the impact of high energy costs, despite the impact of increased sales and the depreciation of the yen. Ordinary income: Decreased due to equity losses of Mitsubishi UBE Cement Corporation and decrease in dividends received. Net income ※: Decreased due to decrease in ordinary income and loss on transfer of business, despite gain on change in equity (recorded in 1Q) Dividend: ¥50 per share, aiming for shareholder returns on par with the total dividend amount of just over ¥30 billion that was expected during the period of FY2023 Strategy.			
Unit: Billion yen	Year ending March 31, 2023 Previous Forecast(a)	Year ending March 31, 2023 Full-year Forecast (b)	Increase/Decrease (b)-(a)
Net sales	1,640.0	1,690.0	+50.0
Operating income	45.0	44.0	-1.0
Ordinary income	32.0	18.0	-14.0
Net income ※	20.0	3.0	-17.0
Net income per share, yen	153.06	22.96	-130.10
Cash Dividends Per Share, yen	50	50	±0
Exchange rates (vs. US\$)	134 yen	139 yen	+6 yen
Copper Price (LME)	378¢/lb	368¢/lb	-10¢/lb
※Profit attributable to owners of parent			
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This is the performance forecast for the full year. This shows a comparison with the forecast announced at the time of announcing the first quarter results.

<FY2023 Full-Year Forecast (compared to the previous fiscal year)>

1. Financial Results for the First Half of the Fiscal Year Ending March 31, 2023, and FY2023 Full-Year Forecast			
FY2023 Full-Year Forecast(Compared to the previous fiscal year)			
Compared to the previous fiscal year			
Net sales: Decreased due to the negative impact of business transfer and other factors, despite an increase in sales in the Copper & copper alloy business and the Metals business and the impact of the weaker yen. Operating income: Decreased due to higher raw material costs and high energy costs, despite an increase in sales and the impact of the weaker yen. Ordinary income: Decreased due to equity losses of Mitsubishi UBE Cement Corporation and decrease in dividends received. Net income ※: Decreased due to decrease in ordinary income and loss on transfer of business, despite gain on change in equity (recorded in 1Q) Dividend: ¥50 per share, aiming for shareholder returns on par with the total dividend amount of just over ¥30 billion that was expected during the period of FY2023 Strategy.			
Unit: Billion yen	Year ended March 31, 2022 Full-year results (a)	Year ending March 31, 2023 Full-year Forecast (b)	Increase/Decrease (b)-(a)
Net sales	1,811.7	1,690.0	-121.7
Operating income	52.7	44.0	-8.7
Ordinary income	76.0	18.0	-58.0
Net income ※	45.0	3.0	-42.0
Net income per share, yen	344.56	22.96	-321.60
Cash Dividends Per Share, yen	90	50	-40
Exchange rates (vs. US\$)	112 yen	139 yen	+27 yen
Copper Price (LME)	440¢/lb	368¢/lb	-72¢/lb
※Profit attributable to owners of parent			
<div>7</div> <div>MITSUBISHI MATERIALS</div>			

This is the full-year performance forecast compared to the previous fiscal year. We regret to inform you that we currently expect net sales, operating income, ordinary income and net income to be lower than they were in the fiscal year ended March 31, 2022.

<Progress toward the FY2023 Strategy Targets | Financial indicators>

2. Progress of the FY2023 Strategy | Targets

Progress toward the FY2023 Strategy Targets | Financial indicators

For FY2023, it will be difficult to achieve the target of indicators such as ROIC due to the deterioration of market conditions, soaring energy costs, etc., as well as the recording of equity method investment losses and extraordinary losses due to the transfer of the polycrystalline silicon business.


		FY2022 Actual	FY2023 Forecast	FY2023 Strategy Target%	Difference
	ROIC(%)	7.0	2.1	4.0	-1.9pt
	Return on assets: (%)	3.7	0.9	2.0	-1.1pt
	ROE(%)	8.0	0.5	6.0	-5.5pt
PL	Net sales	1,811.7	1,690.0	1,410.0	+280.0
	Net sales (excluding metal costs)	817.3	501.4	600.0	-98.6
	Operating income	52.7	44.0	29.0	+15.0
	Ordinary income	76.0	18.0	38.0	-20.0
BS	Total assets	2,125.0	1,882.6	1,820.0	+62.6
	Net interest-bearing debt	449.4	372.0	360.0	+12.0
	Shareholders' equity	584.8	587.0	560.0	+27.0
	Net D/E ratio (times)	0.77	0.63	1.0 or less	
Assumptions Conditions	Exchange rates (yen /US dollars)	112	139	110	
	Exchange rate (Yen/Euro)	131	139	130	
	Copper prices (¢/lb)	440	368	330	

[Sensitivity]

◆ US dollar +¥1/U.S. dollar ¥300 m
 ◆ EUR +¥1/Euro ¥80 m
 ◆ Copper prices +10¢/lb ¥300 m (ordinary income)

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※ Assumed transition to the equity method of the cement business


MITSUBISHI MATERIAL

I will tell you about the progress of the current Medium-Term Management Strategy, which is called FY2023 Strategy.

First, financial indicators. The table in the slide shows, from the left, the results for FY2022, the FY2023 forecast in the red box, and the FY2023 targets in the FY2023 Strategy.

While the FY2022 results greatly exceeded the FY2023 targets, ROIC is expected to fall well below the 4% target, as indicated in the red box, due to deteriorating market conditions, equity in earnings of affiliates and extraordinary loss in the polycrystalline silicon business in the current fiscal year. Other figures are not expected to achieve the target sufficiently, excluding the net D/E ratio.

<Progress toward the FY2023 Strategy Targets | Financial Target Progress by Business>

2. Progress of the FY2023 Strategy | Targets

Progress toward the FY2023 Strategy Targets | Financial Target Progress by Business

Business		ROIC		EBITDA/ROA	
		FY2023 Strategy Target	Forecast	FY2023 Strategy Target	Forecast
Advanced Products business	Copper & copper alloy	3.0%	1.8%	¥14 billion	¥12.75 billion
	Electronic materials & components	4.2%	6.4%	¥11 billion	¥10.53 billion
Metalworking Solutions business		5.3%	7.7%	¥22 billion	¥26.68 billion
Metals business		12.9%	9.3%	7.2%	6.9%
Environment & Energy business	Environmental Recycling	2.4%	5.2%	2.8%	6.0%
	Renewable energy	2.6%	2.4%	3.3%	3.0%

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We started with ROIC targets and EBITDA/ROA targets for measuring growth potential. The slide shows a comparison for each of other major businesses than the Cement business. The ROIC forecast is 1.8% in the Copper & copper alloy business, which means that it still has much room for improvement.

The Electronic materials & components business is 6.4% and the Metalworking solutions business is 7.7%, and they are expected to exceed the target. The Metals business is 9.3%, expected to fall short of the target, due to a decline in earnings in the second half. The Environmental recycling business greatly improved, while the Renewable energy business almost achieved the target.

Regarding EBITDA/ROA, the top three items in the table show the figures of EBITDA. After all, the Copper & copper alloy business was slightly below the target value. The Electronic materials & components business almost reached the target, while the Metalworking solutions business is expected to improve at the end. The items of the Metals business and below show the percentage of ROA, which has a trend similar to ROIC.

<Improving ROIC (for the Copper & copper alloy business)>

2. Progress of the FY2023 Strategy | Targets

Improving ROIC (for the Copper & copper alloy business)

Each businesses have established drivers for improving ROIC and are working to improve ROIC.

In the Copper & copper alloy business, which is particularly low in profitability, the Company has established the following improvement drivers and is advancing measures.

- At Sakai Plant, the company worked to improve yields and ensure stable operations. While 1Q fell short of the target, 2Q was achieved.
- At Wakamatsu plant and Sambo plant (Rolling), the Company announced revisions to processing fees in October due to the impact of soaring energy costs and other factors as a revision to roll margins.
- At Sambo plant (Extrusion), the Company is working to reduce inventories, but at the end of 2Q it was short of its target. As it is in a reduction trend, the Company aims for further improvement, including the effect of yield improvement.

Business	Plant	Outline of Drivers for Improving ROIC
Copper & copper alloy	Sakai	Improve yields of wire rods, etc., and improve MSP5 mass production techniques
	Wakamatsu	Increase in sales due to revision of roll margin
		Cost reductions due to improved yields
	Sambo Rolling	Increase in sales due to revision of roll margin
		Cost reductions due to improved yields
	Sambo Extrusion	Cost reductions due to improved yields Inventory Reduction

This is about improvement of ROIC. In particular, the Copper & copper alloy business is below the target value and its degree is large. Therefore, it needs to be improved. We have defined improvement drivers that should be addressed at each site to improve ROIC as KPIs, and we are taking measures.

As they are manufacturing sites, the main measures include, of course, enhancing cost competitiveness by improving yield and increasing earnings by revising the role margin related to sales. In addition, we are focusing on revising our business portfolio finely segmented by business unit, and portfolio by product.

<Progress toward Medium-Term Management Plan Targets | Investment and Shareholder Returns>

2. Progress of the FY2023 Strategy | Targets

Progress toward Medium-Term Management Plan Targets | Investment and Shareholder Returns

Although the market environment is difficult in FY2023, investments for future growth will be made as planned in FY2023 Strategy, in anticipation of future market recovery

Investment policy

- If there are good large-scale investment projects for growth, aggressively invest within the range of net D/E ratio of 1.0 times or less.
- The accumulated forecast during the FY2023 Strategy for capital expenditure, investments and loans including growth investments are in line with the FY2023 Strategy target.

Billion yen	Total investment forecast in the FY2023 Strategy							FY2023 Strategy Target*	Increase/Decrease
	Copper & copper alloy	Electronic Material & Components	Metalworking Solutions	Metals	Environment & Energy	Common and Others ※	Total		
Cash out of capital expenditure	43.3	23.2	32.9	64.0	14.6	68.8	247.0	250.0	-3.0
Growth investment	21.0	12.4	9.8	11.4	10.1	21.3	86.0	90.0	-4.0
Maintenance and renewal investment	22.3	10.8	23.1	52.6	4.4	47.9	161.0	160.0	+1.0
Cash outflow from investments and loans							99.0	105.0	-60.0
Total cash outflow from investing activities							346.0	355.0	-90.0


※Common and Others include past capital expenditures in the cement and aluminum businesses.

Shareholder Return policy

- The lower limit of the annual dividend amount during the FY2023 Strategy has been changed to ¥50 based on the level of operating cash flow judged to be stably generated.
- By accelerating the sale of assets and flexibly allocating funds such as treasury stock acquisition and additional dividends, we aim to implement shareholder returns equivalent to the total dividend in FY2023 strategy original Plan.

Unit: yen	FY2021 Results	FY2022 Results	FY2023 Forecast	FY2023 Strategy Plan	FY2023 Strategy Original Plan
Annual dividend	50	90	50	50	80

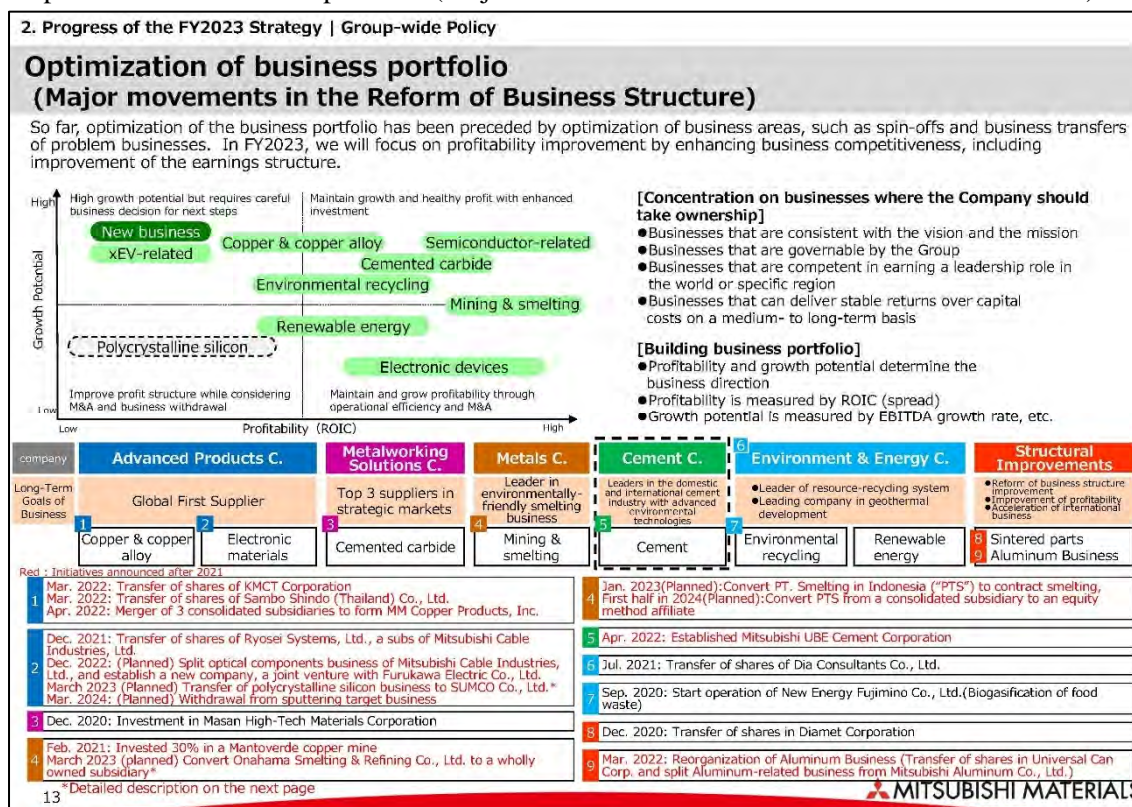
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This is about investment and shareholder returns. The table at the top of the slide shows the three-year investment forecast and investment plans until the end of the current fiscal year. The second column from the right shows the FY2023 Strategy total investment plan, and the next column to the left is the total forecast including the current fiscal year. We are going to proceed with cash out of capital expenditure, growth investment, and maintenance and renewal investment almost as planned.

The shareholder returns shown below were started with ¥50 per share, a reduction from ¥80 per share announced at the beginning of FY2021, due to expected impacts of COVID-19. As a result, the annual dividend was ¥50 for FY2021, ¥90 for FY2022 partly including a special dividend due to improved business performance, and it will be ¥50 for the current fiscal year.




<Optimization of business portfolio (Major movements in the Reform of Business Structure)>



<Optimizing Our Business Portfolio | Recent Initiatives>

2. Progress of the FY2023 Strategy | Group-wide Policy

Optimization of business portfolio | Recent Initiatives

Convert Onahama Smelting & Refining Co., Ltd. to a wholly owned subsidiary	Transfer of polycrystalline silicon business	Mitsubishi UBE Cement Corporation (MUCC) restructuring of production system
<ul style="list-style-type: none"> Our stake in Onahama Smelting & Refining Co., Ltd., which engages in copper consignment smelting, is 55.714% (other shareholders: 31.621% for DOWA Metal Mine Co., Ltd. and 12.665% for Furukawa Metal Resources Co., Ltd.). Our Metals Business C is working on the following. <ul style="list-style-type: none"> Establish an annual 0.2 million tons E-Scrap treatment system by the end of fiscal 2031 Optimizing material flow between diverse sites Strengthen management and development of separation and collection of diverse metal elements and promotion of commercialization By making it a wholly owned subsidiary, the company will construct a new pre-treatment facility for recycled raw materials at its Onahama Smelter & Refinery. Establish a flexible and efficient decision-making system to overcome difficult economic conditions such as soaring operating costs including electricity and fuel costs. 	<ul style="list-style-type: none"> In the polycrystalline silicon business, the Yokkaichi Plant and Mitsubishi Polycrystalline Silicon America Corporation manufacture and sell polycrystalline silicon for silicon wafers for semiconductors, and MMC has a minor stake in Nippon Aerosil Co., Ltd., which manufactures and sells ultra-fine silica particles, etc. Due to the structurally low profitability of the polycrystalline silicon business, it was positioned as a problem business in the FY2023 Strategy, and MMC was exploring the possibility of business growth through drastic improvement in profitability and separate ownership. We judged that operating the business through vertical integration under SUMCO Corporation will contribute to enhancing the value of the business and that it is the best for us and the business. 	<ul style="list-style-type: none"> In order to cope with the rapidly rising cost of energy such as coal, the company has announced price revisions of cement and solidifying materials +2,200 yen, and further +3,000 yen from the portion delivered in October. It is extremely difficult to absorb all cost increases by price revisions alone. Decided that it was necessary to drastically strengthen the corporate structure, and announced the shutdown of the Aomori Plant (production capacity: 1.6 million tons/year) and the suspension of production of Kiln No. 1 at Isa Cement Plant (1.4 million tons/year). As MUCC, extraordinary losses of around ¥20 billion will be recorded from fiscal 2023 onward, however, from fiscal 2024 onward, an annual increase in profits of around ¥10 billion is expected. 

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As the optimization of our business portfolio, we summarized our recent initiatives in three points. The first point is making Onahama Smelting & Refining Co., Ltd. a wholly owned subsidiary. As you know, Onahama Smelting & Refining have two shareholder companies in addition to our company, and it will become a 100% wholly owned subsidiary as both companies have expressed their intention to transfer their equity interests to our company.

Our aim is to build a structure to increase the E-Scrap processing volume to 200,000 tons per year. We intend to achieve this figure by combining figures of the Naoshima Smelter & Refinery and Onahama Smelting & Refining, and we have established a structure to accelerate this movement.

Therefore, various investments will be required in the future. Onahama Smelting & Refining is currently planning a pretreatment facility for recycled raw materials, and is considering putting it into practice.

The second point is the transfer of the polycrystalline silicon business. We have been manufacturing and selling polycrystalline silicon as a raw material for silicon wafers, but it was structurally difficult to make earnings. Therefore, we decided to transfer the business to SUMCO, which manufactures silicon wafers, since we believe that business management under SUMCO would be optimal.

The third point is cement-related businesses. We have no choice but to record a large figure for equity in loss of affiliates. First, however, we will increase prices, particularly for cement, in order to cope with rising coal and other energy costs.

First of all, we have successfully proposed and obtained the consent to an increase in the price of cement and solidifying materials by 2,200 yen per ton. Since October, we have also proposed a price revision of +3,000 yen per ton, and we are currently working hard to obtain consent.

However, we determined that the manufacturing structure needed to be revised because we could not absorb all the cost increases by price increases alone, and announced at the end of September that we would suspend the operation of the Aomori Plant and stop production at one of the two kilns in the Isa Cement Plant.

As a result of this revision of the manufacturing structure, we must temporarily record an extraordinary loss of approximately ¥20 billion, but we expect this to lead to a reduction in fixed costs of approximately ¥10 billion per year from FY2024 onwards, resulting in an increase in profits.

<Reduction in Strategic Stockholdings>

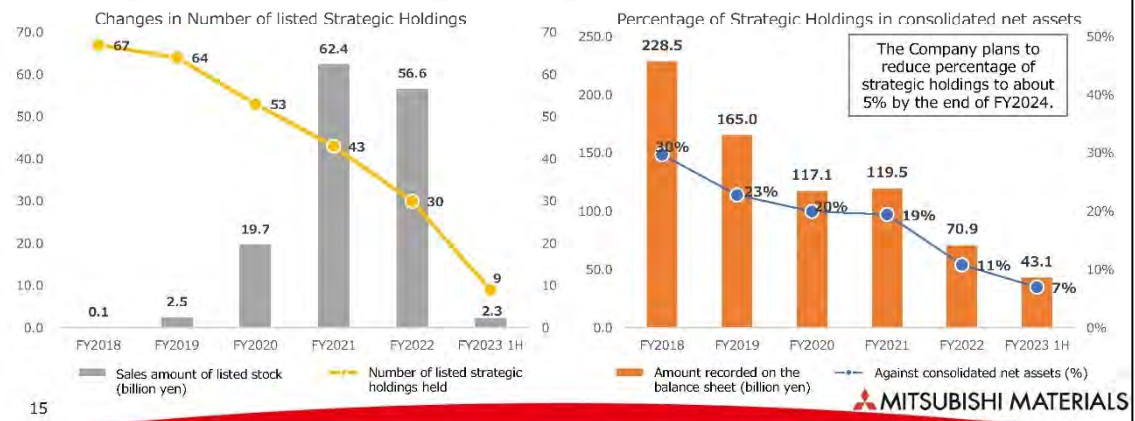
2. Progress of the FY2023 Strategy | Group-wide Policy

Reduction in strategic stockholdings

■ Basic policy on Strategic Holdings

- ✓ The Company shall not acquire or hold Strategic Holdings unless doing so is necessary for the purpose of its business strategy.
- ✓ With regard to the Strategic Holdings, appropriateness of such holdings shall be specifically reviewed and examined at a meeting of the Board of Directors on an annual basis.
- ✓ As a result of such reviews and examinations, the Company will reduce any Strategic Holdings if it is not deemed to be necessary to hold such holdings.

■ Changes in Number of Strategic Holdings



There are two graphs showing the reduction of strategic stockholdings. The line on the left indicates the change in the number of holdings of listed stock. We have been working to reduce this.

The line on the right shows the percentage of strategic stockholdings in consolidated net assets, which had fallen to 7% at the end of the first half of the current fiscal year. We will continue to reduce this figure to approximately 5% by the end of the current fiscal year.

<Four Management Reforms>

2. Progress of the FY2023 Strategy | Four Management Reforms

Four Management Reforms

To realize Group-wide Policy, we promote Four Management Reforms in unison to improve organizational capabilities. For "Corporate Transformation (CX)" and "Human Resources Transformation (HRX)," we will identify issues from effectiveness perspective in 3 to 6 months and implement improvements from October onward. We will promote DX flexibly while continuing to assess its effectiveness.

- **CX** :Reform into optimal form of group management (organization / business management)Reform
<Strategic Headquarters + Professional CoE* responsible for efficiency and sophistication + strong business divisions capable of autonomous business management (complete In-house Company system) >
- **HRX** :Reform of HR system and work style to acquire and develop autonomous talents who can adapt to changes
<Introduction of Job-based HR system / Internal Job Posting system / Talent Management / 1-on-1 communication / Next-Generation Leadership Talent Development>
- **DX** :Reform that utilizes data and digital technology to strengthen today, create tomorrow and cultivate talent
<Improvement of business added value, operational competitiveness, and management speed>
- **Operational efficiency improvement**: Reform that reviews organizations, business processes, and work styles

* CoE (Center of Excellence): Organization with expertise in specific areas

Create both social and economic values

Mission

To contribute to the building of;

- a prosperous society,
- a recycling-oriented society,
- a decarbonized society

Group-wide policy

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

Targeting organization and culture

- ① Organization with good and healthy communication where employees have unrestricted communication
- ② Organization capable of autonomously solving issues
- ③ Organization that adequately shares the understanding of its business
- ④ Organization that makes prompt and resolute decisions
- ⑤ Organization that manages its business with the awareness of the differences between product-type and process-type businesses
- ⑥ Organization that aims for thorough digitalization

Improvement of organizational capabilities

- ・Change Adaptability
Ability to implement more agile responses to changing environment
- ・Ability to Integrate
Ability to implement strategies through human networks and combination of functions

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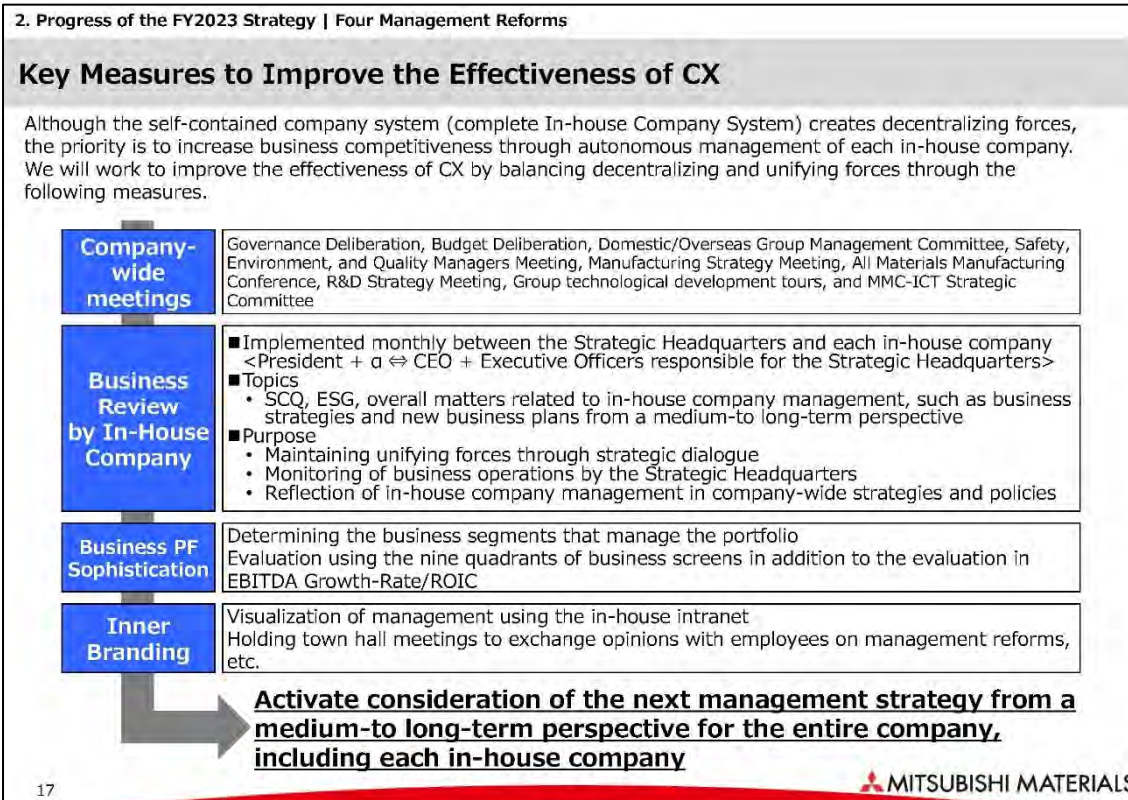
MITSUBISHI MATERIALS

As Four Management Reforms, we are working to improve and reform the organizations and corporate culture within the Company and the Group. The gray color on the right-hand side of the slide indicates the organizations and corporate culture we are aiming for in six categories. We will reform our group management style as CX so that it will lead to them.

Specifically, we have shifted to the complete In-house Company System in which autonomous management is strongly carried out, and we are reforming our personnel system, including the introduction of a Job-based HR system under the name HRX. On the other hand, DX has preceded them, and we are working on it as a conventional approach to improve operational efficiency and cost competitiveness.

We will continue the reform to achieve the organizations we are aiming for and lead it to an improvement in organizational capabilities such as adaptability to change and integration.

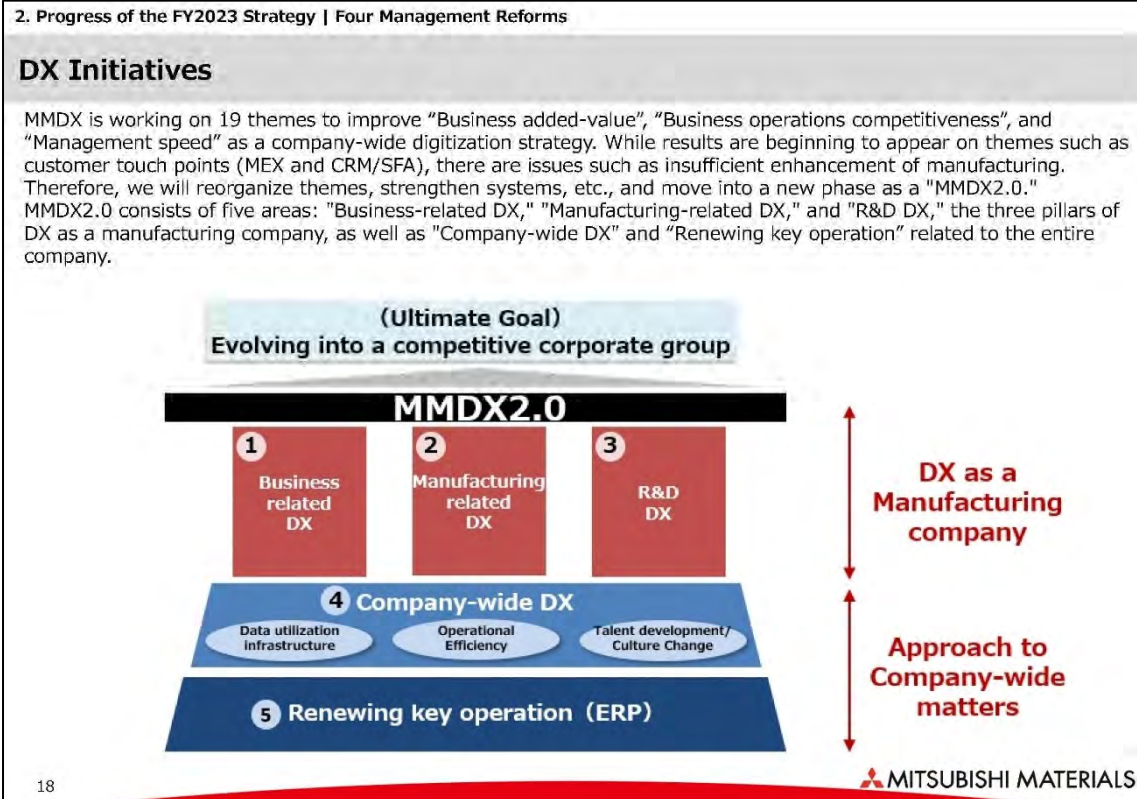
<Key Measures to Improve the Effectiveness of CX>



The main objective of CX is to ensure the autonomous management of the in-house companies. However, there is always the challenge of balancing decentralizing and unifying forces.

To achieve this balance, we will hold company-wide meetings to increase opportunities for dialogue through business reviews of each in-house company. We are also promoting to facilitate portfolio management and management reforms at each in-house company or site.

<DX Initiatives>



DX initiatives began in FY2021. However, since we believe that it is necessary to expand the basis of manufacturing, we have positioned business-related DX, manufacturing-related DX, and research & development DX as the three pillars of the manufacturing company's DX, and we are sorting out the themes we are working on.

In addition, the diagram on the slide expresses that they will be supported by company-wide DX and ERP which we plan to deploy in the future.

<Overall List of MMDX2.0 Themes>

2. Progress of the FY2023 Strategy Four Management Reforms									
Overview of MMDX2.0 themes									
Newly added theme for MMDX2.0									
MMDX2.0 themes		Business Added-Value	Operations Competitiveness	Management Speed	Foundation for Data Utilization	Talent development	Culture Change		
Business related DX	Metaworking Solutions Co. DX	Market intelligence(MI)	✓					Manufacturing related DX	Advance development and production data utilization
		Ability to propose solutions	✓						Automation / Personnel saving
		Demand and supply management		✓					Challenge the automizing test
		Improvement of customer touch points	✓						Shorten manufacturing lead time
	Advanced Products Co. DX	Supply chain integration		✓					Improve productivity
		Advanced cost management of electrical materials			✓				Inventory control
Manufacturing related DX	Metals Co. DX	Strengthening E-Scrap processing	✓						Location management
	Env.&Ene. Co. DX	Environmental recycling DX	✓	✓					Production planning
	Security and Safety	Safety related to facilities		✓				R&D DX	Electrical lab notebook
		Safety related to humans		✓					Utilize knowledge on inside and outside of the company
		Safety related to materials		✓					Materials Informatics
		Safety related to factory works		✓					Operation efficiency on R&D
	Environment/ Energy	Reduce GHG		✓				Company-wide DX	Advance procurement
		Save energy		✓					Upgrading of business administration
	Quality management	Better yield		✓					Data infrastructure and utilization
		Better material efficiency		✓					Operational efficiency
	Maintenance	Operational efficiency		✓				HR	Talent management
		Predictive maintenance		✓					DX talent development and literacy improvement
		Risk-based maintenance		✓				Renewing key operation(ERP)	ERP

This is the positioning of the themes regarding the viewpoints I have explained so far. The strengthening of E-Scrap is positioned in business-related DX on the left side of the slide, and the improvement of yield is positioned in the quality management of manufacturing-related DX. Automation and labor saving, and test automation are positioned on the right-hand side, and we believe they will lead to better cost competitiveness.

<Achievements of MMDX's Initiatives to Date>

2. Progress of the FY2023 Strategy | Four Management Reforms

Achievements of MMDX's Initiatives to Date

Full-scale results will begin in FY2024, but we are gradually achieving results in the following themes.

	Theme	Sub-themes	Release timing	Summary of Results and Achievements	
Business-related DX	Metals Co. DX	E-Scrap	Phase1 Digitization of trading operations	2021/12	We have received favorable reviews from customers who deliver E-Scrap to our smelter, and this has greatly contributed to securing quantities. Our policy is to continue to deepen our MEX by reflecting a variety of needs • Increase in E-Scrap collection by about 5% after introduction of MEX in December 2021.
	Manufacturing-related DX	Maintenance	Predictive detection	2022/9	The model construction for predictive detection is completed at Gifu Plant of Metalworking Solutions Company. • It was found that abnormal signs leading to failure can be captured from the time-series data of the object equipment. We plan to continue demonstration tests by increasing the number of N. • Data analysis will be used to detect signs of deterioration by observing changes in numerical data. This will be used as a replacement signal for equipment maintenance.
R&D DX	Innovation Center	Insight Engine: Improved searchability of information within the center	2022/7	Improve in-center information searchability by introducing insight engines • You can quickly retrieve from a huge amount of file server data. It is also easy to look for related materials due to the path display function. • Technical information (patents) can be searched "simply," "quickly," and "extensively."	
Company-wide DX	Data Infrastructure	Data Infrastructure and Utilization	Study and development of education	2022/7	Number of participants in digital literacy education: 685 (as of November 2) 2,716 employees are expected to take the course by the end of March 2023.
	Operational efficiency	RPA		2022/4	Reduced 33,000 hours at the end of 2Q compared to the annual target of 77,000 hours ※Time is calculated by annualizing the reduced operations.
	HR	Talent Management	Building a talent management system Centralized management of human resource information	2022/2	Introduced and started operation of a talent management system to realize data-driven HR • Registered the career interview system previously implemented by Excel and the engagement survey, which is a new initiative, on the system and began operation. Registered 95% or more employees. • Started implementing the evaluation process of union personnel on the system and registering "business and leadership experience" by employees themselves. Aim to support autonomous career development and improve efficiency and sophistication of HR operations.

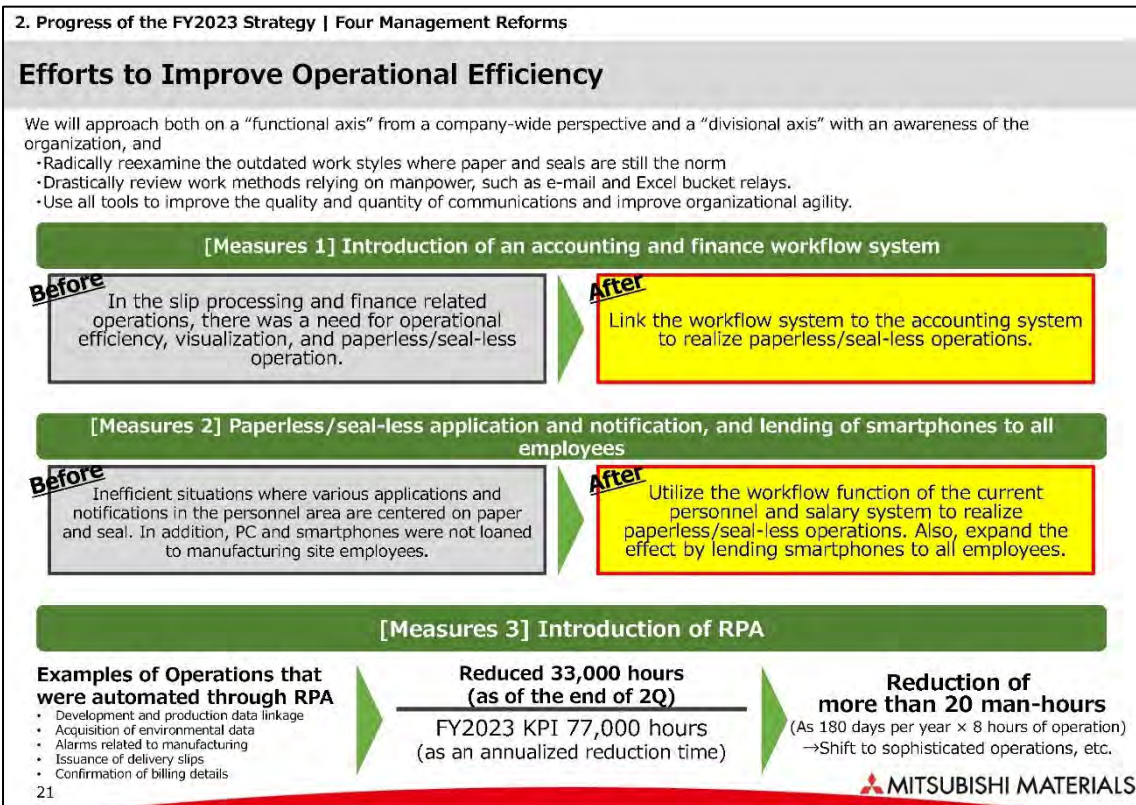
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MITSUBISHI MATERIALS

This is a brief summary of the achievements of MMDX's initiatives to date. In the business-related DX, we have introduced a system called MEX for E-Scrap. As seen on the right-hand side of the slide, we estimate that this has led to a 5% increase in E-Scrap collection.

In manufacturing-related DX, we are now focusing on predictive detection, partly for preventive maintenance. On the other hand, there is an urgent need to develop digital human resources and improve digital literacy as part of digital literacy education. This shows the achievements.

<Efforts to Improve Operational Efficiency>

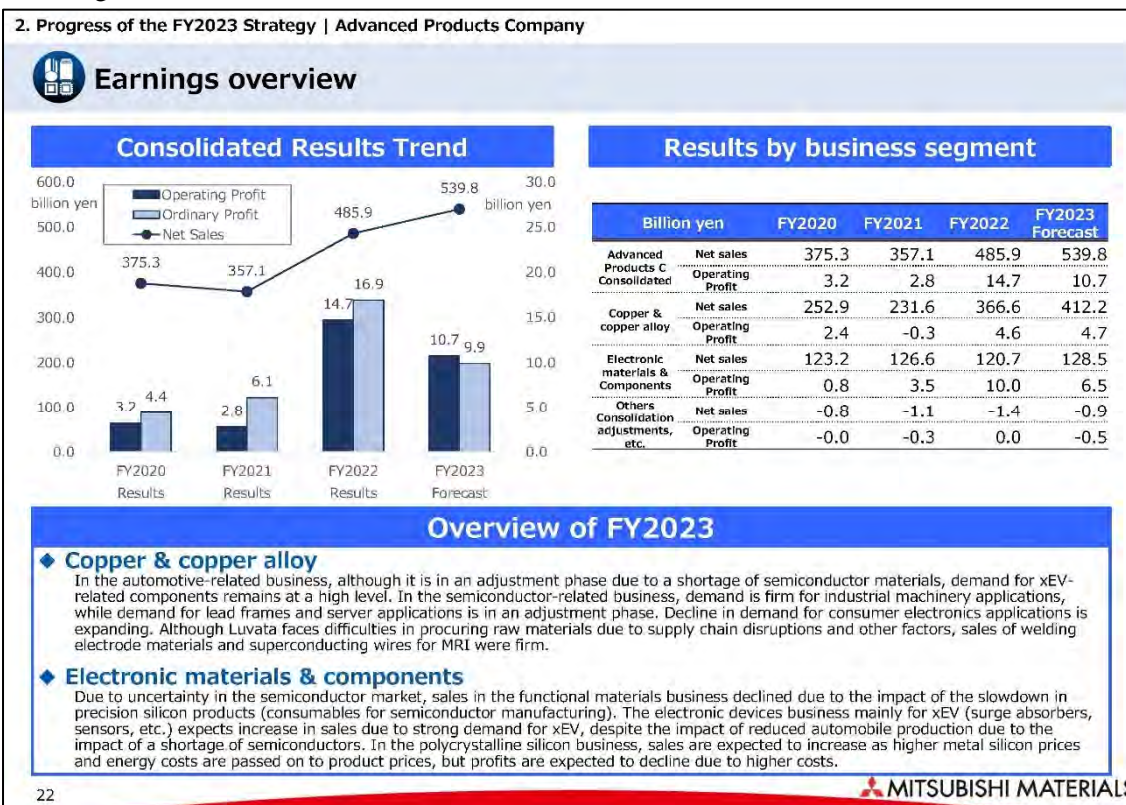


Regarding operational efficiency, our company is making belated progress toward paperless and seal-free operations. Particularly in the accounting and finance areas, we expect to realize paperless and seal-free operations from next April.

There are various internal application tasks in addition to them, and it is mandatory that all employees can handle them. For that purpose, we lent smartphones to all employees who had not previously been lent electronic devices. We intend to accelerate these initiatives.

The introduction of robotic process automation (RPA) is related to our DX initiatives, and we have achieved the results shown on the slide.

<Earnings overview>




Here is an overview of the earnings of each business division. In the Advanced Products Company, demand for xEV-related products remained strong in the Copper & copper alloy business. On the other hand, semiconductor-related businesses are experiencing a slight lull. In order to improve ROIC, it is important to increase the production volume and meet demand.

In the Electronic materials & components business, sales of semiconductors are on a downward trend, and this is expected to affect precision silicon products, which are our specialty materials for semiconductor manufacturing. Based on this, we summarized the change in our business results up to the previous fiscal year and the forecast for the current fiscal year as shown in the graph on the slide and in the table on the right.

<Priority Measures>


2. Progress of the FY2023 Strategy | Advanced Products Company

 **Priority Measures**

Long-term goals Global First Supplier		FY2023 Strategy	<ul style="list-style-type: none">Enhancing marketing capabilitiesPlanning and development of new products and creation of new businesses based on product roadmapsExpansion of global basesStrengthen manufacturing capabilities (standardize operations, establish mass production system)Key account strategy (to become a first-call vendor)Securing and developing excellent talent
Long-term strategy	<ul style="list-style-type: none">Refine and combine core competencies (e.g., the development and manufacturing technology of oxygen-free copper base alloys, development of functional materials, welding technology, etc.), to create new products and businesses.Pursue winning patterns from a market perspective.		

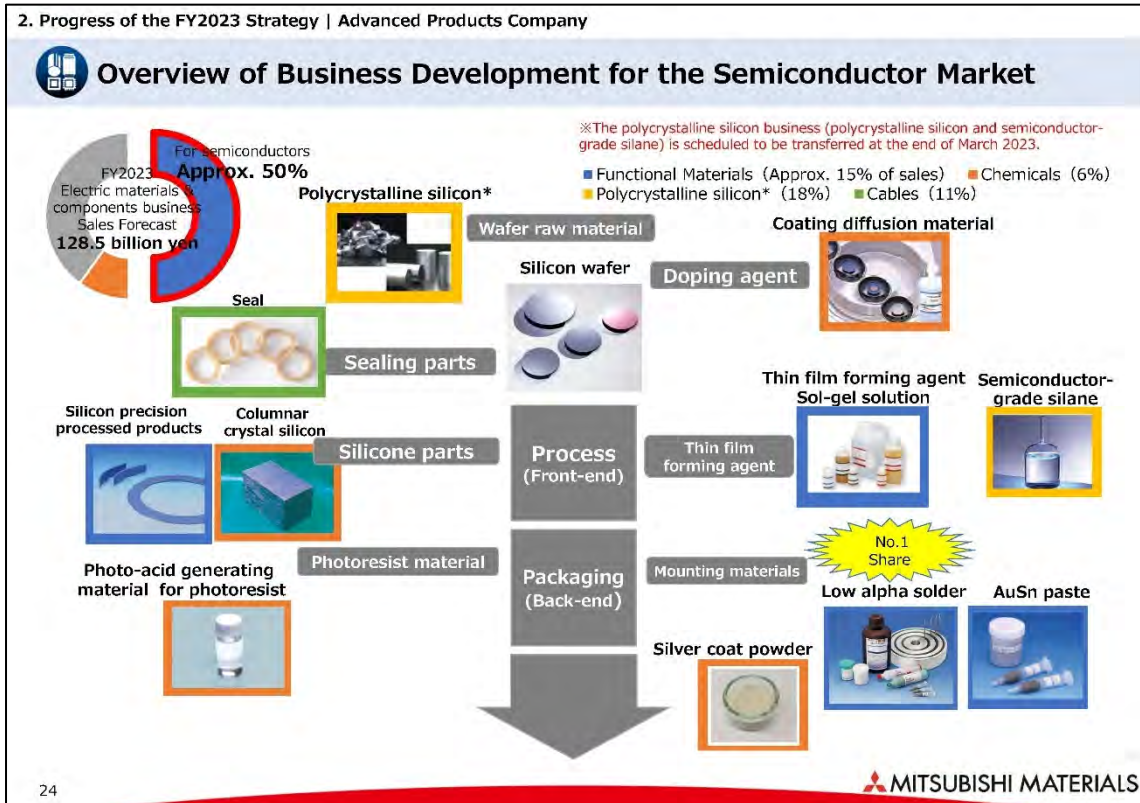
Key Measures for the FY2023 Strategy		FY2023 First Half Results	Future Initiatives
	Assignment of key account (KA) managers acting cross-sectionally	Established KA strategy activities	Continue to manage the status of KA through monthly meetings
All businesses	Enhancing customer touch points	Establishment of SFDC Introduction and KPI follow-up	Improve retention rate through KPI follow-up
	Sales training (strengthening negotiation skills)	Continued training on preparations for negotiations, the art of negotiations, etc.	Continue implementation of program in 3Q
Copper & copper alloy	Business restructuring of the rolling and extrusion business and strengthening of production system	Established a plan to install facilities for increased production Rolling: Promoted start-up of new slitting and packaging machines in Wakamatsu, and washing, slitting, and packaging machines in Sanbo Promoted start-up of increased copper mold production at Sakai Plant Extrusion: Reviewed process streamlining	Sambo plant: Continued stable operations Wakamatsu plant: Review of production planning system and horizontal deployment of activities to reduce major equipment failures Extrusion business: Improve earnings through price-raising activities
Electronic materials & components	Strengthen production capacity for sealing materials	Implementation of a plan to establish a new plant to strengthen the production capacity of sealing materials	Scheduled to start operation in FY2024 (Increased sales by 1.5 times in 2025)
	Growth in the device business	Clarifying the direction of the device business	Continue to consider options other than organic growth

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 **MITSUBISHI MATERIALS**

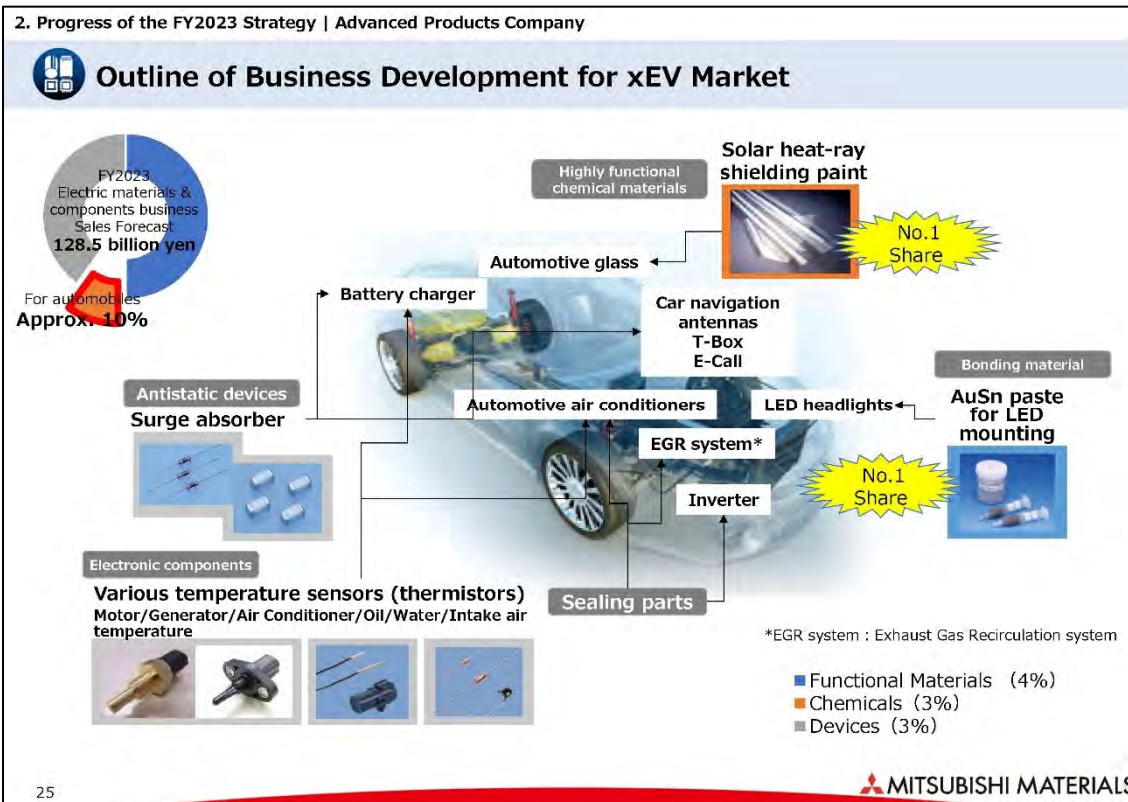
These are priority measures. In the Copper & copper alloy business, we are making progress in starting up lines to increase production. In so doing, the Sakai Plant positioned upstream will complete its start-up of increased production in the course of the current fiscal year and will contribute to our earnings. On the other hand, the Electronic materials & components business is working to enhance the capacity to manufacture seals.

<Overview of Business Development for the Semiconductor Market>



The diagram in the slide shows the product lines for the semiconductor market in the Electronic materials & components business. As shown in the pie chart on the upper left, products for semiconductors account for approximately 50% of sales in the Electronic materials & components business. While this includes the polycrystalline silicon business, which we have decided to transfer, there are also sealing parts, which are important parts for handling silicon wafers, silicon parts used in equipment for manufacturing silicon wafers, and mounting materials such as low alpha solder and AuSn paste.

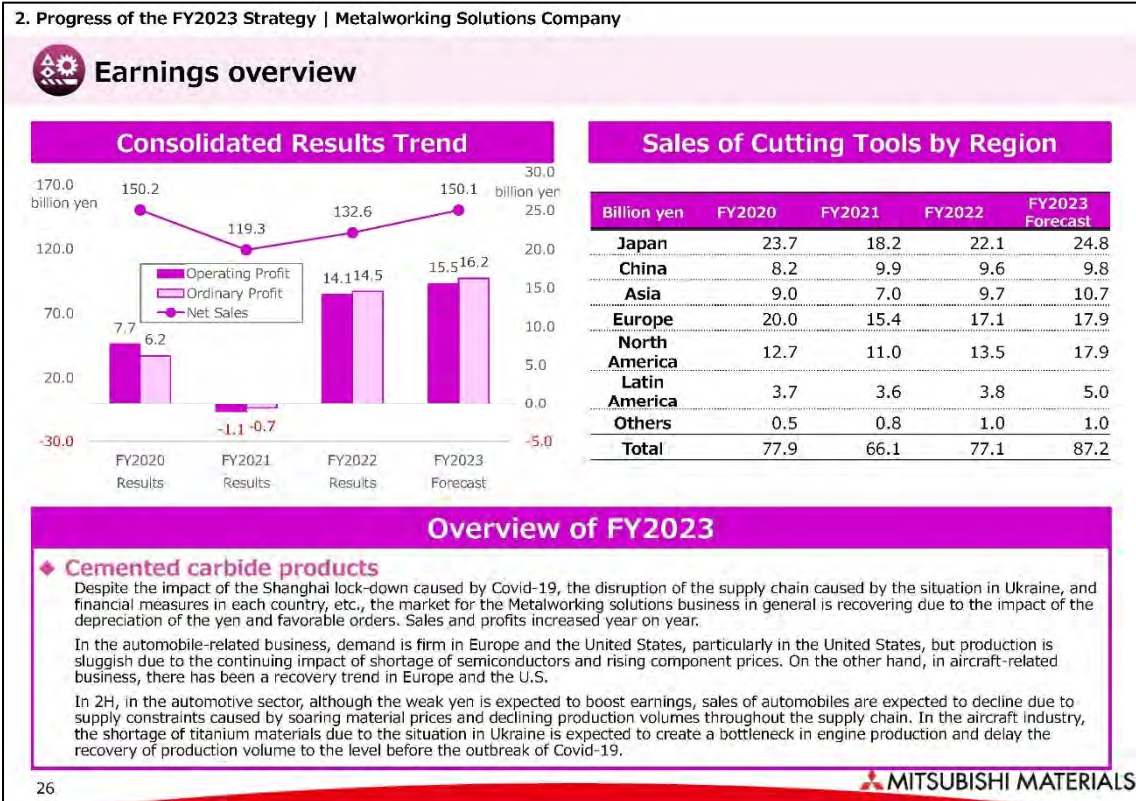
<Outline of Business Development for xEV Market>



In the automobile industry, which is expected to grow in the future, this shows items particularly related to the electrified vehicle (xEV) market. Currently, as shown in the pie chart at the top left of the slide, products for automobiles account for only 10% of the Electronic materials & components business, but we expect this to grow in the future.

In terms of products, our solar heat-ray shielding paint used for windshields has already acquired the largest market share. Our AuSn paste also has the largest share. We also intend to expand the sensor product range used for various applications.



<Earnings overview>



Next is the Metalworking solutions business. The top right of the slide shows the change in sales by region in a table format. It is characteristic that China's growth has slowed. Europe grew in the previous fiscal year, but has also slowed in the current fiscal year.

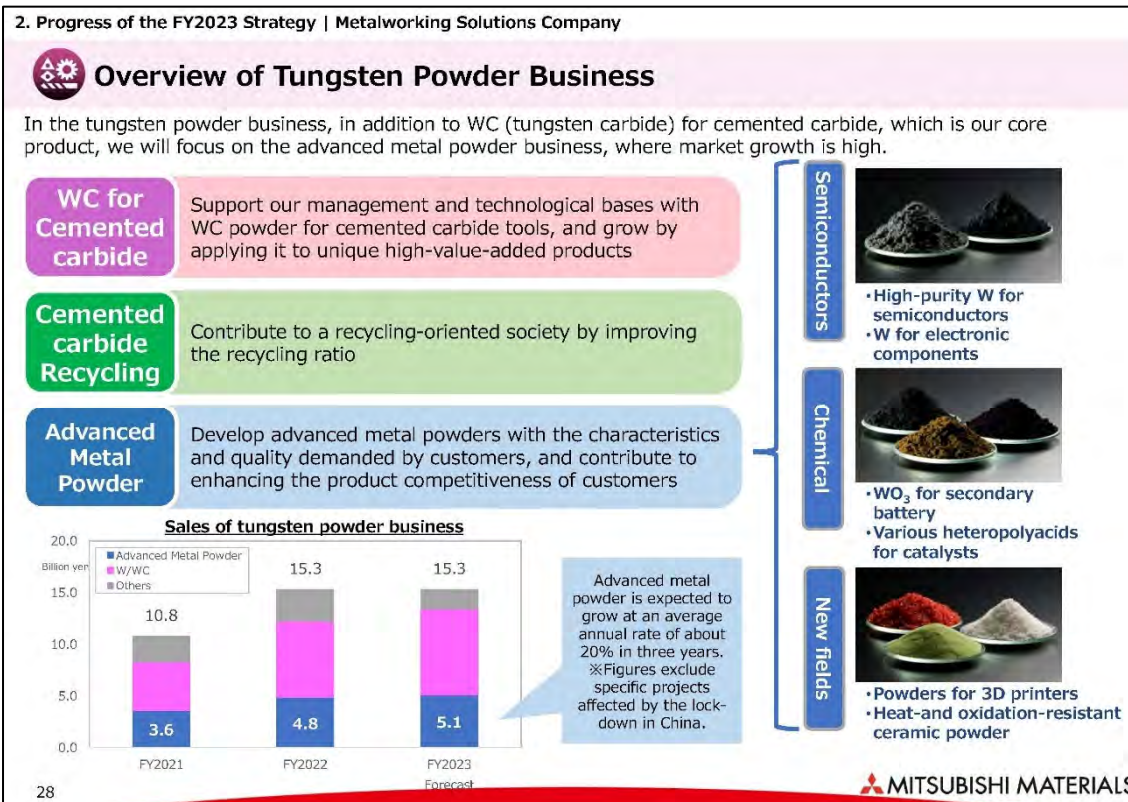
On the other hand, North America is expected to continue growing significantly in the current fiscal year. By industry, while there has been little change in the automobile business, the aircraft-related business is on a recovery track.

<Priority Measures>

2. Progress of the FY2023 Strategy Metalworking Solutions Company		
 Priority Measures		
Long-term business goals Top 3 supplier in strategic markets		Specific Measures in FY2023 Strategy <ul style="list-style-type: none"> • Increase recycling rate in our tool recovery system and utilize renewable energy • Provide high efficiency tools and digital solutions • Transition to smart factory and optimization of logistics and supply chain • Expand advanced metal powder business to rechargeable battery market
Long-term strategy	<ul style="list-style-type: none"> • Promote clean manufacturing • Provide high-efficiency products by utilizing advanced technology • Develop advanced metal powder business 	
FY2023 Priority Measures	FY2023 First Half Results	Future Initiatives
Provide products and services near customers through a four-polar system	Formulated a basic concept with each site for transferring control function such as manufacturing, sales, inventory.	First establish European control base , then expand to the Americas and China
Develop highly efficient tools	Launched sales of 629 new products targeting key industries	Develop tools for machining difficult-to-cut materials for key industries, plan to launch 2,641 new products in FY2023
Promote transition to smart factories	Formulated factory vision based on business strategy to raise the manufacturing capability to the next level	Promote cross-departmental projects to improve efficiency of goods, people and equipment, including progress, spare capacity, and physical management
Expand cemented carbide recycling and utilize renewable energy	<p>Achieved a recycling rate of 44% in FY2022 (FY2023 Strategy target: 35%)</p> <p>In line with the revision of GHG reduction targets, the plan was changed to make the entire amount of electricity used in the manufacturing process virtually CO2-free by FY2031</p>	<p>Collaborate with Masan High-Tech Materials Corporation and expand the amount of cemented carbide scrap collected from overseas areas to achieve a recycling rate of 80% by 2030 (FY2023 target: 50%)</p> <p>Begin purchasing renewable energy electricity at domestic manufacturing sites, plan to increase by 11% each year</p>
Expand advanced metal powder business to rechargeable battery market	<p>Engaged in developments for the commercialization of advanced metal powder for in-vehicle secondary batteries</p> <p>Considered technical cooperation with Masan High-Tech Materials (MHT) regarding advanced tungsten powder</p>	<p>Continuous implementation of prototype evaluation tests at secondary battery manufacturers (lot repeatability confirmation)</p> <p>Continue consideration with MHT</p>
27	 MITSUBISHI MATERIALS	

There are also many items in the priority measures. As shown in the second item from the bottom of the slide, we have set a FY2023 Strategy target of 35% for the ratio of recycled raw materials for cemented carbide products, and this figure has already risen to 44% in the previous fiscal year. On the other hand, we intend to expand the advanced metal powder business beyond cemented carbide products.

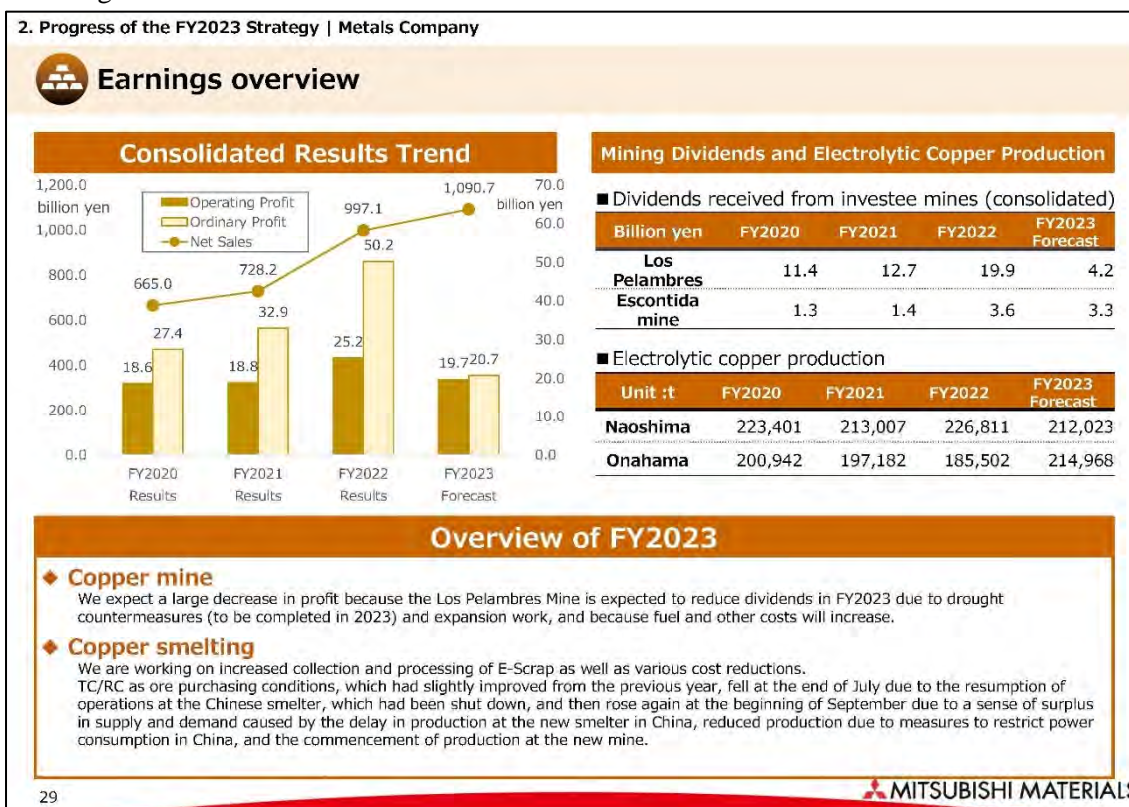
<Overview of Tungsten Powders Business>



This is an overview of the Tungsten powders business. In addition to recycling tungsten carbide, which is a raw material for cemented carbide tools, we are also focusing on advanced metal powders.

As shown on the right-hand side of the slide, advanced metal powders are divided into high-purity tungsten used for semiconductors, tungsten oxide used for batteries, and other types of powders used in new fields. As shown in the blue portion of the bar chart at the bottom left of the slide, it has grown significantly over the past few years.

<Earnings overview>




This is about the Metals business. In the copper mine business, there are significant differences in the figures of dividends received from investee mines, as shown in the table at the top right of the slide. While the amounts for the fiscal year ended March 31, 2022 were ¥19.9 billion from the Los Pelambres Mine and ¥3.6 billion from the Escondida Mine, the forecasts for the current fiscal year are ¥4.2 billion from the Los Pelambres Mine and ¥3.3 billion from the Escondida Mine, ¥7.5 billion in total, which decrease significantly.

As shown in the lower part of the slide, the decrease in dividends is due to the continued construction for desalination of seawater to address droughts at the Los Pelambres Mine and the continued expansion work at the mines.

Copper smelting will be explained later. The key is how much E-Scrap we can collect and how much we can grow it.

<Priority Measures>

2. Progress of the FY2023 Strategy | Metals Company

 **Priority Measures**

Long-term business goals | Leader in environmentally-friendly mining & smelting business

Long-term strategy


Stable supply and circulation of copper and other non-ferrous metals
• Creation of a sustainable raw material portfolio consisting of clean copper concentrate and E-Scrap/-Promotion of recycling/-Combating climate change

FY2023 Strategy

- Secure clean copper concentrate by investing in new mines
- Develop impurity removal technology in copper concentrate
- Optimize valuable metal material flow
- Reduce fossil fuels

Key Measures for FY2023 Strategy		FY2023 First Half Results	Future Initiatives
Mining	Securement of clean copper concentrate by investing in new mines	<p>The Zafranal copper project was partially delayed from the original plan due to local conditions in Peru (e.g., COVID-19). <u>We focused on obtaining an environmental permits (ETA).</u></p> <p><u>Conducted detailed engineering, stripping and other construction work</u> at the Mantoverde mine in preparation for the start of sulfide ore production in 2024 (64.5% progress against 71.4% plan as of the end of August 2022)</p> <p>Started <u>trial operation of the ore dressing plant expansion</u> at Copper Mountain Mine from the end of November 2021</p>	<p><u>Make final investment decision</u> after obtaining the environmental permit (EIA) for Zafranal copper project</p> <p><u>Steadily progress</u> Mantoverde copper project <u>construction work</u> (The ore dressing plant and tailings dam construction will be completed by the end of FY2024)</p> <p><u>Optimize mining operations</u>, including expansion</p>
	Optimization of material flow for valuable metal	<p><u>Increased recovery of valuable metals</u> by improving processes at the Naoshima Smelter and Refinery's precious metals plant</p> <p><u>The tin recovery facility (newly installed)</u> at Hosokura Metal Mining Co., Ltd. continued <u>stable operations</u>.</p>	<p><u>Develop technologies for separation and recovery of trace components in E-Scrap</u> for further efficient recovery of valuable metals (Sn, Al)</p>
Smelting	Reduction in fossil fuels	<p><u>Identified and optimized factors limiting E-Scrap input</u>, which can also be used as an alternative fuel, to reduce fossil fuel consumption (Progress as planned)</p>	<p><u>Promote fossil fuel substitution through increased E-Scrap processing</u> by taking advantage of the superiority of Mitsubishi Process for continuous copper smelting</p>

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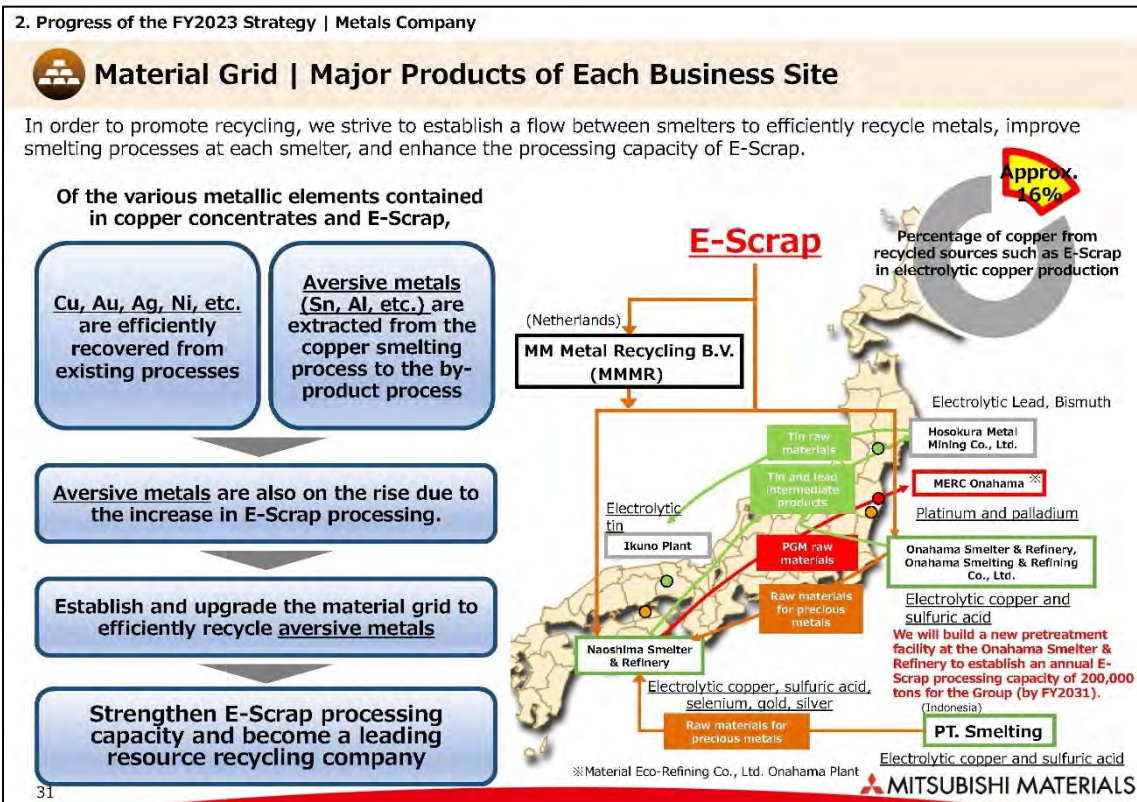
 **MITSUBISHI MATERIALS**

The part of mining at the middle section of the slide shows three cases at different stages respectively. The first mine, the Zafranal Mine, is still in the process of obtaining permits, and we are currently considering participation with a 20% interest.

For the second mine, the Mantoverde Mine, we have already acquired a 30% interest and are currently implementing construction work after obtaining the permits. Production is scheduled to begin in 2024.

The third is Copper Mountain. This mine is already in operation and we have procured copper ore. Smelting will be explained in the next slide.

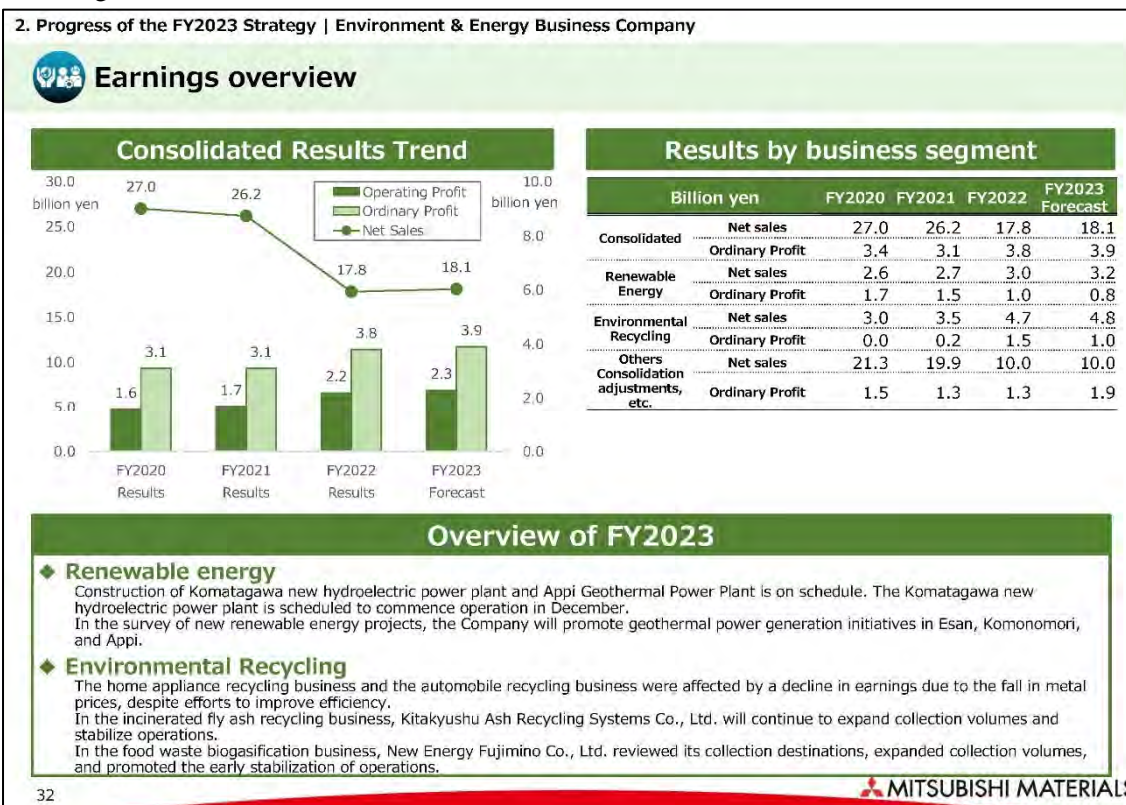
<Material Grid | Major Products of Each Business Site>



The material grid is important in the Smelting business. If E-Scrap is increased, metals such as tin and aluminum that should be avoided in the process of copper smelting, will also be contained in addition to copper, gold, silver, and nickel, which have been contained in copper ore. The more E-Scrap we increase, the more they will also increase. So, it is essential to treat them well.

For that purpose, the important point is to recover those metals by sharing roles, such as Hosokura Metal Mining Co., Ltd. recovering electrolytic lead and the Ikuno Plant recovering electric tin if copper smelters cannot recover them, and to return them as resources to the market for earnings.

<Earnings overview>



This is an overview of earnings for the Environment & energy business. This is divided into renewable energy and environmental recycling. In renewable energy, investment is ahead at this stage.

As shown at the bottom of the slide, the Komatagawa New Hydroelectric Power Plant, with a generating capacity of slightly over 10,000 kilowatts, is expected to begin operation in December this year.

A geothermal power plant is also under construction. Its scale is slightly less than 15,000 kilowatts, and it aims to start operation in 2024.


<Priority Measures>

2. Progress of the FY2023 Strategy | Environment & Energy Business Company

Priority Measures

Long-term Business goals	(Environmental recycling) Driving force of resource-recycling systems (Renewable energy) Leading company in geothermal development	FY2023 Strategy	<ul style="list-style-type: none"> Expand home appliance recycling business, advancement of automation, and improvement of added value of recovered products Demonstrate LiB recycling technology and solar panel recycling technology Secure stable plant operations in fly ash recycling business and biogasification business Complete Komatagawa new hydroelectric power plant, construction of Apipi geothermal power plant, and survey of new geothermal sites
Long-term strategy	<ul style="list-style-type: none"> Provision of a safe recycling system with thorough traceability, etc. Decarbonization through the expansion of the Renewable energy business 		
FY2023 Strategy priority measures		FY2023 First Half Results	Future Initiatives
Environmental recycling	Promote automated dismantling in home appliance recycling	<ul style="list-style-type: none"> Completed installation of a demonstration machine for automated recovery of AC outdoor unit compressors and started operation in August 	<ul style="list-style-type: none"> Conduct demonstration test
	Enhance added value of recovered products	<ul style="list-style-type: none"> Transferred picking robot technology to Chubu Eco Technology Co., Ltd. (CETCO) and <u>it is in operation</u> 	<ul style="list-style-type: none"> Consideration is underway for the introduction to East Japan Recycle Systems Corp. (EJRS)
	Demonstrate LiB recycling technologies	<ul style="list-style-type: none"> Reviewed LiB recycling processes and improved recovery rates, etc. 	<ul style="list-style-type: none"> <u>Ongoing implementation of system demonstrations</u>
	Demonstrate solar panel recycling	<ul style="list-style-type: none"> <u>Delay in improvement plan of pretreatment processes</u> due to delay in parts procurement caused by insufficient supply of semiconductors 	<ul style="list-style-type: none"> Introduce of <u>improved pretreatment processes to East Japan Recycle Systems Corp. (EJRS)</u>
	Stable operation of incineration fly ash recycling business	<ul style="list-style-type: none"> Continued to improve facilities, reduced trouble in transportation systems and generally achieved <u>stable operations</u> 	<ul style="list-style-type: none"> <u>Increase acceptance volume and promote process optimization</u>
	Stable operation of food waste biogasification business	<ul style="list-style-type: none"> Continued to improve equipment, <u>with generally stable operations</u> 	<ul style="list-style-type: none"> Promote business by <u>increasing collection volumes</u> and stabilizing operations <u>Discussions underway with local governments, etc. on commercialization of the second plant</u>
Renewable energy	Complete Komatagawa new hydroelectric power plant	<ul style="list-style-type: none"> Started carrying-in and installation of power generators Steel tower foundation and revetment work is underway 	<ul style="list-style-type: none"> <u>Commence commercial operations in December 2022 as scheduled</u>
	Construct Apipi geothermal power plant	<ul style="list-style-type: none"> Construction of Apipi geothermal power plant <u>progressed as planned</u>, including preparation of approach roads and commencement of production well drilling 	<ul style="list-style-type: none"> Drilling of production wells for confirmation in a simple fumarole test next year Steam facility construction at production, power generation, and reinjection bases
	Survey new small hydropower	<ul style="list-style-type: none"> Survey <u>progressed generally as planned</u> 	<ul style="list-style-type: none"> Continue conducting surveys

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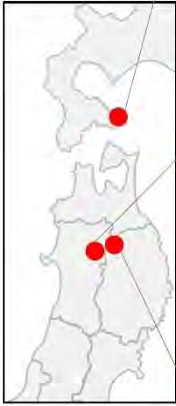
 MITSUBISHI MATERIALS

Here are priority measures. In environmental recycling, as shown in the slide, for home appliance recycling we are making various attempts to thoroughly save labor and automate in consideration of the labor shortage in the future. To demonstrate LiB recycling technology and solar panel recycling, we are developing technologies in preparation for the future.

<Initiatives for Geothermal Power Generation>

2. Progress of the FY2023 Strategy | Environment & Energy Business Company

Initiatives for Geothermal Power Generation



Esan area
Hakodate, Hokkaido

Promote business development with the aim of developing a new geothermal power plant in the Esan area of Hakodate City, Hokkaido. We contribute to the project by utilizing our experience and technological capabilities through investment.

2015 Renova and Denenergy began geothermal surveys
 2016 Dec. Established Hakodate-Esan Geothermal Co., Ltd.
 2019 Apr. Changed to LLC
 Lenova, Daiwa Energy Infrastructure, and Sigma Power (Toshiba) invested
 2017-19 Drilled three survey wells
 2020 ESN-1 short-term fumarole test
 2021 Oct. Toshiba announced its withdrawal.
May 2022 The Company participated in the project.
 ※Adopted as JOGMEC's "FY2023 Geothermal Power Resource Survey Subsidy Project"

Komomori area
Kazuno, Akita

Maintain good relationships with local stakeholders and smoothly promote consensus building for the development of geothermal power plant.

FY2022 Electromagnetic exploration and continuous monitoring of hot springs
 FY2023 Logging and rooting work for new roads and site development
 FY2024 New roads and site development construction
 FY2025 Survey well drilling construction (Scheduled)
 Communication with local communities (Kazuno City, hot spring operators, etc.) is good.
 Continuous hot spring monitoring equipments provided by us began operations as originally planned.
 ※Adopted as JOGMEC's "FY2023 Geothermal Power Resource Survey Subsidy Project"

Appi Geothermal
Hachimantai, Iwate

Construction is underway in preparation for the start of operations in the spring of 2024.

FY2023 Civil engineering work, steam equipment construction, and well drilling work
 FY2024 Scheduled start of construction of power generation facilities

Full view of Appi Geothermal construction (taken from north on August 19)

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MITSUBISHI MATERIALS

This is about initiatives for geothermal power generation. As in the Esan area, Hakodate, Hokkaido at the top of the slide, we believe that there will be more cases where our company participates in and brings its technological capabilities to projects led by other companies, in addition to cases where we take the initiative.

On the other hand, our company is taking the initiative in the Appi area in Hachimantai, Iwate. As I mentioned earlier, a geothermal power plant is currently under construction and is scheduled to start operation in spring 2024.

<Promote DX in food waste biogasification>

2. Progress of the FY2023 Strategy | Environment & Energy Business Company

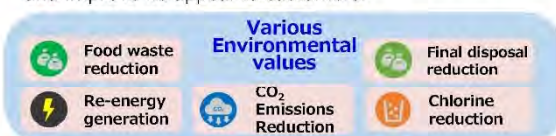
Promote DX in food waste biogasification

We utilize New Energy Fujimino's operating data to visualize the environmental value of the biogasification business and upgrade operations through data analysis.



Visualization of Environmental Value

We have visualized environmental values and started to use it as a sales tool. We aim to build a mechanism that can be used by users in the future and improve its appeal to customers.



Report type (current)



Currently provided to customers

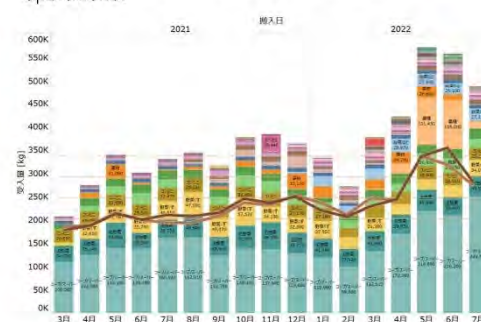
Report output from operation management data, Considering how to provide to customers



Hearings from customers on their needs for environmental value information during sales activities and reflects them


Data Analysis

By analyzing data from operations, we aim to advance operations such as understanding the conditions in the tanks and optimizing operations.



Breakdown of Received Waste by Type and Trends in Power Generation Efficiency (Example)

Implementing initiatives to improve power generation efficiency by identifying the influencing factors of gas generation from the breakdown of waste.

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We are also using DX for biogasification of food waste to actively promote visualization of environmental values and data analysis.

<Various ESG Initiatives>

2. Progress of the FY2023 Strategy ESG Initiatives				
Various ESG Initiatives				
In fiscal 2022, the company actively promoted initiatives related to ESG. We will further strengthen our efforts in the future.				
	Start of Medium-term Management Strategy (FY2023 Strategy) ▼ April 2020	ESG meeting (March 2021) ▼ April 2021		April 2022
E Creation of a recycling-oriented society Dealing with climate change Environment protection technologies	Start of commercial operation of a biogas power plant Participation in Keidanren's "Challenge Zero" Support of TCFD recommendations Participation in the TCFD Consortium	Setting and revision of greenhouse gas emission reduction targets Carbon footprint calculation CO ₂ recovery, methanation and utilization test progress	E-Scrap • Processing capacity improvement expansion work • Start of operation of the MEX business platform Promotion of GHG reduction through industry-academia-government collaboration Adoption of carbon recycling technology for NEDO business	Participation in the 30by30 Alliance for Biodiversity Endorsement of Ministry of the Economy, Trade and Industry's GX League Basic Concept Cooperation with the Ministry of the Environment's Demonstration Project for Certifying Natural Symbiosis Sites Application for SBT certification Utilization of electricity derived from in-house hydroelectric power generation at in-house plants
S Responsibility in value chain Development of diverse talents	Optimization by positioning the head office as the communication core Certified as one of the 2020 Establishment of the Certified Health & Productivity Management Outstanding Organizations (Large Enterprise Category) From FY2018 Joint industry-academia activities (endowed course)	Human Resources Transformation Donations to four organizations working to solve social issues for the 150th anniversary of the Group's founding	Implementation of diversity and inclusion initiatives Establishment of Human Rights Policy and Procurement Policy Signed the United Nations Global Compact Change of organizations related to management reform and introduction of a job-based personnel system	Support for "Resource Sciences Education Consortium" by Hokkaido Univ. and Kyushu Univ. Kyoto Univ. Endowed Chair Established the "Non-ferrous Extractive Metallurgy" Certified as one of the 2022 Health & Productivity Management Outstanding Organizations Participation in G20 EMPOWER Continued donations to four organizations working to solve social issues Established "Sustainability Innovation Collaborative Research Cluster" in partnership with the Tokyo Institute of Technology Letter of Appreciation from East Japan Railway Co. for Early Delivery of Trolley Wire
G Governance	Corporate governance Review of executive remuneration system Establishment of Basic Policy on Corporate Governance Increase in the ratio of outside directors (6/11 → 6/10) Group governance Internal control enhancement measures Establishment of Sustainable Management Office	Revisions to the Corporate Governance Code Publication of Directors' Skills Matrix Introduction of a global in-house reporting system Inner branding, reverse mentoring and other communication initiatives	Application for Prime Market listing Establishment of the Sustainability Policy Strategic IP formation activities and promotion of IP governance Third-party evaluation of the effectiveness of the Board of Directors Launched "WITH MATERIALS," a corporate communications magazine	Change in compensation system for executive officers Establishment of the Sustainability Committee Increase in the ratio of outside directors 6(1)/10 → 7(2)/10 Female outside directors indicated in parentheses Launch of "Special Website on our Mission"
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ESG initiatives since April 2020 are shown in the slides as E, S, and G separately. Particularly since April 2022, we have been proceeding with the process of applying for SBT certification in the part of the environment (E). In the part of society (S), we are working with the Tokyo Institute of Technology to develop human resources.

In the part of governance (G), we established the Sustainability Committee reporting to the Board of Directors in the current fiscal year as part of our corporate governance. The ratio of outside directors has increased from 6 out of 10 directors to 7 out of 10 directors in the current fiscal year, 2 of whom are female, as part of our reforms.

That is all for my explanation.

Question and Answer Session

<Q&A (Summary): Status of the Metals Business>

Q: Do you have any update about the Metals business? For example, please tell us about the effect of making Onahama Smelting & Refining Co., Ltd. a wholly owned subsidiary, including numerical figures.

Also, the shift of PTS to consignment smelting will decrease revenue from by-products. How will you make up for the negative side?

At the Los Pelambres Mine, the construction of the desalination plant seems to have been delayed. What is your outlook? Will dividends come back?

Regarding Mantoverde, I have heard that a high royalty will be imposed in Chile, though it has not been decided yet. Please let us know as much as you can about these things.

Ono: Increasing the scale of copper smelters requires huge costs, which can be difficult. So, I think the important point is how to increase E-Scrap within the processing capacity.

In this sense, our company has the Naoshima Smelter & Refinery in the west and the Onahama Smelting & Refinery in the east, and we are considering building a structure for producing 200,000 tons by FY2031 by enhancing the E-Scrap processing capacity of both the smelters. In addition, the smelters are dispersed in the west and east. This can be viewed in various ways, but may be helpful in terms of BCP.

Also, PTS does not accept E-Scrap. However, I think there is a possibility that PTS will accept E-Scrap when E-Scrap increases in the future. This kind of story has not been determined at this point, so I mentioned it only as a possibility. Even if PTS shifts to consignment smelting, it will not become completely unrelated to us. We will continue business while thinking about the future story.

Nobuhiro Takayanagi (“Takayanagi”): The Los Pelambres Mine has experienced a drought, but its operation improved significantly since around October, and the mine is currently 100% in operation.

However, as you pointed out, the seawater desalination project itself has been delayed. It was scheduled to be completed this November according to the plan, but it is likely to be delayed until the first quarter of the next fiscal year.

Therefore, if the desalination project is completed, stable operations can be expected regardless of river droughts. Currently the mine is 100% in operation because the river is in good condition.

Regarding dividends, the reason for the delay in completing the desalination project is that the high tide washed away the start-up facilities and equipment on the seashore. In light of this loss and the loss caused by the delay in the construction, I think it is too early to tell you about dividends now.

So far, we have not heard that much progress has been made on the royalty in Chile. I cannot say for sure whether there will be an immediate and significant impact.

Q: I think that E-Scrap is not expected to be as effective for the Onahama Smelting & Refinery as for the Naoshima Smelter & Refinery in terms of facilities. Will investment generate certain impacts?

Regarding the view on the shift of PTS to consignment smelting, is it correct to understand that revenue from slime and other products will decline, which will affect earnings, but profit margins on total assets are expected to improve since it will become off-balance sheet?

Ono: Regarding the view on PTS, it is correct that it will be off-balance sheet. On the other hand, we own the right to sell, through a subsidiary we will establish in Indonesia, electrolytic copper produced by PTS. As a result, there is revenue from consignment smelting.

In terms of actual operations, although the revenue depends on prices, we have promoted the shift to consignment smelting with the expectation that there will be no significant change in profitability caused by the shift to consignment smelting.

As you understand, the Onahama Smelting & Refinery does not have the same smelting process as that of the Naoshima Smelter & Refinery. While making the most of its features, it cannot be exactly the same as the Naoshima Smelter & Refinery, but we are planning to build a 200,000 ton structure by combining the efforts of both.

<Q&A (Summary): ROIC of the Copper & Copper Alloy Business>

Q: What do you think about the background of the failure of the ROIC forecast for the Copper & copper alloy business to meet the FY2023 Strategy target? You mentioned the characteristics of oxygen-free copper in the business briefing in August. How do you think about the improvement obtained by utilizing it? Also, regarding the ROIC improvement driver, please tell us what you think about the possibility of improving ROIC by reducing the asset size.

Ono: ROIC of the Copper & copper alloy business may be low because investment is ahead at this stage. We are working to improve it based on the recognition that improvement is an urgent task.

Regarding our product portfolio, we believe that it is necessary to improve the overall strength of our plants in order to boost profitability, in light of the balance of our product lines including unprofitable products.

Takayanagi: To complement the explanation about the fact that the ROIC forecast has not met the target, there are several possible reasons. The first is that the facilities at the Wakamatsu Plant and the Sambo Plant are aging and must be renewed.

Second, the return from Luvata has not reached the income and EBITDA we expected. These are the two largest factors that are weighing on our earnings.

As for Luvata, we are seeing a recovery in welding electrode materials in the United States, superconducting wires for MRI systems in China and other countries, and bus bars in Malaysia. We hope that the pace of recovery will continue.

Regarding the aging facilities in Japan, we are considering working to improve efficiency by launching renewed facilities as soon as possible. We are thinking about measures for that.

<Q&A (Summary): Recovery in the Metals Business>

Q: The forecast of recovery in the Metals business has not been stable. I have the impression that there are many cases in which no firm assumptions have been made. Are you considering measures to achieve recovery in a stable manner?

Takayanagi: As you pointed out, the forecast is somewhat difficult. However, it is not true that we have not started to address this. We are making forecasts by making rules based on historical data. But please understand that there is still a difference with the actual results in spite of it.

Every year we are making efforts to minimize the gap between the forecast and the actual results. We are trying to minimize it.

<Q&A (Summary): Businesses with Growth Potential>

Q: You mentioned that you would work on a growth strategy in the new Medium-Term Management Strategy from the next fiscal year. Please tell us about any fields or product lines you expect to grow most among your remaining core businesses.

Ono: As a new growth item, I believe that the major direction for the future is to seize LiBs, motors, and other products that will emerge in relation to xEV, as earnings opportunities.

We will seek a path to growth by successfully combining these new growth items with existing businesses.

<Q&A (Summary): Growth Strategy for the Environment & Energy Business>

Q: What do you think about the capacity to expand businesses in the Environment & energy business in the medium term?

Will you increase business assets by actively participating in bidding projects for renewable energy or such a consortium? Or will you aim to expand business opportunities by focusing more on recycling businesses related to technological studies?

What is your approach to positioning this as a growth strategy?

Ono: It is true that renewable energy has not been unprofitable, but its scale of earnings is not as large as that of other businesses.

On the other hand, investment is also necessary. In terms of return on investment, we calculate weighted average cost of capital (WACC) for each business, and we have determined that it will not damage corporate value. Therefore, we have established a structure to participate in several geothermal power generation projects.

However, I do not think the Mitsubishi Materials Group should become a company of renewable energy. Our main focus will be on growing by allocating resources to such fields as metal smelting, solvent extraction, where we have technological advantages, including further research and development.

Home appliance recycling, which we are conducting as environmental recycling, also includes metal resources in the same way as automobiles. I believe that metal resources will be an important position.

In addition, in terms of the concept of economic security currently at issue in Japan, it is also important as a future movement to consider how to reuse important mineral resources.

<Q&A (Summary): Involvement in the Cement Business>

Q: Regarding the Cement business. While the 50:50 stake does not necessarily mean a minority interest, it has a large impact on business performance and you will take significant action. I would like to sort out my thinking again on how your company will take the initiative to be involved in it. The business has a big impact even though it has not been mentioned in the business explanation like this.

Ono: As you pointed out, although it is an equity-method affiliate, we have witnessed a very difficult situation, and we recognize that the next one year or two will be a very important period.

First of all, regarding the involvement in the management of MUCC, one thing is that another person and I are currently responsible for management as directors. Another thing is that the key is how to communicate the business status and future outlook of MUCC to investors.

I do not think the disclosure has always been sufficient so far, and we would like to make improvements from next time in order to present matters in a way that is understandable or acceptable.

<Q&A (Summary): Expected Improvement in ROIC of the Copper & Copper Alloy Business>

Q: When will ROIC of the Copper & copper alloy business begin to improve?

You have just outlined the ROIC improvement driver. Since you plan to invest ¥30 billion to increase the automobile-related production capacity, there will be impacts of increased fixed costs, I think.

In such a situation, when will ROIC start improving in the next Medium-Term Management Strategy period? For example, near the final year, or early in the Strategy period? Can we expect such improvement in ROIC and earnings? Please make a comment.

Takayanagi: In terms of the debt-equity ratio, the debt is larger in the case of the Copper & copper alloy business. Therefore, WACC of the Copper & copper alloy business is actually expected to be a little lower than 4%. For the time being, we would like to surpass this WACC at an early stage of the Medium-Term Management Strategy. We consider the low ROIC and low profitability of the Copper & copper alloy business to be our biggest challenges. We would like to show you a rising trend as early as possible.

<Q&A (Summary): Impact of the Revision of Roll Margin in the Copper & Copper Alloy Business>

Q: How much of the impact of the revised roll margin is included in the improvement of ROIC in the Copper & copper alloy business?

Takayanagi: Regarding the revision of role margin, although I cannot give you a specific amount, we expect an improvement in revenue by at least ¥0.5 billion.

<Q&A (Summary): ROIC of the Electronic Materials & Components Business>

Q: You said that the ROIC forecast for the Electronic materials & components business was 6.4% for the current fiscal year. Does it include the polycrystalline silicon business? How much effect will the transfer of the polycrystalline silicon business have?

Takayanagi: The ROIC forecast for the Electronic materials & components business still includes the impact of the polycrystalline silicon business. The polycrystalline silicon business is included because the transfer of the business is scheduled for March, the end of the fiscal year, and its earnings are counted in our operating income until then.