

# Corporate Strategy Briefing

FY2021 (FY ended March 2022)

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**DOWA HOLDINGS CO.,LTD.**

May 19, 2022

Thank you for attending our Corporate Strategy Briefing today.

My name is SEKIGUCHI Akira. I am president and representative director of DOWA HOLDINGS.

This was previously called our results briefing but from now on we are calling it our Corporate Strategy Briefing.

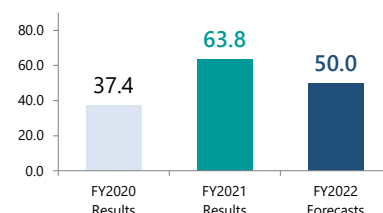
Today, I would like to give a brief explanation of our results for FY2021 and our FY2022 forecasts before going on to introduce the details of our new Midterm Plan.

## Full Year Results for FY2021, FY2022 Full Year Forecasts

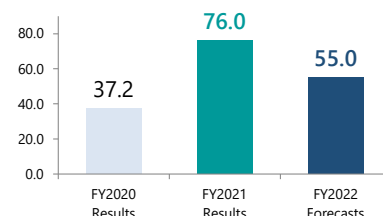
Record profit was achieved in FY2021, reflecting an increase in profits that resulted from rising market prices and the results of our own initiatives. On the other hand, in FY2022, demand is expected to remain strong but an increase in sales and a decline in profit are expected due to rising costs, including the cost of electricity.

Billion yen	FY2020	FY2021	Year-on-Year	FY2022	Year-on-Year	
	Results	Results		Forecasts		
Net Sales	588.0	<b>831.7</b>	243.7	<b>900.0</b>	68.2	
Operating Income	37.4	<b>63.8</b>	26.3	<b>50.0</b>	(13.8)	
Ordinary Income	37.2	<b>76.0</b>	38.8	<b>55.0</b>	(21.0)	
By Segment	Environmental Management & Recycling	8.6	13.6	4.9	10.5	(3.1)
	Nonferrous Metals	25.9	42.7	16.8	30.4	(12.3)
	Electronic Materials	3.6	6.5	2.8	6.0	(0.5)
	Metal Processing	4.6	6.8	2.1	7.0	0.1
	Heat Treatment	0.8	3.0	2.1	2.8	(0.2)
	Other/ Eliminations	(6.5)	3.2	9.7	(1.7)	(4.9)
Profit attributable to owners of parent	21.8	<b>51.0</b>	+29.1	<b>36.0</b>	(15.0)	

Operating Income (billion yen)



Ordinary Income (billion yen)



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Let me start by explaining our results for FY2021 and our FY2022 forecasts.

In FY2021, we were able to report a huge profit. I believe that this is largely attributable to three factors. First, from the end of FY2020 through to the first quarter of FY2021, the prices of platinum group metals (PGMs) rose and, as a result of this price spike, car dismantlers got rid of their stocks of spent automotive catalysts.

This made us rapidly increase the volume of spent automotive catalysts collected and, as result, the PGM recycling business reported considerable profits especially in the first quarter.

Second, a number of initiatives contributed to profit during FY2021.

For example, the start of the non-combustible waste resource recycling business in the Environmental Management & Recycling Segment and the launch of short-wavelength-infrared LEDs and photo diodes (PD) in the Electronic Materials Segment.

Meanwhile, among investments in affiliates accounted for by the equity method, the Los Gatos Mine in Mexico, which went into full-scale operation at the beginning of 2020, contributed to profit.

Third, automobile-related businesses, namely the Metal Processing and Heat Treatment Segment, were able to steadily tap into demand, which recovered dramatically from the second half of FY2020.

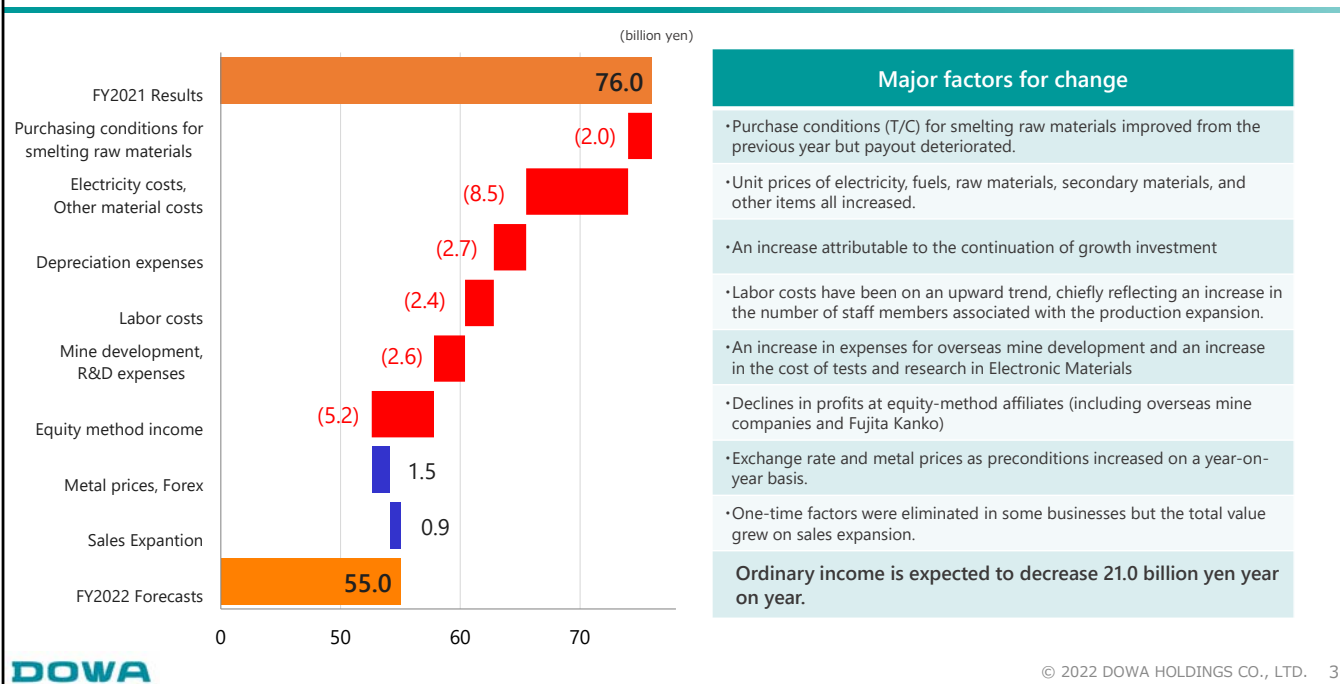
As a result of these factors, in FY2021, the Group as a whole achieved record profits.

Also on a segment basis, the Environmental Management & Recycling Segment and Nonferrous Metals Segment reported record profits.

However, turning to our forecasts for FY2022, I believe we are facing an extremely unpredictable environment and, quite frankly, I think we have been somewhat more conservative in our estimates than in previous forecasts.

Currently, we forecast net sales of 900 billion yen and ordinary income of 55 billion yen and expect to post higher sales and lower income compared to the preceding year.

## Factor Analysis of Ordinary Income (Year-on-Year)



Here I would like to explain the factors behind the decline in ordinary income.

We expect purchasing conditions of raw materials to worsen. Looking at zinc T/C, in 2022 purchasing conditions were much better than the preceding year. However, given that stocks will be used up first, payouts for zinc raw materials with the previous fiscal year's unfavorable conditions will be made during the first half of FY2022. As a result, based on the payouts that are reflected in FY2022 results, costs are expected to increase during the first half and the benefits of more favorable purchasing conditions of raw materials are expected to be felt from the second half of FY2022 through to the first half of FY2023.

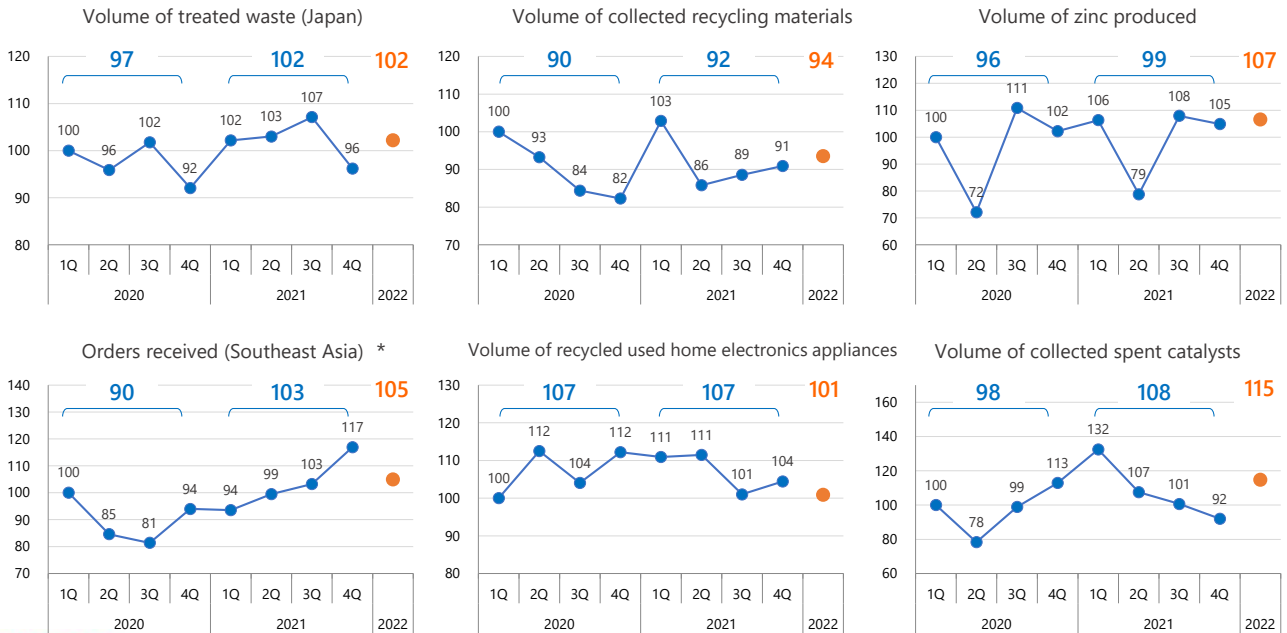
In addition, we estimate increases in electricity costs and other material costs of approximately 8.5 billion yen. I said earlier that the outlook is unpredictable and we have been somewhat conservative in our estimates and cost increases of 8.5 billion yen are, based on recent actual costs, an overestimate. That said, we expect energy prices to rise steadily and have slightly overestimated them. We hope you will understand this as an expression of uncertainty about the full-year outlook for this fiscal year.

Since the increases in depreciation, labor costs and R&D expenditure are recognized as part of our investment in future growth, if anything we regard these as positive cost increases.

As for profits at equity-method affiliates, profits of overseas mine companies, which are influenced by metal prices, may, in view of recent prices, be much better than these figures. Another factor is Fujita Kanko. Our figures are based on Fujita Kanko's recently announced income forecast and whereas Fujita Kanko made a profit on the sale of assets in FY2021, income is expected to fall in the absence of this factor in FY2022.

As for the impact of prices, our recent forecast assumes less price volatility than in FY2021 but it is fair to say that the outlook is extremely uncertain.

## Major Market Trends (1) (Compared to Q1 of FY2020)



\*Local closing month basis, consolidated results reflected 3 months after the above.

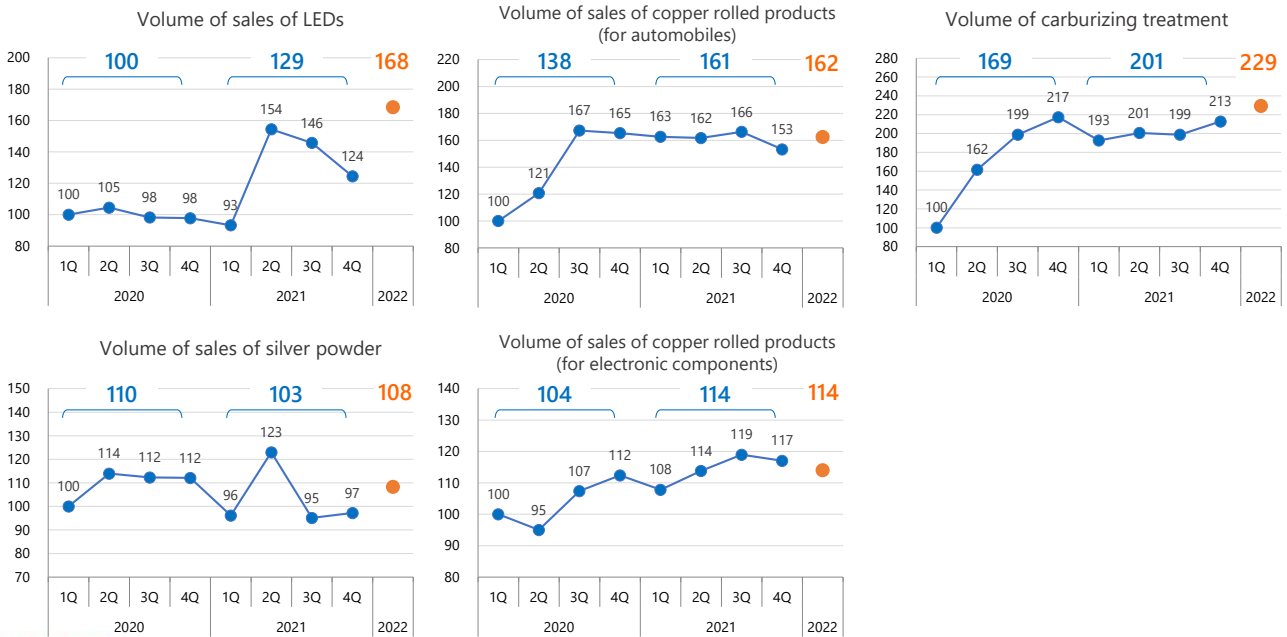
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This page and the next page show how we see demand trends for our target markets in FY2022.

In a word, we do not expect any major change.

Our forecasts are based on expectations that in FY2022, as in FY2021, markets will continue to see firm demand compared to other years.

## Major Market Trends (2) (Compared to Q1 of FY2020)



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As for changes in the world situation such as the lockdown in Shanghai, China and the war in Ukraine, as things stand, we have not been directly affected.

Despite concerns that our customers' production trends will be somehow impacted in the future, our FY2022 forecast do not factor this in.

I said we had overestimated increases in electricity costs and other material costs but I hope you will understand that instability factors in terms of demand have partly been factored into forecasts in the form of costs.



# Review of Midterm Plan 2020 (FY2018–FY2021)

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I would now like to review the Midterm Plan 2020, which was our previous midterm plan.

## Review of Midterm Plan 2020 (1): Achievements

The initiatives included in Midterm Plan 2020 were steadily executed in each business, with monetization achieved in some of them. All management targets were exceeded due to the achievement of record profit in FY2021.

Policy	Segment	Expand businesses in growth markets	Increase competitiveness of existing businesses			
Achievements	Environmental Management & Recycling	<ul style="list-style-type: none"> <li>- Start of construction of the second landfill site and commencement of operation of an incinerator in Indonesia</li> <li>- Strengthening of the business of recycling used lithium-ion batteries</li> </ul>	<ul style="list-style-type: none"> <li>- Increase in used home appliance recycling and automobile recycling volumes</li> <li>- Construction and start of operation of a new landfill facility in Japan (Hanaoka)</li> </ul>			
	Nonferrous Metals	<ul style="list-style-type: none"> <li>- Establishment of overseas bases for sampling spent catalysts</li> </ul>	<ul style="list-style-type: none"> <li>- Start of operation of Los Gatos Zinc Mine (Mexico)</li> </ul>			
	Electronic Materials	<ul style="list-style-type: none"> <li>- Start of mass production of short-wavelength-infrared LEDs and photo diodes (PD) for wearable equipment</li> </ul>				
	Metal Processing	<ul style="list-style-type: none"> <li>- Enhanced production capacity and expansion of overseas processing bases of copper rolled products</li> </ul>	<ul style="list-style-type: none"> <li>- Expansion of sales and increase in orders for existing products and services</li> <li>- Upgrade of production and treatment facilities</li> <li>- Improved productivity</li> </ul>			
	Heat Treatment	<ul style="list-style-type: none"> <li>- Expansion of heat treatment facilities in overseas areas where the treatment is demanded</li> </ul>				
Major Management Targets	Midterm Plan 2020		FY2018	FY2019	FY2020	FY2021
	Operating income	45.0 billion yen	18.6 billion yen	25.9 billion yen	37.4 billion yen	63.8 billion yen
	Ordinary income	50.0 billion yen	24.3 billion yen	28.9 billion yen	37.2 billion yen	76.0 billion yen
	ROE	12% or more	6.3%	7.2%	8.5%	17.6%

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As shown here, in each of our businesses, we generally managed to steadily execute the initiatives included in Midterm Plan 2020.

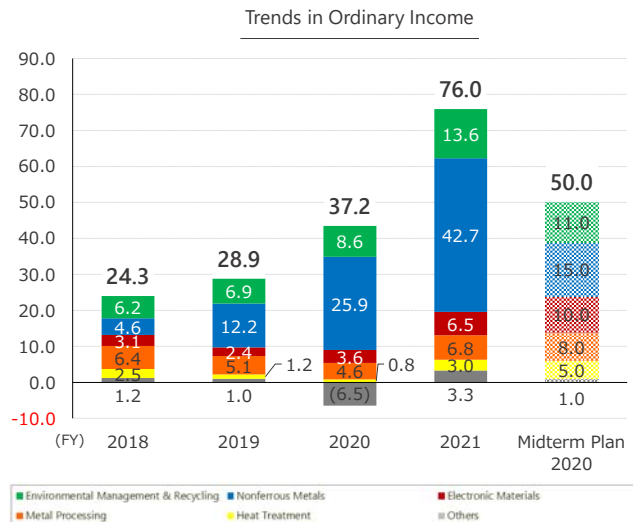
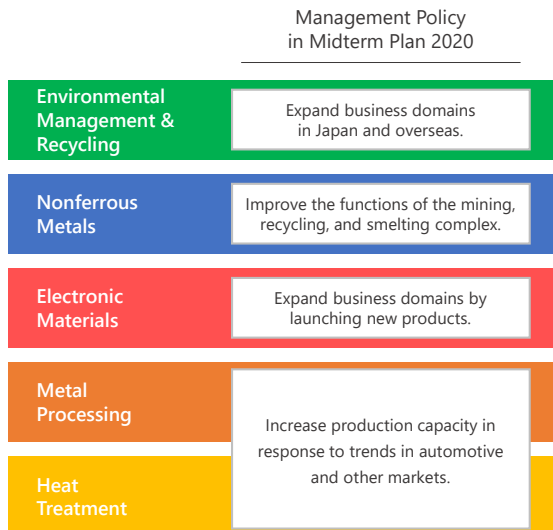
This shows our main achievements and we realized some initiatives to the extent that they contributed to profit in FY2021. Increase in used home appliance recycling volumes, establishment of overseas bases for sampling spent catalysts, start of operation of Los Gatos Zinc Mine (Mexico), and start of mass production of short-wavelength-infrared LEDs and photo diodes (PD) are projects which contributed to profit in FY2021. Progress made on the other initiatives is, if anything, seen as preparation for FY2022 and beyond.

In view of such results, I believe that the outcome of Midterm Plan 2020 is that comparatively good progress was made in terms of profit contributions and preparations for the future.

As for the numerical targets, we ultimately achieved all our final fiscal year targets, though higher prices did have a big impact.

## Review of Midterm Plan 2020 (2): Views on business portfolio

It was reconfirmed that all of the businesses constituting our business portfolio have high earnings strength. The necessity to reorganize business portfolio will remain low for the time being, so efforts will continue to be focused on expansion of each business.



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One reflection on Midterm Plan 2020 is that I believe we reconfirmed that all of the five businesses constituting our business portfolio have high earnings strength. Especially when the COVID-19 pandemic began in 2020, it filled us with confidence that although demand, especially demand for auto parts and services, practically vanished in the first half, it then rebounded dramatically in the second half and we were able to reliably capture this.

Looking back from a results perspective, the 2020 COVID-19 pandemic served as a kind of stress test and gave us an opportunity to reconfirm the strengths of our businesses. Ultimately, even the Heat Treatment Segment which was most affected managed to finish FY2020 in profit.

These results not only give us great confidence but also put us on track for the next Midterm Plan, I believe.



## Review of Midterm Plan 2020 (3): Future tasks

While some achievements were made in financial terms, efforts to strengthen our businesses must be continued because they are essential for adapting to the rapidly changing external environment. It is also important to continue meeting requests from stakeholders by enhancing measures to address sustainability issues towards enhancing the business base.

Increasing earning strength further by deepening the five core businesses  
(Enhancing products and services that lead to solutions to social issues)

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Enhancing measures to address sustainability issues

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As explained previously, I think some achievements were made both on the results front and the financial front. That said, I believe we must do even more to meet requests from stakeholders to ensure our business continuity. We recognize that, in addition to further improving our skills in our actual business, enhancing measures to address sustainability issues is a challenge for the next Midterm Plan and beyond, to demonstrate internally and externally that the entire DOWA Group is even more sound.



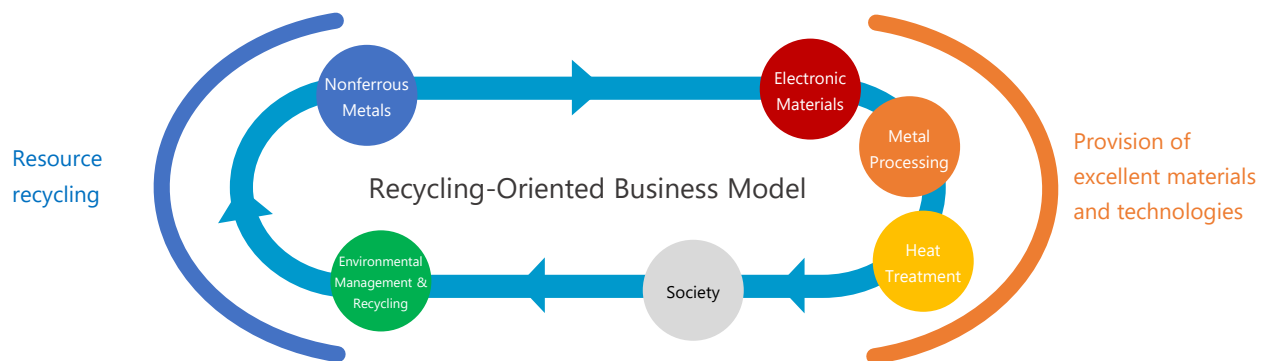
I would now like to explain Midterm Plan 2024.

## Future Direction of the DOWA Group

To achieve the vision (our goal in 2030), the DOWA Group will drive initiatives to achieve an improvement in both its economic value and social value, thus improving its corporate value and contributing to building a sustainable society.

### Vision (our goal in 2030)

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



Firstly, in November 2020, we announced the vision of the DOWA Group (our goal in 2030). We adopted an expression which further develops our previous vision and defined our goal for 2030 as "Contribute continuously to building a sustainable future through our core business, the promotion of resource recycling, and the provision of excellent materials and technologies."

Our vision once again indicates that each of our five businesses can contribute to society while seeking to strengthen the Group as whole through the promotion of resource recycling, and the provision of excellent materials and technologies.

## Business Environment in the Period Leading to 2030 (1): Resource Recycling and Waste Treatment

The pursuit of a resource-recycling society has been accelerated globally. Needs for recycling have increased further. At the same time, the value of recycling has also increased. While waste treatment demand is expected to grow in Southeast Asia, the shift from incineration to recycling is forecast to be accelerated in Japan.

	Opportunities	Risks
Resource recycling	<ul style="list-style-type: none"> <li>- Growth in needs for recycling reflecting initiatives to achieve SDGs and instill ESG management</li> <li>- Tightening of recycling-related regulations towards the formation of a resource-recycling society</li> <li>- Growth in demand for nonferrous metals associated with the shift to a low-carbon society</li> <li>- Increase in the value of recycled metals</li> </ul>	<ul style="list-style-type: none"> <li>- Decline in demand for waste incineration attributable to the spread of recycling</li> <li>- Intensification of competition for collection of recyclable waste and materials for recycling</li> <li>- Sophisticated and diversified social requirements on mining of natural resources</li> </ul>
Waste treatment	<ul style="list-style-type: none"> <li>- Expansion in the range of waste to treat resulting from tightening of environmental regulations in Japan</li> <li>- Increase in the volume of hazardous waste resulting from manufacturing of high-performance materials and products</li> <li>- Increase in the amount of waste generated resulting from population increases in Southeast Asia</li> </ul>	<ul style="list-style-type: none"> <li>- Decline in the demand for waste incineration resulting from the shift to a low-carbon society</li> <li>- Rise of incineration cost resulting from the introduction of carbon pricing (such as carbon tax)</li> <li>- Decrease in the amount of waste generated resulting from population decline in Japan</li> </ul>



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We conducted an evaluation of the business environment for resource recycling and waste treatment in the period leading to 2030, in terms of opportunities and risks.

A single phenomenon has both positive and negatives. For example, when it comes to "decline in demand for waste incineration," general speaking, we are seeing such a trend and demand for straightforward waste incineration will undoubtedly continue to shrink going forward. However, demand for the incineration of waste that is difficult to recycle and hazardous waste that, if left untreated, would have a major environmental impact will never disappear and, if anything, provided we pursue more effective, safer incineration, the incineration business could be a business that still has growth potential. Whilst we face many challenges in order to achieve this, including the development of technologies and the upgrading and improvement of facilities, it is fair to say by continuing to pursue this goal, this trend will not be an entirely bad thing for our business environment.

I would like this to be a motivation to look further ahead than the period of Midterm Plan 2024 and to promote the development of technologies, research and development and capital investment.

## Business Environment in the Period Leading to 2030 (2): Provision of Excellent Materials and Technologies

Demand for materials and technologies for automobiles (xEVs) and renewable energy will increase further in response to megatrends, such as moves to achieve carbon neutrality. As in the previous midterm plan, the four markets including information and communication and healthcare are positioned as highly promising markets.



Automobiles



Information and communication



Environment and energy



Healthcare

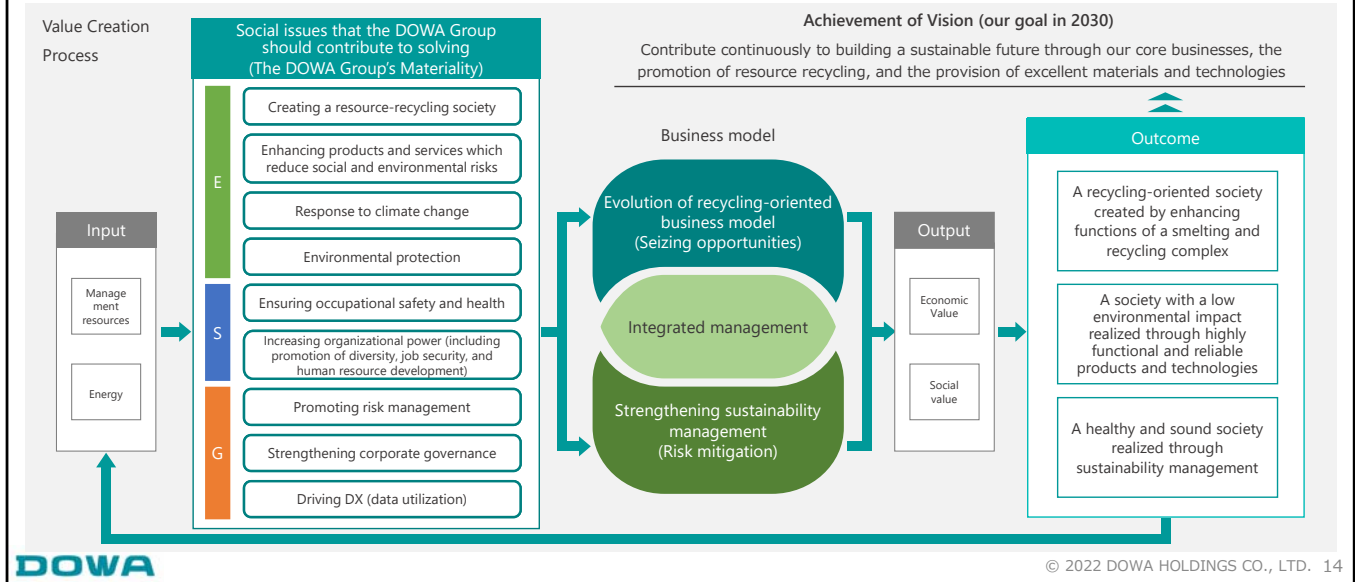
Moving on to the markets targeted by the Electronic Materials Business, Metal Processing Business and Heat Treatment Business.

Provided we further brush up the materials, technologies and services we provide in the markets of Automobiles, Information and communication, Environment and energy and Healthcare that we have positioned as growth markets, I have no doubt that these are promising markets where high growth can still be expected.

Our second approach to the business environment is to grow our business in each market by producing better goods based on a careful assessment of social trends and customer requirements.

## Social Issues and the DOWA Group's Material Issues

Social issues that the DOWA Group should contribute to solving have been identified in light of the business environment, stakeholders' expectations and requests, etc. Those issues are positioned as the DOWA Group's Materiality, and initiatives will be taken to solve them.



The DOWA Group identified material issues in 2010 but during the review of our corporate mission and vision, we once again held much discussions to clarify the issues we should focus on both from the perspective of the characteristics of our business and what society expects of us today. Based on these discussions, we have now positioned nine themes as the DOWA Group's Material Issues and established Midterm Plan 2024 with the intention of increasing the Group's corporate value by stepping up both "evolution of recycling-oriented business model" and "strengthening sustainability management" as the starting point.

## Basic Strategy for Solving the DOWA Group's Material Issues

Make it the basic strategy under the Midterm Plan 2024 to work on initiatives to acquire opportunities by evolving the recycling-oriented business model and reduce risks by strengthening sustainability management, so as to solve the DOWA Group's material issues.



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I think that the top four themes out of the nine newly established themes are exactly our main business. In addition to these, the five remaining themes are things which are universally expected of companies and which we think we should focus on as a priority. Enhancing and strengthening each of these nine themes will be a major pillar of Midterm Plan 2024.



# Evolution of Recycling-oriented Business Model

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I would now like to explain "evolution of recycling-oriented business model."



## Focus (1): Enhancing Metal Recycling

Focus efforts on enhancing metal recycling to increase the ratio of products derived from materials for recycling to the output (metals we produce). Further enhance global resource recycling, which is essential for realizing a circular economy and a carbon-neutral society.



The first focus is enhancing metal recycling, which is an important theme.

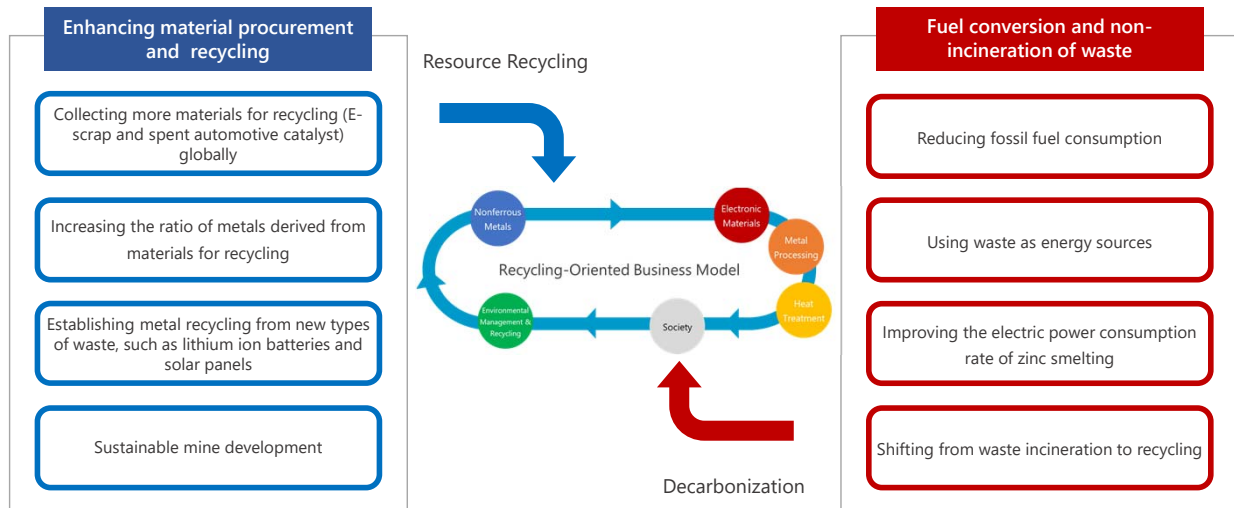
We recognize that our business model which leverages our combined-recycling smelters and combines environmental business and recycling and smelting is very unique and practically the only one of its kind in the world.

Further developing this business model is one course of action under Midterm Plan 2024. To give an example, we have established the ratio of metals derived from materials for recycling in terms of sales in Nonferrous Metals Business as a numerical target. Regarding sales of metals derived from materials for recycling, which currently account for just over 50% of total sales, we will aim not only to expand the total volume of such sales but also to increase the ratio of such sales.

To this end, we will not simply strengthen the Nonferrous Metals Business but also promote collaboration with the Environmental & Recycling Business, which is responsible for pre-treatment functions, and pursue further evolution of the business model in anticipation of fusion of the two businesses further down the line.

## Focus (2): Achieving both Resource Recycling and Decarbonization (Long-term Initiatives)

Take initiatives such as reducing fossil fuel consumption and fuel conversion in addition to ensuring stable material procurement and enhancing recycling, so as to evolve the recycling-oriented business model into a sustainable, more competitive form that enables both resource recycling and decarbonization.



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At the same time the question of how to carry out recycling whilst minimizing energy consumption rather than merely recycling will be another major theme. We also need to implement initiatives for the achievement of carbon neutrality by 2050. We have set reducing fossil fuel consumption, using waste as energy sources, and improving the electric power consumption rate as themes in preparation for this goal and although they are all themes that are technically challenging, we intend to tackle with a positive mindset.

### Focus (3): Enhancing Products and Services Targeting Growth Markets

Focus efforts on developing and expanding sales of new products and services by identifying technology trends and needs in each market accurately. Make sure to tap into the growth potential of each market by making effective use of AI, IoT, and other digital technologies.



Automobiles

**Electrification**  
**Carbon neutrality**

- Launching and expanding sales of new high-performance copper alloy strips
- Developing and promoting sales of heat treatment facilities for realizing carbon neutrality



Information and communication

**Downsized, lower-profile components**  
**Terminals with advanced functions**

- Achieving higher performance and increasing the production of conductive atomized powder for MLCC
- Process optimization and mass production of solid electrolyte powder for all-solid-state batteries for consumer use



Environment and energy

**Growth in demand for renewable energy**

- Developing silver powder in line with the progress in the development of high-efficiency solar panels
- Establishing a system for mass-producing fuel cell materials



Healthcare

**Rising health consciousness**  
**Enhanced healthcare functions**

- Increasing production capacity of short-wavelength-infrared LEDs and photo diodes (PD) for wearable devices



Our next focus is enhancing products and services targeting growth markets. In each market, we plan to seek enhancement of various products, technologies and services in a way that addresses the social themes our customers want us to address.

#### Focus (4): Reinforcing the Structure for Supporting the Development of New Businesses and Technologies

DOWA x Tohoku University Co-creation Research Center was established in April 2022. Exceptional technological seeds at Tohoku University and technologies of DOWA will be integrated with the aim of creating cutting-edge technology that will contribute to offering resource recycling and excellent materials and technologies.



Glimpse of the Online Co-creation Research Center Grand Opening  
(Left: President Ohno, Tohoku University; Right: President Sekiguchi, DOWA)



The Engineering Laboratory Complex Building at the Graduate School of Engineering, Tohoku University, where the DOWA x Tohoku University Co-creation Research Center was established

Strengthen cooperation with the Graduate School of Environmental Studies, Tohoku University, and the Graduate School of International Resource Sciences, Akita University, with which DOWA has established endowed chairs, five universities with which DOWA has concluded framework agreement (Okayama University, Tohoku University, Akita University, Kumamoto University, and Gunma University), and universities and research institutions with which DOWA conducts joint research.  
Drive introduction of new technologies, such as ones related to carbon neutrality and AI, MI, and IoT technologies that contribute to innovative development and efficient manufacturing.

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To address the customer needs mentioned earlier, new technological innovation will be required. To assist with solutions to such matters, we established the Co-creation Research Center at Tohoku University in April this year.

We have had dealings with Tohoku University for many years, including establishing an endowed chair and signing a comprehensive agreement in 2004. Tohoku University has outstanding knowledge in the field of resources and materials, on which our company is based, and already within the framework of the endowed chair and comprehensive agreement, we have collaborated on a number of successful projects. Against this background, we have now established the Co-creation Research Center. This is the first such center at the university established in the Non-Ferrous Metals Industry.

The Co-creation Research Center was created for the purpose of moving away from the limited collaboration of the past and making the technology seeds of Tohoku University more widely available and working with us to enhance new technologies such as decarbonization technologies, AI and MI and IoT. We also intend to send young engineers to the Co-creation Research Center and to use it to train highly skilled human resources through exchange with the professors and students from Tohoku University.



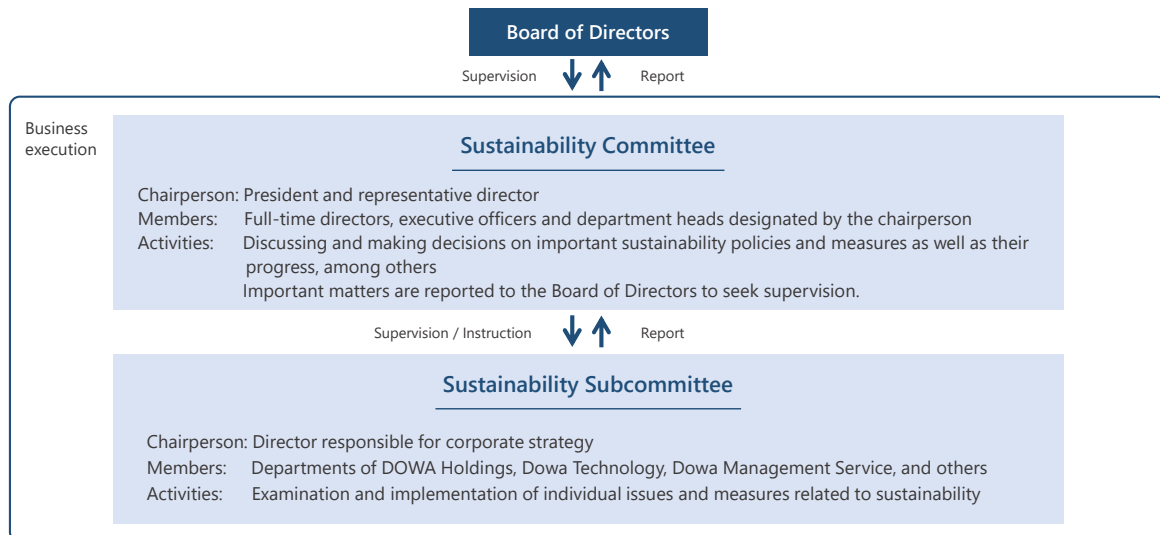
## Strengthening Sustainability Management

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Moving on to our next focus, strengthening sustainability management. Through the eyes of companies that are advanced in terms of sustainability initiatives, this may seem late in the day. But we intend to redo the initiatives we have implemented to date to create a framework that is easier to strengthen, ready to actively implement sustainability initiatives.

## Focus (5): Building a Sustainability Promotion Structure

A framework for regularly discussing important sustainability issues and polices and measures to address such issues was built in April 2022. Important matters are reported to the Board of Directors so that the overall DOWA Group will address sustainability issues.



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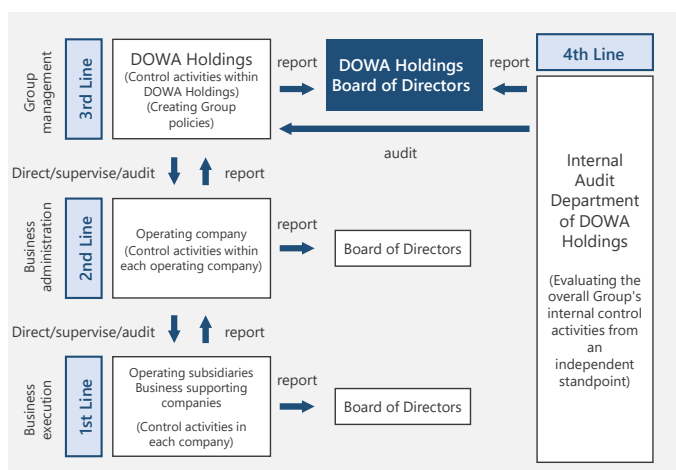
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In March 2022, we announced our Sustainability Basic Policy. In response to this, on April 1, 2022, we launched an organization to tackle sustainability issues. We established the Sustainability Committee, with me as chair, under the Board of Directors. The committee shall meet two or three times a year to discuss the progress of important policies, initiatives or plans related to sustainability. We intend to firmly establish a flow whereby any important matters are reported to the Board of Directors. Further, under the Sustainability Committee, we established a Sustainability Subcommittee consisting of internal experts from each area. We will examine initiatives to address individual issues on each theme, check progress each month, and proceed in a way that increases the effectiveness of each activity. Details of each theme examined by the Sustainability Subcommittee will be included in the Integrated Report (DOWA REPORT). Please refer to this report for further details.

## Focus (6): Enhancing Risk Management Structure and Strengthening Corporate Governance

Enhance risk management system by building The Four Lines Model with DOWA Holdings' Board of Directors at the top.  
Plan introduction of a restricted stock compensation plan and begin to disclose directors' skills matrix.

### Four Lines Model (internal control system)



### Introduction of a restricted stock compensation plan

Introduce a restricted stock compensation plan on condition that it will be approved at the Annual General Meeting of Shareholders to be held in June 2022.

Target	Directors (excluding outside directors) and executive officers
Transfer restriction period	Until the date of resignation

### Disclosure of the skills matrix for directors

Directors' skills matrix is planned to be disclosed in the notice of Annual General Meeting of Shareholders to be held in June 2022.

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Our next focus is initiatives for enhancing the risk management structure.

The Company has adopted a holding company system and put in place a structure with five business companies and two business support companies under the holding company. In addition, production sites affiliated with the business companies have been established as business subsidiaries for each product and service. Aiming to build a risk management structure that conforms to such a corporate structure, we developed the Four Lines Model. Whilst ultimately required to report to the holding company's Board of Directors, the Internal Audit Department newly established in April 2020 functions as an independent watchdog. The holding company must ensure control over business companies with administrative or sales units and production-centered business subsidiaries respectively and must check whether ultimately control is achieved across the Group as a whole. Whilst the overall structure is tailored to the Company's corporate structure and is, therefore, slightly complex, it was designed with the aim of creating a framework that can fully function in terms of execution.

We announced that the other day the Board of Directors resolved to introduce a restricted stock compensation plan on condition of approval at the general meeting of shareholders in June 2022. In addition, in the notice of the Annual General Meeting of Shareholders, we plan to disclose the Directors' skills matrix. This is all information which stakeholders expect to be disclosed nowadays and we intend to steadily meet their expectations.

Whilst we have endeavored to enhance risk management and governance in the past, this time, through systematic reorganization, we intend to establish a structure which facilitates management and which even outsiders can tell is effective.

## Focus (7): Tackling Climate Change

Specific targets and measures for achieving the FY2030 GHG reduction targets are planned to be announced in the period of the Midterm Plan 2024. Information is planned to be disclosed in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) in near future.

- August 2021 : Establishment of DOWA Group's Climate Change Policy and Long-Term Targets

### Climate Change Policy

DOWA Group positions the measures against climate change as an important management issue and will work to reduce greenhouse gas emissions. It will also contribute to the realization of a carbon-free society through various businesses, leading to continued growth of the group.

### Long-Term Targets

DOWA Group will aim to achieve carbon neutral status by 2050.

- February 2022 : Establishment of the FY2030 GHG Emissions Reduction Targets, Supports for the TCFD Recommendations

### FY2030 GHG Emissions Reduction Targets

Energy Sources	CO2 from electric power/fossil fuels used in manufacturing bases	At least 38% reduction (from the FY2013 level)
	CO2 from electric power/fossil fuels used in offices and other locations	At least 51% reduction (from the FY2013 level)
Non-Energy Sources	CO2 from waste	At least 15% reduction (from the FY2013 level)

\* The DOWA Group aims to reduce its Scope 1 and 2 GHG emissions in FY2030 compared with the FY2013 levels as a baseline. These targets include offsetting through the utilization of carbon credits.



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Our next focus is tackling climate change.

Climate change is an extremely important theme which we also need to address. In August 2021, we announced our Climate Change Policy and Long-Term Targets and, in February 2022, we announced more specific 2030 targets. To ensure realization of these targets, we intend to step up a whole range of activities from now on.



## Focus (8): Enhancing Human Capital

Building an organization that continues growing is essential for achieving the Mission and Vision (our goal in 2030). Drive initiatives to enhance human capital with key initiatives of developing human resources who make changes happen and securing diverse human resources and workstyles.

### Human resource strategy under the Midterm Plan 2024

Achieving the Mission and Vision (our goal in 2030)

Building an organization that continues growing

#### Developing human resources who make changes happen

- Developing core human resources (enhancing human resource development policies and systems)
- Developing globally competitive human resources
- Enhancing training programs and developing a culture of self-learning
- Developing resources for digital transformation (DX)

#### Securing diverse human resources and workstyles

- Enhancing programs which enable employees to balance childcare/nursing care and work (introduction of flexible working hours, support for self-driven career development, etc.)
- Driving active participation of women (increasing the number of new graduates and retention rate)
- Building working environment that is essential for active participation of women, senior employees, foreigners, mid-career employees, and people with disabilities

Going forward, it is clear that companies will struggle to survive unless they expand their investment in people and training. Consequently, we are also focusing on enhancing human capital as a key theme under Midterm Plan 2024.

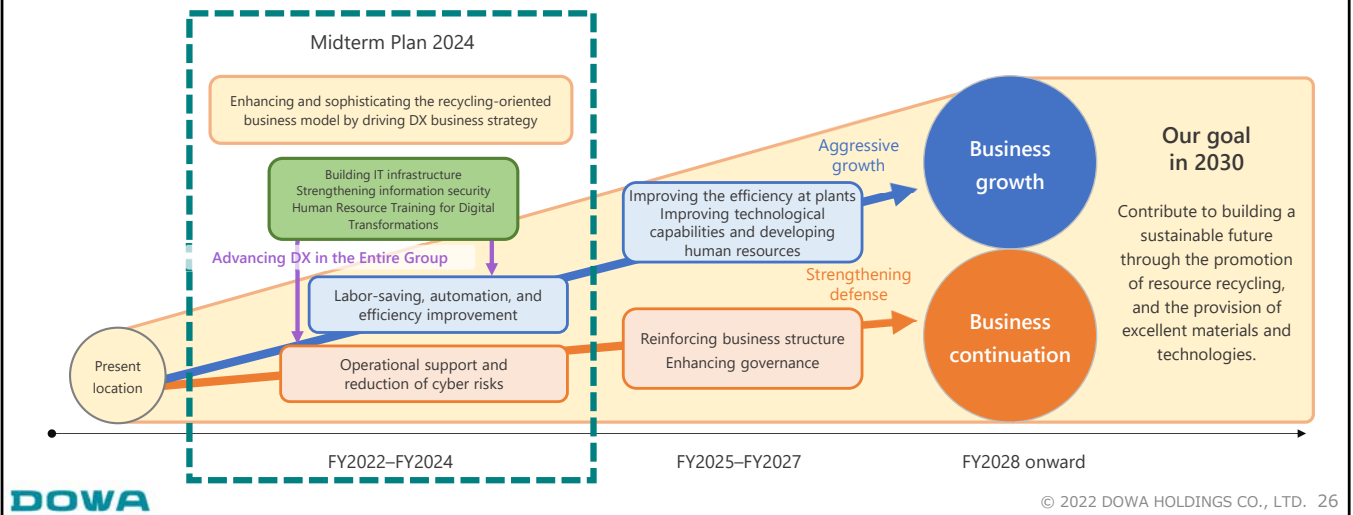
Securing the funds necessary for this will also be a focus of groupwide efforts.

Here are some examples of planned initiatives but we intend to focus on two themes, namely actively and effectively providing growth opportunities to employees and steadily achieving greater employee satisfaction and transparency in the treatment of employees.

## Focus (9): Driving Digital Transformation (DX)

### DX basic policy: Manufacturing transformation (DOWA Transformation)

The DOWA Group will accelerate and sophisticate data utilization with digital technologies to develop its adaptability to change, thus strengthening its main business of resource recycling and improving its ability to provide superior materials and technologies.



We will push ahead with DX, with manufacturing transformation as our basic policy. Looking at the period of Midterm Plan 2024, a major project for the renewal of backbone systems is currently underway. In addition to this, we plan to implement initiatives over this three-year period, focusing on strengthening cyber security and training and developing our own DX human resources. When the backbone system renewal is completed, we will seek to create highly efficient plants through the use of AI, IoT, MI and other technologies at plants. Both over the period of Midterm Plan 2024 and beyond, we will continue focusing on the key theme of enhancing governance through the use of DX.

So far I have explained to you our priority themes but we also have numerous other themes besides those highlighted here. Partly due to time constraints, I have highlighted the main areas of focus.



# Midterm Plan 2024 Management Targets

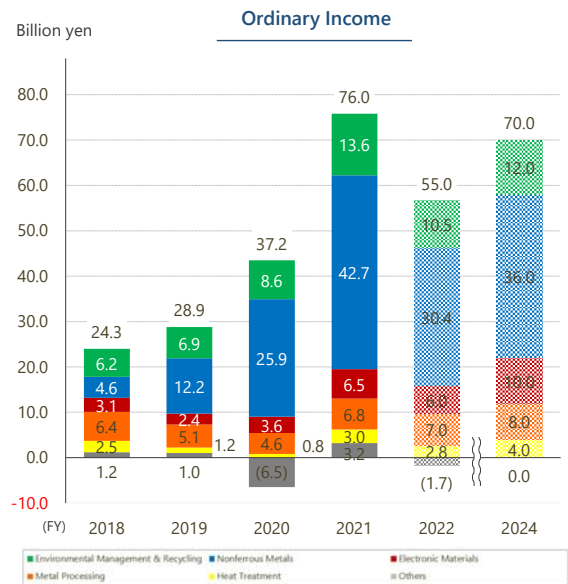
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I will now move on to our Management Targets.

## Financial Targets

(FY)	Midterm Plan 2020 (results)				Midterm Plan 2024	
	2018	2019	2020	2021	2022	2024
Operating Income (billion yen)	18.6	25.9	37.4	63.8	50.0	60.0
Ordinary Income (billion yen)	24.3	28.9	37.2	76.0	55.0	70.0
ROA* (%)	5.1	5.8	6.7	12.1	—	10 or more
ROE (%)	6.3	7.2	8.5	17.6	—	12 or more
Assumptions	Forex (¥/\$)	110.9	108.7	106.1	112.4	120.0
	Copper (\$/t)	6,341	5,860	6,879	9,691	10,000
	Zinc (\$/t)	2,746	2,405	2,419	3,254	3,800

\* ROA (Return on Assets): Ordinary income divided by the average of total assets at the start and end of the year.



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Looking at our financial targets, our income targets for FY2024, which is the final fiscal year of the plan, are on a par with our FY2021 results and we intend to reap the benefits of initiatives to keep various other indicators at a level comparable with FY2021.

While our price assumptions seem high compared with FY2021, since there will also be increases in energy costs and materials costs, we believe that, in combination with price volatility and the cost increase factor, the change will not be so great.

The Environmental Management & Recycling Segment is projected to maintain ordinary income exceeding 10 billion yen and the Nonferrous Metals Segment is also projected to post ordinary income exceeding 30 billion yen. It is the Electronic Materials Segment that will see the biggest change. Thanks to the launch of several promising new products, the segment will again take on the challenge of achieving ordinary income of 10 billion yen, a challenge taken on repeatedly in the past. Likewise, the Metal Processing Segment and the Heat Treatment Segment will once again strive to achieve the ordinary income target under Mid-term Plan 2020.

## Basic Policy on Capital Management

### Basic Policy on Capital Management

We aim to achieve sustainable growth and maximize our corporate value to achieve our Mission and Vision (our goal in 2030). To achieve these targets, we will implement capital measures with an appropriate balance between growth investments, maintenance of a sound financial foundation, and enhancement of shareholder returns while also paying attention to the business environment and future risks.

### Initiatives under the Midterm Plan 2024

#### Growth investments

We will be proactive in making investments in promising businesses and investments which improve the sustainability of the overall Group. Regarding growth investments, we will focus on projects which are expected to produce high investment effects, by considering capital cost and return on investment.

#### Maintaining a healthy financial foundation

We aim to maintain a sound financial foundation by fully considering the balance between shareholders' equity and interest-bearing debt, so as to continue growth investments and secure working capital.

#### An increase in shareholder returns

We provide returns to our shareholders by paying dividends, in principle, and will strive to ensure stable dividends and increase dividends in a stepwise manner.



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In our pursuit of sustained growth, we need to actively promote investment in markets with growth potential and in research and development. As in the previous mid-term plan, we have identified the continuation of growth investments as a key part of our capital management policy.

In addition, we intend to actively make ESG-related investments as investments to increase the Group's sustainability. I will give you a sense of the scale of investment later in this presentation.

Meanwhile, interest rates around the world including in Europe and the US are rising and Japan will also at some stage seek to normalize interest rates. In preparation for this, we have identified securing funds for investment and operating funds by own efforts as an important theme.

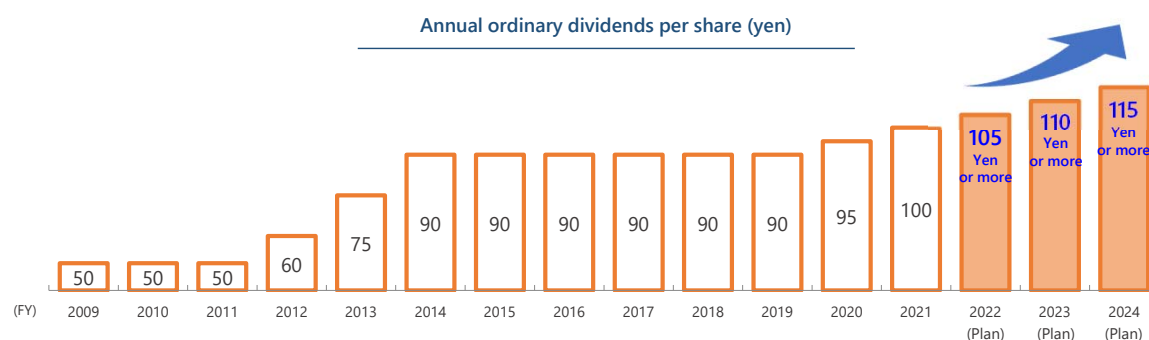
Our shareholder returns policy for the period of the Midterm Plan 2024 is that we provide returns to our shareholders by paying dividends, in principle, and will strive to ensure stable dividends and increase dividends in a stepwise manner. Ensuring stable dividends is something we have communicated before and we have kept this as the basis of our policy.

## Dividend Policy

DOWA regards the payment of dividends to shareholders as one of its top management priorities. The Company sets out a policy of increasing dividends as performance allows, while ensuring sufficient internal reserves for bolstering the corporate structure and expanding business in the future in line with the basic principle of maintaining stable dividends.

Our basic dividend policy for the period of the Midterm Plan 2024 (FY2022 through FY2024) is not to decrease the amount of ordinary dividends from the previous year's amount and to increase the amount of ordinary dividends in stages because ordinary income will increase in stages from 55.0 billion yen to 70.0 billion yen under the plan.

Moreover, we will aim to increase the amount of dividends further in consideration of financial results and cash flows in each fiscal year, future prospects, and other factors.



\*Figures for the annual ordinary dividends per share for FY2016 and before were corrected to those after the stock split.

\*The total amount of annual dividends for FY2021 is 130 yen per share, with the amount of special dividends (30 yen) added to that of ordinary dividends (100 yen).

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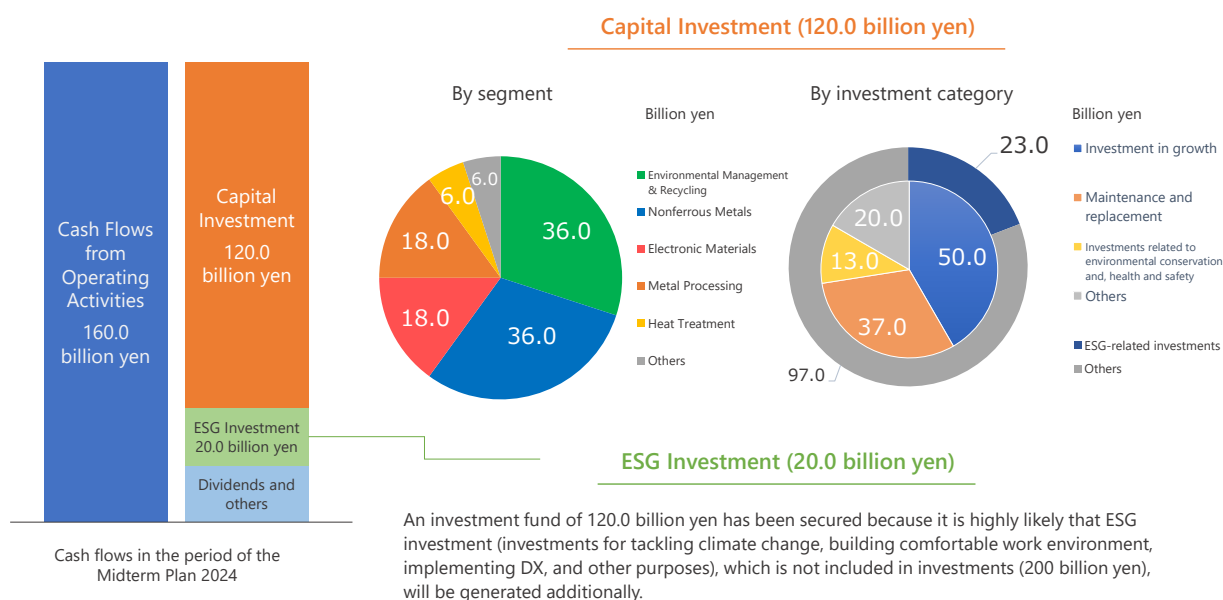
This deals with our dividend policy.

In FY2021, we paid a total dividend of 130 yen, consisting of an ordinary dividend of 100 yen as well as a special dividend of 30 yen, which has not been included in the graph.

Under Midterm Plan 2024, ordinary income will reach 55.0 billion yen in FY2022, which is the first fiscal year of the plan. This is the second highest level of income on record. With this as the bottom level, we will then raise the level of ordinary income every year until it reaches 70 billion yen. Based on this plan, we intend to pay ordinary dividends in the amounts shown in the graph at the very least.

By "or more" in this graph, we mean that, given the current circumstances which make price trends absolutely impossible to predict, if, like in FY2021, prices are much better than anticipated, we will aim for "more" than this dividend level. At any rate, we will continue to pay a stable dividend and have said in our basic dividend policy that we will not decrease the amount of ordinary dividends from the previous year's amount.

## Allocation of Funds (Cash Allocation)



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This shows our approach to the allocation of funds.

The plan assumes cash flows from operating activities of 160.0 billion yen over the three years. 120.0 billion yen of this has already been earmarked for capital investment. In addition, we have set aside 20.0 billion yen as funds for ESG investments over the next three years based on our capital management policy of actively promoting investment in sustainability. The remaining 20.0 billion yen or so will be used for dividends.

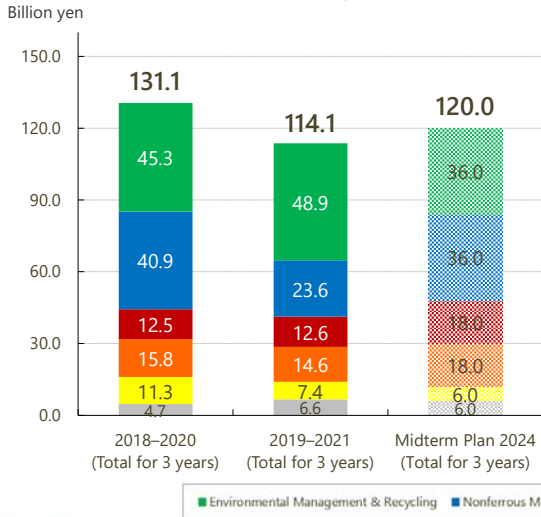
Especially in the Environmental Management & Recycling Segment and the Nonferrous Metals Segment, investment focused on maintenance is expected to increase because these segments have a great deal of equipment and facilities. In the Electronic Materials Segment, Metal Processing Segment, and Heat Treatment Segment, we will continue making high levels of growth investments.

The investment fund of 120.0 billion yen can be broken down by use as follows: 50.0 billion yen for investment in growth, 37.0 billion yen for maintenance and replacement mainly in the Nonferrous Metals Segment, and 13.0 billion yen for investments related to environmental conservation and health and safety, and 20 billion yen for others. A breakdown of investment into ESG investment and non-ESG investment shows that ESG investment will amount to 23.0 billion yen. Since we will generate 20.0 billion yen for ESG investment on top of this amount, we plan to make ESG investment on a scale exceeding 40.0 billion yen over the coming 3 years.

(Ref.) Capital Investment, R&D

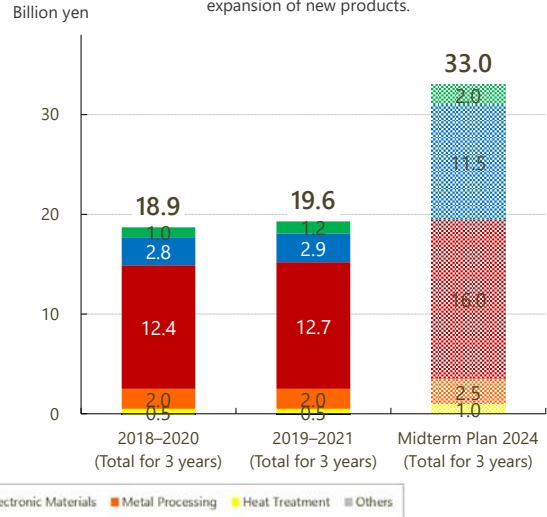
Capital Investment

The total amount of investment increased slightly compared to the last three years.



R&D

In Nonferrous Metals, cost of overseas mineral exploration increased. In Electronic Materials, cost of samples, etc. increased reflecting sales expansion of new products.



Partly due to an increase in the number of sites across the Group, capital investment is expected to increase over the period of Midterm Plan 2024. Since capital investment in the period from FY2018 to FY2020 includes investment for the construction of the Los Gatos Mine in the Nonferrous Metals Segment, capital investment will decrease compared with those three years. However, we will continue making extremely high levels of capital investment.

R&D expenses are projected to increase significantly in the Nonferrous Metals Segment. This is because a business engaged in exploration activity in Alaska became a consolidated company due to an increase in our stake and exploration expenses have been added to the R&D expenses. We hope to fuse the environmental and smelting businesses in the future to further develop the recycling business but specific investment related to this is not included in the plan. We intend to estimate exactly how much investment will be needed whilst pursuing technological investment over the coming three years.

Meanwhile in the Electronic Materials Segment, without aggressive investment in development and research, the risk of failing to keep up with future technological trends will increase and we therefore intend to continue actively investing in development.





# Midterm Plan 2024 Strategies in Each Business

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I would now like to explain specific strategies in each segment.

## Environmental Management & Recycling (1) Outline of Midterm Plan 2024



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### Business strategy

Contribute to building a safe, secure future by continuing to create solutions with high customer satisfaction as Asia's top runner in the environmental management field.

### Financial data

Operating income	Ordinary income	Capital investment	R&D
<b>11.0 billion yen</b> (FY2024)	<b>12.0 billion yen</b> (FY2024)	<b>36.0 billion yen</b> (Total for 3 years)	<b>2.0 billion yen</b> (Total for 3 years)

### Major initiatives

- Waste treatment:** Expanding treatment of hazardous waste and driving the business of treating used lithium ion batteries
- Soil remediation:** Expanding the dismantling, shredding, and sorting businesses and driving the expansion of landfill facilities (Green Fill Kosaka)
- Recycling:** Increasing the collection of materials for recycling and enhancing the capacity of the used home appliance recycling business and waste plastic recycling business
- Southeast Asia:** Enhancing treatment of hazardous waste and establishing a new treatment facility in East Java (Indonesia)

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I will begin with an explanation of the Environmental Management & Recycling Segment. Our business strategy is an extension of our previous strategy and is to "contribute to building a safe, secure future by continuing to create solutions with high customer satisfaction as Asia's top runner in the environmental field." It has always been our commitment to "create solutions with high customer satisfaction."

In terms of financial targets, we will aim for ordinary income exceeding 10.0 billion yen in FY2024 and also plan to actively make investment.

As for major initiatives, in the waste treatment business, which is one of our strengths, we expect that the expansion and monetization of the treatment of hazardous waste are challenges for the period beyond Midterm Plan 2024 but we intend to make preparations to drive the business of treating used lithium ion batteries. In the soil remediation business, we will expand the non-incineration business, in other words, the dismantling, shredding, and sorting businesses, and steadily push ahead with the expansion of landfill facilities. In the recycling business, with expectations growing all around the world, we will expand the recycling of various materials. In Southeast Asia, the volume of waste generated is expected to increase with the region's economic development and so we will ensure that we tap into this opportunity.

Environmental Management & Recycling (2) Major Initiatives (details)		★: New initiatives to pursue under the Midterm Plan 2024				
Waste treatment	Expanding treatment of hazardous waste	Expanding treatment of fluorocarbons and other hazardous waste				
	Driving the business of treating used lithium ion batteries	Expanding recycling capacity	Increasing the volume of recycling		Commercialization	
Soil remediation	Expanding the dismantling, shredding, and sorting businesses	Full operations	Maintaining a high operating rate in the business of recycling non-burnable waste			
	Driving the expansion of landfill facilities (Green Fill Kosaka)	Preparations for construction		Construction work	Start of operation	
Recycling	Increasing the collection of materials for recycling		★ Expanding the area for collection and establishing a new collection base			
	Enhancing the capacity of the used home appliance recycling business and waste plastic recycling business		★ Investment in enhancement	Start of operation		
Southeast Asia	Enhancing treatment of hazardous waste	Thailand Indonesia	Obtaining new authorization	Increasing treatment options		
	establishing a new treatment facility in East Java (Indonesia)		Facility construction	Expansion of incineration and detoxifying treatment		
			Construction work	Start of operation		
		FY2021	FY2022	FY2023	FY2024	FY2025 onward



This page gives more details of the initiatives to be executed during the Midterm Plan 2024 period and beyond.

The initiatives marked with ★ are new initiatives to be pursued under the Midterm Plan 2024. In the Environmental Management & Recycling Segment, we will introduce new initiatives focused on the recycling business. In other businesses, the monetization of preparations made under the previous midterm plan will be the focus.

## Nonferrous Metals (1) Outline of Midterm Plan 2024



### Business strategies

Enhance resource recycling further and deliverer the full potential of resources.  
Building a sustainable Nonferrous Metals business model.

### Financial data

#### Operating income

**30.0 billion yen**  
(FY2024)

#### Ordinary income

**36.0 billion yen**  
(FY2024)

#### Capital investment

**36.0 billion yen**  
(Total for 3 years)

#### R&D

**11.5 billion yen**  
(Total for 3 years)

### Major initiatives

Precious metals and copper smelting: Treating more materials for recycling by handling impurities and increasing the production volume and yield rate of tin  
Platinum group metals (PGM): Increasing spent catalysts collection by expanding overseas bases and increasing the treatment capacity of Nippon PGM  
Zinc: Establishing a structure for annual production of 220,000 tons at Akita Zinc  
Mine development: Increasing production at Los Gatos Mine (Mexico) and driving the Palmer Zinc and Copper Project (Alaska)

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This deals with the Nonferrous Metals Segment.

Our business strategy in the Nonferrous Metals Segment is to "enhance resource recycling further and deliverer the full potential of resources" and "building a sustainable Nonferrous Metals business model."

The wording is slightly different from before, but we intend to further enhance resource recycling as an extension of the past business flow.

This is a business segment that is significantly affected by metals prices but, based on the assumptions of Midterm Plan 2024, it is still a segment which can be expected to be highly profitable. Investment will be focused on infrastructure development but we will maintain a comparatively high level of investment.

Looking at major initiatives, in the precious metals and copper smelting business, we will strengthen the production processes at Kosaka Smelting and Refining. Since there is still room for the recovery of tin, we will implement initiatives such as developing new recovery technology and knowhow and improving facilities and increase the recovery rate of valuable metals which were previously missed. In the PGM business, more and more spent automotive catalysts will be generated in the future and so we will create a structure that allows us to expand spent catalyst collection all over the world, not only in the United States and Europe where we already operate but also in Asia and Latin America, and we will also expand our equipment and facilities. In the mine development business, we have already started production at Los Gatos Mine and so, if anything, we will focus on advancing the mining projects that are next in line.

## Nonferrous Metals (2) Major Initiatives (details)

★: New initiatives to pursue under the Midterm Plan 2024

		FY2021	FY2022	FY2023	FY2024	FY2025 onward
Precious metals and copper smelting	Treating more materials for recycling by handling impurities	★	Introduction of test facilities	Tests and development	Start of operation	
	Increasing the production volume and yield rate of tin	Increasing the yield rate	Technology development to further increase yield rate	Process optimization	Start of operation	
	Business infrastructure development	Continuing investment for environmental preservation				
PGM	Increasing spent catalysts collection by expanding overseas bases Europe Korea	Start of operation	Collecting more spent catalysts			
		North America ★	Improving the efficiency of existing bases and expanding the area for collection	Collecting more spent catalysts		
	Increasing the treatment capacity of Nippon PGM	★	Preparations for construction	Upgrading electric furnaces	Start of operation	
Zinc	Establishing a structure for annual production of 220,000 tons at Akita Zinc	Process improvement	Starting to increase production	Continuing process improvement and optimizing zinc smelting process		
Mine development	Increasing production at Los Gatos Mine (Mexico)	Enhancing facilities for handling impurities		Reducing the amount of impurities		
		Driving mineral exploration at owned mining areas				
	Driving the Palmer Zinc and Copper Project (Alaska)	Mineral exploration activities			Starting a feasibility study	Development decision



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As before, this page shows detailed plans of initiatives, this time for the Nonferrous Metals Segment.

In the precious metals and copper smelting business, we will introduce test equipment to treat more materials for recycling by handling impurities and strive to acquire technical knowledge at Kosaka Smelting and Refining. In the PGM business, we will implement a range of initiatives for business expansion. In other businesses, we will mainly refine our initiatives to date.

## Electronic Materials (1) Outline of Midterm Plan 2024



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### Business strategies

Expand the business in growth markets such as energy, information and communication, automobiles, and healthcare.  
Provide unique products needed in society, such as ones for achieving carbon neutrality and ones for the healthcare market.

### Financial data

#### Operating income

**7.5 billion yen**  
(FY2024)

#### Ordinary income

**10.0 billion yen**  
(FY2024)

#### Capital investment

**18.0 billion yen**  
(Total for 3 years)

#### R&D

**16.0 billion yen**  
(Total for 3 years)

### Major initiatives

- Semiconductors: Increasing production capacity of short-wavelength-infrared LEDs and photo diodes (PD) for wearable devices
- Electronic materials: Developing silver powder in line with the progress in the development of high-efficiency solar panels and improving the performance and increasing the production of conductive atomized powder
- Advanced fine materials: Establishing a structure for the mass production of fuel cell materials
- New development: Process optimization and mass production of solid electrolyte powder for all-solid-state batteries for consumer use

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This deals with the Electronic Materials Segment. This is the segment with the biggest change in terms of income target.

Looking at initiatives, in the semiconductor business, we intend to strengthen short-wavelength-infrared LEDs and photo diodes (PD), including those for next-generation devices, after a good start in FY2021. In the electronic materials business, silver powder for high-efficiency solar panels will definitely be a pillar of earnings. In addition, we intend to quickly develop conductive atomized powder in response to increasing inquiries from customers. We are already turning a profit but we will make the business even more profitable.

In the advanced fine materials business, we have yet to produce any real hit products but one product which we have high hopes for is fuel cell materials. Against the backdrop of the recent increase in energy costs, inquiries about materials for stationary fuel cells have gradually increased in Asia and Europe. We therefore intend to establish fuel cell materials as a major business. In terms of new development, we will continue to develop solid electrolyte powder for all-solid-state batteries though this will still take us time and money.

Electronic Materials (2) Major Initiatives (details)					★: New initiatives to pursue under the Midterm Plan 2024	
Semiconductors	Increasing production capacity of short-wavelength-infrared LEDs and photo diodes (PD) for wearable devices ★	Start mass production	Construction work for increasing production	Start of operation		
		Development and sample provision of products for next-generation wearable devices	Mass production preparations	Start mass production		
Electronic materials	Developing silver powder in line with the progress in the development of high-efficiency solar panels	Developing differentiating technologies	Provide evaluation samples	Start mass production	Considering construction for increasing production in response to demand	
		Improving the performance and increasing the production of conductive atomized powder	Start mass production	Development for achieving higher performance Provide evaluation samples	Construction work for increasing production	Start of operation
Advanced fine materials	Establishing a structure for the mass production of fuel cell materials		Launch	Start mass production		
			Customer development	Considering construction for increasing production in response to demand		
New development	Developing next-generation recording materials and establishing a structure for mass production ★		Material development and provision of samples	Process optimization	Construction and launch	Start of operation
		Process optimization and mass production of solid electrolyte powder for all-solid-state batteries for consumer use	Mass production Construction	Launch and process optimization	Start mass production	
		FY2021	FY2022	FY2023	FY2024	FY2025 onward



Again, the initiatives marked with ★ are new initiatives under the latest plan.

Short-wavelength-infrared LEDs and photo diodes (PD) are already built into existing models but we will push ahead with development and sample provision of products for next-generation wearable devices.

We will also focus on developing next-generation recording materials and establishing a structure for mass production. The usefulness of data storage using magnetic recording tape is once again attracting attention from the viewpoint of carbon neutrality and reduction of CO2 emissions in addition to cybersecurity, and this may be a huge business opportunity. We also intend to push ahead with the development and mass production of next generation recording materials to ensure we meet customer needs for increased memory capacity.



## Metal Processing (1) Outline of Midterm Plan 2024



### Business strategies

Continue to invest aggressively in growth markets (applications and regions) to tap into new demand surely.  
Contribute to society by providing products and services which reduce environmental risks.

### Financial data

Operating income	Ordinary income	Capital investment	R&D
<b>7.5 billion yen</b> (FY2024)	<b>8.0 billion yen</b> (FY2024)	<b>18.0 billion yen</b> (Total for 3 years)	<b>2.5 billion yen</b> (Total for 3 years)

### Major initiatives

**Copper rolled products:** Increasing sales of high-value-added products, strengthening sales in growth markets, and expanding the Asia business  
Launching and expanding sales of new high-performance copper alloy strips

**Electroplating:** Expanding sales of electroplated products for high-voltage terminals and increasing capacity by eliminating and consolidating production lines and increasing production at facilities in Japan

**Metal-ceramic substrates:** Expanding sales and increasing production capacity of metal-ceramic substrates for industrial machinery and railways

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This page is about the Metal Processing Segment.

Our business strategy is to "continue to invest aggressively in growth markets (applications and regions) to tap into new demand surely" and to "contribute to society by providing products and services which reduce environmental risks."

In automotive and electronic component applications, demand for high-performance materials is growing stronger and stronger. Since this is a market in which we can seek to differentiate ourselves from our competitors through our technical expertise, we will focus on establishing a market advantage by opening up new markets and developing new products. In the copper rolled products business, we have made aggressive investments to eliminate production bottlenecks at our two main plants (DOWA METAL and DOWA METANIX). We also plan to complete the upgrading of rolling mills at DOWA METANIX during FY2022 and believe that the challenge of how to use the increased capacity of each facility effectively represents a growth opportunity, and will be a major theme.

In the electroplating business, the market for new electroplated products for high-voltage terminals is one in which we could gain a monopoly and so we intend to keep pace with the establishment of the market and steadily tap into demand.

In the metal-ceramic substrates business, demand for metal-ceramic substrates for railways is still at a standstill but will undoubtedly pick up at some point, and from the viewpoint of carbon neutrality, railways will once again become hugely significant. We therefore intend to expand sales of high performance products as before and seize this opportunity.



## Metal Processing (2) Major Initiatives (details)

★: New initiatives to pursue under the Midterm Plan 2024

		FY2021	FY2022	FY2023	FY2024	FY2025 onward
Copper rolled products	Increasing sales of high-value-added products	Sales expansion to small terminals for automotive use				
		Sales expansion to terminals for industrial machinery				
	Strengthening sales in growth markets	Construction for increasing production (rolling machines)	Launch	Start of operation		
		Sales expansion of connector materials for smartphones				
	Expanding the Asia business	China	Sales expansion to local manufacturers	Construction work for increasing production	Start of operation	
Thailand		Sales expansion to local manufacturers	Construction work for increasing production	Launch		
Launching and expanding sales of new high-performance copper alloy strips	Development of new alloys and process optimization		Start of sales			
Electroplating	Expanding sales of electroplated products for high-voltage terminals	Japan	Tapping new demand and expanding sales to cater to customers' development needs			
		★ Thailand	Preparations for construction	Construction work for increasing production	Start of operation	
	Increasing capacity by eliminating and consolidating production lines and increasing production at facilities in Japan	Electroplating lines Preparing for elimination and consolidation	★ New building construction	Constructing eliminating & consolidating production lines	Start of operation	
Metal-ceramic substrates	Expanding sales and increasing production capacity of metal-ceramic substrates for industrial machinery and railways	Preparations for construction	Construction work for increasing production			Start of operation

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This shows details of major initiatives.

In the copper rolled products business, reaping the benefits of initiatives implemented under the Midterm Plan 2020 will be a major theme.

While there are few new initiatives, in the electroplating business, we will push ahead with the construction of a new electroplating plant in Thailand. Meanwhile, in Japan, we will build new electroplating lines to enable us to meet increasing new electroplating demand. We will also build a new plant on our existing site in a bid for improvement in terms of Quality, Cost, Delivery, Environment and Safety (QCDES).

## Heat Treatment (1) Outline of Midterm Plan 2024



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### Business strategies

Take the moves towards carbon neutrality as an opportunity and drive initiatives to reinforce sales, manufacturing, and development structures.

Achieve steady growth in growing markets (overseas and new markets).

### Financial data

Operating income	Ordinary income	Capital investment	R&D
4.0 billion yen (FY2024)	4.0 billion yen (FY2024)	6.0 billion yen (Total for 3 years)	1.0 billion yen (Total for 3 years)

### Major initiatives

Industrial furnaces:	<ul style="list-style-type: none"> <li>Developing and expanding sales of heat treatment facilities which realize carbon neutrality (such as the cell-type vacuum carburizing furnace)</li> <li>Developing and expanding sales of new equipment for applications other than automobiles</li> </ul>
Heat treatment processing:	<ul style="list-style-type: none"> <li>Receiving orders for EV-related components, finding new customers, and winning orders from customers other than those in the automotive industry</li> <li>Responding to demand for local procurement and winning new customers (related to EVs) in overseas countries</li> </ul>

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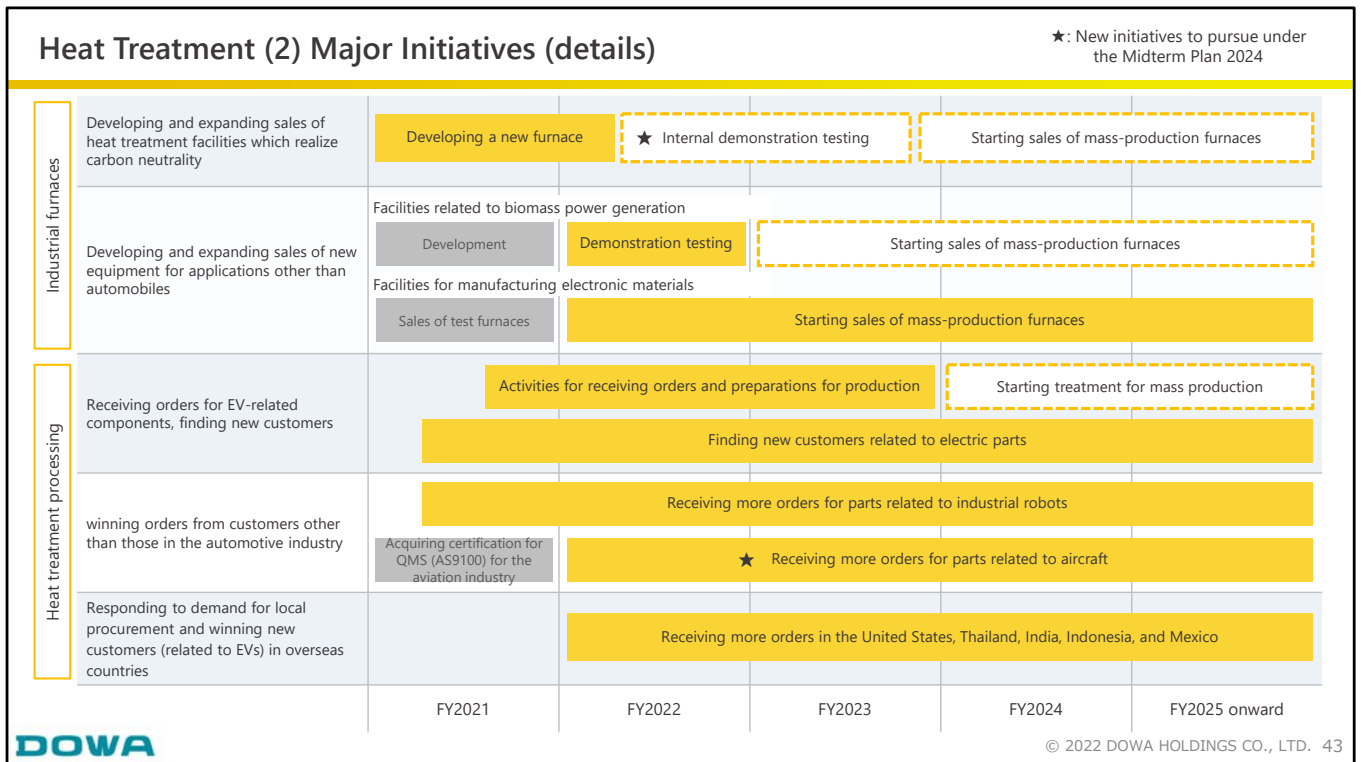
In the Heat Treatment Segment, the trend of production of vehicles using internal combustion engines is the biggest cause of concern partly due to the very high degree of dependence on the automotive industry.

Our business strategy is to "take the moves towards carbon neutrality as an opportunity and drive initiatives to reinforce sales, manufacturing, and development structures" and to "achieve steady growth in growing markets (overseas and new markets)." In this context, "new" means markets other than the automotive market. Also in terms of income targets, we projected income exceeding the high level achieved in FY2021.

In the industrial furnaces business, we will develop and expand sales of new furnaces which realize carbon neutrality and intend to push ahead with development with a view to launching these furnaces in the final fiscal year of the Midterm Plan 2024.

In terms of "developing and expanding sales of new equipment for applications other than automobiles", we are already receiving concrete enquiries and intend to gradually expand sales.

In the heat treatment processing business, whilst it is said that, due to the spread of EVs, the number of components that require heat treatment per vehicle will decrease, we believe that auto production will increase. We estimate, that the automotive components heat treatment market in general is unlikely to shrink significantly due to the spread of EVs. Whilst there may be little prospect of significant growth in the future, we will ensure business survival by tapping into opportunities in a modestly growing market and this will be a major theme in the heat treatment business. Especially during the period of the Midterm Plan 2020, we pushed ahead with the expansion and development of overseas sites and so we will focus on the monetization of these initiatives in the future.



This shows details of major initiatives.

Whilst meeting automotive demand will still be a focus, outside the automotive industry, we have already begun sales on a trial basis for facilities related to biomass power generation and facilities for manufacturing electronic materials. We intend to get such initiatives fully on track. In connection with initiatives outside the automotive industry, in the heat treatment processing business, we succeeded in obtaining AS9100 quality management system certification for the aerospace industry at one of our domestic plants last year and so we intend to fully expand heat treatment services for aircraft over the coming three years. Overseas, we have been making investments to expand our capacity and so a major challenge during the period of the Midterm Plan 2024 will be to improve the performance of each plant. Under Midterm Plan 2020, we made investments to expand our plants in various overseas countries including India and Mexico, but under Midterm Plan 2024 we are not considering advancing into new areas. We expect that we will make appropriate judgments as necessary based on an assessment of market trends.

## (Appendix 1) Assumptions and Sensitivities

Sensitivity (Operating Income / FY2022)			Million yen
	Assumptions	Fluctuation	Sensitivity
Exchange rate	120.0 ¥/\$	±1 ¥/\$	<b>680</b>
Copper	10,000 \$/ton	±100 \$/ton	<b>40</b>
Zinc	3,800 \$/ton	±100 \$/ton	<b>420</b>

\* Exchange rate sensitivity; Nonferrous Metals 540 million yen and Electronic Materials 140 million yen.

### Exchange Rate and Metal Prices

	Midterm Plan 2020 (results)				Midterm Plan 2024		
	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
Exchange Rate: (¥/\$)	110.9	108.7	106.1	112.4	<b>120.0</b>	<b>120.0</b>	<b>120.0</b>
Copper: (\$/t)	6,341	5,860	6,879	9,691	<b>10,000</b>	<b>10,000</b>	<b>10,000</b>
Zinc: (\$/t)	2,746	2,405	2,419	3,254	<b>3,800</b>	<b>3,800</b>	<b>3,800</b>

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The assumptions for the three-year period covered by the Midterm Plan 2024 are the same as those used to calculate the FY2022 forecasts. In terms of sensitivity, factors such as increased sales of byproduct metals in the Environmental Management & Recycling Segment and expansion in sales of silver powder in the Electronic Materials Segment has increased our exchange rate sensitivity and this can be said to be a feature of our business in recent years.

## (Appendix 2) Factor Analysis of Ordinary Income



Our ordinary income target for the final fiscal year of Midterm Plan 2024 is 70.0 billion yen, which is on a par with the FY2021 result.

Regarding costs, as mentioned in connection with the FY2022 forecasts, due to the high levels of uncertainty, our estimates are to some extent on the safe side. We see the increases in depreciation expenses and R&D expenses in a positive light as they are higher costs associated with investment necessary for growth. As for the impact of metal prices, we hope you will see this in combination with the increase in hedging costs which are to some extent linked to price movements. On top of this, we plan to generate profit by reaping the benefits of increased sales and initiatives.

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

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This concludes my presentation.  
Thank you very much.