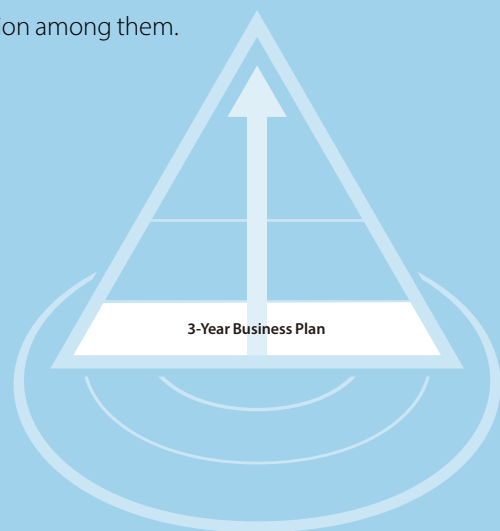




Medium-to Long-Term Strategy for Value Creation

As a means of responding to our materiality and Vision for 2030, SMM announced a 3-year business plan ending in FY2024. We are promoting a strengthening of our growth base by the three core businesses of Mineral Resources, Smelting & Refining, and Materials and fortifying collaboration among them.



Strategy and Resource Allocation

- 44 **Changes in the 3-Year Business Plan**
- 46 **The Value Creation Logic Tree**
- 48 **Main Progress of the 2021 3-Year Business Plan**

Financial Strategy

- 52 **Basic Approach to Financial Strategy**
- 54 **Funding/Investment/Return to Shareholders**
- 56 **Results and Plan**

Strategies for Individual Business Segments

- 58 **Mineral Resources Business**
- 62 **Smelting & Refining Business**
- 66 **Materials Business**

Reinforcing Intangible Assets

- 72 **Research & Development**
- 76 **Human Resources Strategy**
- 80 **Digital Transformation (DX) at the SMM Group**

Promotion of Sustainability Activities

- 86 **Sustainability Management**
- 88 **Vision for 2030 (Material Issues and KPIs)**
- 90 **Focus 1 Carbon Neutrality**
- 96 **Focus 2 Management of Tailings Dams**
- 98 **Focus 3 Human Rights**

What we want to convey in this chapter

We relate the value creation logic tree to our strategies in the 3-year business plan and resource allocation and arrange the connectivity of each measure in a logical manner.

We position initiatives in R&D, human-resource strategy, and DX as the strengthening of intangible assets and communicate the progress and results of these initiatives with reporting the opinions of employees.

We explain sustainability-related initiatives as medium- to long-term strategy and in particular explain high-priority initiatives as Focus.

Changes in the 3-Year Business Plan

We have been focusing on strengthening our corporate structure through selection and concentration since the Corporate Revitalization Plan (FY2000 to FY2001), which was created in the year after the JCO criticality accident in 1999, and the 2001 2-Year Business Plan (FY2002 to FY2003). In the 2003 3-Year Business Plan (FY2004 to FY2006) and beyond, we are shifting to the implementation of large-scale projects





to achieve growth strategies. We continue to expand and strengthen our core business to this day.

In recent years, there have been some projects that did not result in major successes, such as the participation in planning for the Sierra Gorda Copper Mine (transferred in 2022) and the feasibility study on the Indonesian Pomalaa Project (discontinued in 2022). However, the Cote Gold Proj-

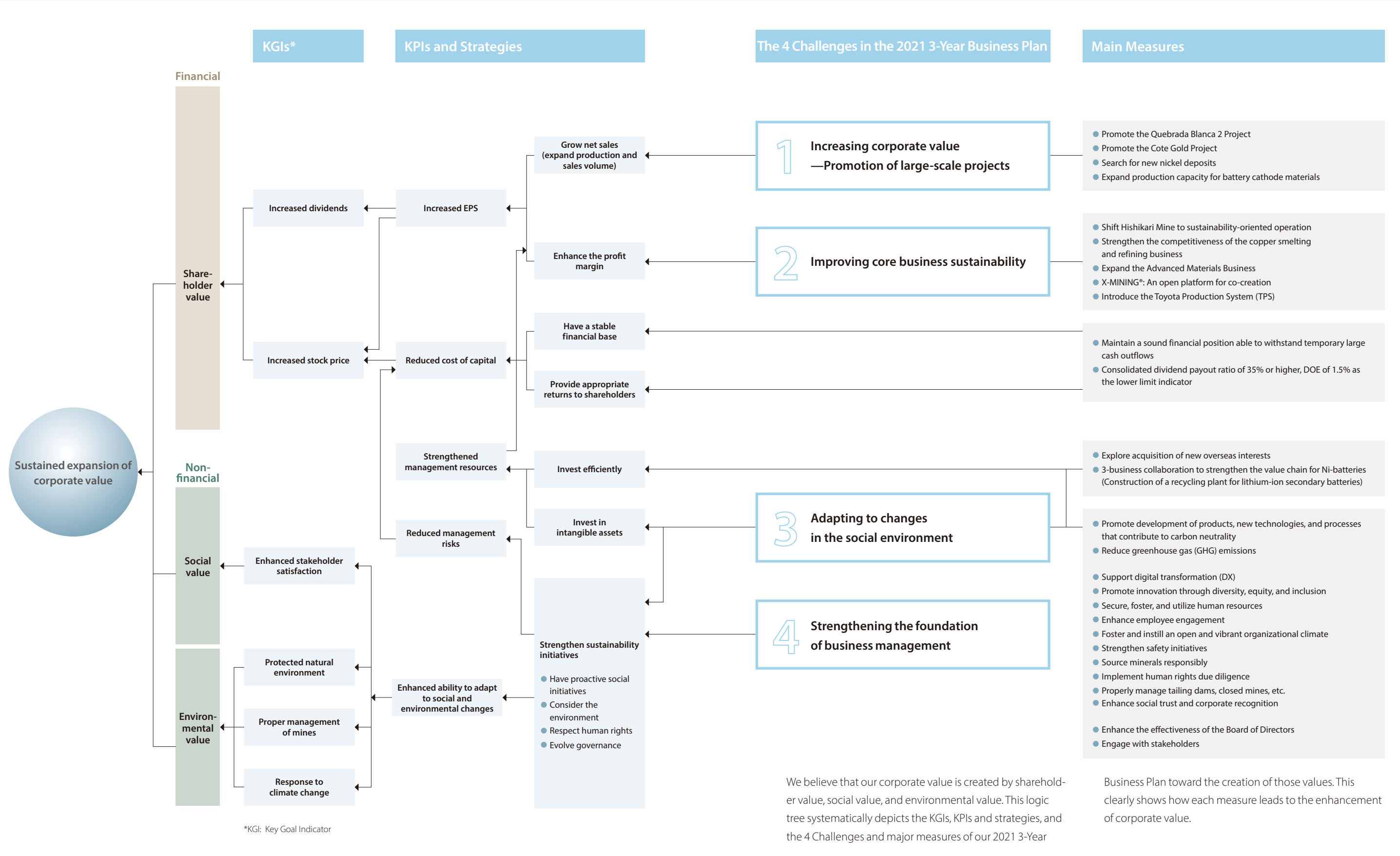
ect and the Quebrada Blanca 2 Project in which we decided to participate during our 2015 3-Year Business Plan (FY2016 to FY2018), as well as the expansion of production capacity for cathode materials for secondary batteries in which we decided to invest during the 2018 3-Year Business Plan (FY2019 to FY2021), are expected to contribute to our performance starting this fiscal year, which is the final year of the 2021

3-Year Business Plan (FY2022 to FY2024).

Going forward, as we put to use the results from our previous initiatives, we aim to further improve our corporate value and work to promote and monetize various projects.

	2015 3-Year Business Plan FY2016 to FY2018	2018 3-Year Business Plan FY2022 to FY2024	2021 3-Year Business Plan FY2022 to FY2024	
Long-Term Vision	Become the world leader in the non-ferrous metals industry and an excellent company of Japan			
Plans	<div>Mineral Resources</div> <ul style="list-style-type: none">Full-scale production at the Sierra Gorda Copper MineAcquire new gold mine interests <div>Smelting & Refining</div> <ul style="list-style-type: none">Expand Taganito HPALAdvance growth strategies using HPAL peripheral technologiesEnhance competitiveness of copper smelting business <div>Materials</div> <ul style="list-style-type: none">Profit contribution from expanded battery material and LT/ LN productionContinuously create and adapt next-generation products <ul style="list-style-type: none">Corporate governance strengtheningGlobalization measures	<div>1 Strengthen the growth foundation of core businesses (Mineral Resources, Smelting & Refining, Materials)</div> <ul style="list-style-type: none">Steady promotion of growth strategy and swift realization of competitiveness: Aggressive investmentMinimizaiton of lost profits and opportunity loss and consolidation of business base: Defensive investment <div>2 Strengthen 3-business collaboration centered on cathode materials for batteries</div> <ul style="list-style-type: none">Maximally leverage the integrated production structure and win through overall capabilities, including battery recycling <div>3 Strengthen corporate functions</div> <ul style="list-style-type: none">Stimulate communication with stakeholders both inside and outside the companyRebuild an open and vibrant organizational climate	<div>Become the world leader in the non-ferrous metals industry</div> <div>The 4 Challenges in the 2021 3-Year Business Plan</div> <div>1 Increasing corporate value—Promotion of large-scale projects</div> <ul style="list-style-type: none">Expanding production capacity for battery cathode materials ▶ P.48Quebrada Blanca 2 project ▶ P.48Cote gold mine development project ▶ P.48 <div>2 Improving core business sustainability</div> <ul style="list-style-type: none">3-business collaboration to strengthen the value chain for Ni-batteries<ul style="list-style-type: none">Searching for a next nickel project ▶ P.49Battery recycling ▶ P.65Shifting Hishikari Mine to sustainability-oriented operation ▶ P.60Enhancing competitiveness of copper-smelting business ▶ P.49Strategy for advanced materials business expansion ▶ P.49 <div>3 Adapting to changes in the social environment</div> <ul style="list-style-type: none">Reducing greenhouse gas (GHG) emissions ▶ P.50Promoting the development of products, technologies and processes that can help achieve carbon neutrality ▶ P.92Adaptation to digital transformation (DX) ▶ P.50Initiatives for securing, fostering and utilizing human capital ▶ P.50 <div>4 Strengthening the foundation of business management</div> <ul style="list-style-type: none">Strengthening safety initiatives ▶ P.51Reorganizing and enhancing sustainability promotion framework ▶ P.51Corporate governance ▶ P.51 <div></div>	
Results	<div>Mineral Resources</div> <ul style="list-style-type: none">Incurred a large impairment loss at the Sierra Gorda Copper Mine due to a production slump and increase in costsEntered into the Cote Gold ProjectAcquired interest in the Quebrada Blanca 2Transferred the Pogo Gold Mine interest <div>Smelting & Refining</div> <ul style="list-style-type: none">Completed 36-kt production structure at Taganito HPALCommercialized scandium and chromite recoveryAchieved 450-kt electrolytic copper production volumeCompleted 49-kt nickel sulfate production structureBegan Pomalaa Project Definitive Feasibility Study (DFS) <div>Materials</div> <ul style="list-style-type: none">Completed 4,550-t/month battery material production structureCompleted increase of LT/LN production structureDeveloped nickel oxide powder for fuel cell electrodesEntered into silicon carbide (SiC) businessWithdrew from lead frame business <ul style="list-style-type: none">Increased number of outside directors, appointed female directorsImplemented International Financial Reporting Standards (IFRS), commenced integrated report publication	<div>Strengthen the growth foundation of core businesses (Mineral Resources, Smelting & Refining, Materials)</div> <div>Mineral Resources</div> <ul style="list-style-type: none">Decided to sell all interests in the Sierra Gorda Copper Mine, which has established stable, full-scale production, as part of the Group-wide asset portfolio optimization and strategic asset replacement (transfer of all interests completed in February 2022)Had steady progress in FY2021 despite factors such as a temporary halt of construction of the Quebrada Blanca 2 Project due to COVID-19 and an increase in the initial start-up costs of the Cote Gold Project <div>Smelting & Refining</div> <ul style="list-style-type: none">Decided to discontinue feasibility study on the Indonesian Pomalaa Project in April 2022 <div>Materials</div> <ul style="list-style-type: none">Concluded a transfer contract with Sumitomo Osaka Cement Co., Ltd. to acquire their lithium iron phosphate (LFP) battery materials business on May 1, 2022 <div>Strengthen 3-business collaboration centered on cathode materials for batteries</div> <ul style="list-style-type: none">Decided to construct a new battery plant in 2021 (construction to be completed during the 2021 3-Year Business Plan)Established a new recycling process with the ability to recycle copper, nickel, cobalt, and lithium <div>Strengthen corporate functions</div> <ul style="list-style-type: none">Enhanced responsiveness to changes in the business environment through organizational restructuringRebuilt the organizational culture by renewing the Head OfficeEnhanced SR (Shareholder Relations) activities for institutional investors		
Issues	<ul style="list-style-type: none">Enhancing and improving site management capability manufacturing and operational capabilities and management capabilityCreating new products and businessesSecuring and developing the human resources to support growth	<ul style="list-style-type: none">Missed the 2018 3-Year Business Plan safety-related initiative target of less than 5 occupational accidents in Japan (FY2021 recorded 20 accidents)Accelerating the search for new nickel deposits and consideration of new projects in response to the discontinuation of feasibility study on the Indonesian Pomalaa ProjectStrengthening the value chain of the 3-business collaboration (for Ni-batteries), including recycling		

The Value Creation Logic Tree



Main Progress of the 2021 3-Year Business Plan

1 Increasing corporate value—Promotion of large-scale projects

● Expanding production capacity for battery cathode materials

The project to expand production capacity to 24,000 tons per year is progressing steadily and generally as planned, with production scheduled to start in FY2024. After the completion of construction of the building, installation of equipment in the main building started in August 2023, and infrastructure-related construction was completed in November. Going forward, we plan to conduct trial operations in line with processes and start operation of the new plant after obtaining customer qualification. For the next phase of production expansion, we plan to continue our examination while closely monitoring the legal systems of each country, such as the Inflation Reduction Act (IRA) in the U.S.

In the lithium iron phosphate (LFP) battery material business, which was transferred to us from Sumitomo Osaka Cement Co. Ltd. in May 2022, we are continuing development of technologies

for new mass production processes. We started operation of small-volume test equipment at the Ome District Division in September 2023 and are currently conducting testing.



Exterior of the new Niihama Plant

● Quebrada Blanca 2 project

Under the leadership of our partner Teck Resources Limited ("Teck"), construction of the Quebrada Blanca 2 Project began in January 2019. Production and shipment of bulk copper concentrates started in June 2023, and construction of the main facilities, including the port and offshore facilities, was largely completed in March 2024, with the and shipment of copper concentrates from the QB port commencing shortly thereafter.

Going forward, "we plan to advance the ramp-up of facilities toward full production", and continue with long-term stable production that will extend for longer than 20 years. Working ever more closely with Teck, we will move the project forward to achieve our production goal of 300,000 tons of copper per year, one of the targets of our long-term vision.

● Cote gold mine development project



Cote Gold Mine opening ceremony (May 2024)

This is a gold mine development project being advanced together with Canadian gold producer IAMGOLD Corporation ("IMG"), and construction began in September 2020. Construction of the main facilities was substantially completed in FY2023, and initial gold production started in March 2024. Going forward, we will ramp up operations to achieve stable production as soon as possible. We further plan to leverage the project as an opportunity for young engineers to gain experience. Exploration activities in the Gosselin Area, located about 1.5 km to the northeast of the pit site, have confirmed continuous gold mineralization. We will continue drilling activities with the intention of enhancing the future value of the project. We will also analyze information such as the continuity and grade of the orebody.

2 Improving core business sustainability

● 3-business collaboration to strengthen the value chain for Ni-batteries

Searching for a next nickel project

We decided in April 2022 to discontinue our investigation of the Indonesian Pomalaa Project, which was planned at the time of announcement of the 2021 3-Year Business Plan. Even after the cancellation of this project, we have continued exploration, primarily in the Pacific Rim region, and in April 2024, we started participating with Ardea Resources Limited (Ardea), an Australian mining company, in development of the Kalgoorlie Nickel Project Goongarrie Hub, which is wholly-owned by Ardea. We reached agreement with Ardea to invest 98.5 million Australian dollars (approximately JPY10 billion) in an Ardea subsidiary and conditionally

acquire a maximum of 50% of the subsidiary's shares in stages through a joint venture established with Mitsubishi Corporation for the purpose of conducting a definitive feasibility study (DFS) for the project.

In addition to this project, we will continue to investigate, filter, and scrutinize other projects in various stages. We will select projects that make the most of our strengths, including the development of projects utilizing the hydrometallurgical refining and pyrometallurgical smelting technologies we have cultivated to date, in addition to HPAL technology.

● Enhancing competitiveness of copper-smelting business

One important theme under the 2021 3-Year Business Plan is enhancing our competitive edge in copper smelting and refining, which is the mainstay of our smelting and refining business. The Toyo Smelter & Refinery's annual electrolytic copper production volume was 450,000 tons. We are increasing this by another 10,000 tons to establish a structure capable of producing 460,000 tons. In FY2022, we expanded concentrate drying* capacity, increasing concentrate processing volume. In addition, we will increase current density in the electrolysis process to transition to a structure with annual capacity of 460,000 tons.

In FY2023, we conducted a long large-scale shutdown for the first major repair of a smelting furnace in 12 years. We used this shutdown period to strengthen systems for stable production, improve production facilities, and increase the operating rate. We also invested in reducing GHG emissions by converting the fuel used in a number of facilities at the Toyo Smelter & Refinery to LNG, as planned.

* The process of drying concentrate, which contains approximately 8% moisture.

● Strategy for advanced materials business expansion

Silicon carbide (SiC)

Under the 2021 3-year Business Plan, we set a goal for silicon carbide (SiC) a power semiconductor material: "Achieving market penetration and launching mass production for use in vehicles in FY2025". We completed construction of an 8-inch substrate development line and started prototyping in FY2024. We will continue work with the aim of constructing a mass production line with monthly capacity of 10,000 wafers (6-inch equivalent) in FY2025.

Nickel powder

Under the 2021 3-year Business Plan, we set a goal for nickel powder, which is used in multilayer ceramic capacitors and other components: "Expanding sales in high-end markets by leverag-

ing the low cost, uniform particle diameter, and low coarseness achieved by our wet processing technology". Currently, we are actively moving forward with sample work and customer evaluations to achieve this goal. In the future, we will clear each technical issue and strive to achieve the goal.

Communications devices

Regarding communication devices, under the 2021 3-year Business Plan we set a goal of "Establishing a production and sales capabilities to capture every market growth opportunity". GRA-NOPT CO., LTD., an affiliate, constructed a new plant to produce Faraday rotator and established a new sales company in China to expand business in the future and achieve this goal.

Main Progress of the 2021 3-Year Business Plan

3 Adapting to changes in the social environment

● Reducing greenhouse gas (GHG) emissions

We established the Carbon Neutrality Committee in April 2022, and the Committee is now working to reduce the GHG mis-sions of the SMM Group. The Committee is debating individual measures and future plans, including specific plans for achiev-ing net-zero emissions by 2050 and setting Scope 3 targets in accordance with the commitments of international industry organizations such as the International Council on Mining and Metals (ICMM).

In addition, we formulated and announced the Roadmap to Carbon Neutrality by 2050 in December 2023 as a path to 2050. Regarding capital expenditures, we are taking action

to reduce GHG emissions and conserve energy by using the internal carbon pricing (ICP) system. We are also tackling issues such as developing advanced materials that contribute to carbon neutrality and new technologies and processes for reducing GHG emissions in existing processes, and contribute to lessening our carbon footprint though new businesses, such as battery recycling, which was selected as a Green Innovation (GI) Fund Project,* and the development of cathode materials for solid-state batteries.

* Projects funded by the New Energy and Industrial Technology Development Organization (NEDO).

● Adaptation to digital transformation (DX)

We established the Digital Transformation Department in July 2022, and it is currently taking action in accordance with our DX roadmap. In FY2023, we set key performance indicators (KPIs) as milestones that include the main measures in each priority area and their objectives to further accelerate our DX activities. We expect that this will achieve more reliable PDCA of measures, including periodic progress reviews of DX by management and corrective measures such as reallocation of management capital.

Specific measures for contributing to the reinforcement of DX foundations throughout the SMM Group include formulating an overall concept for DX human resource development, start-ing the use of ChatGPT throughout the Group, initiating renewal of our wide-area networks, and formulating a plan and concept for data utilization platform.

Digital Transformation (DX) at the SMM Group P.80-85

● Initiatives for securing, fostering and utilizing human capital

Active investment in human resources is also ongoing as part of the 2021 3-Year Business Plan. In July 2023, we revised the personnel system for managerial track employees with the aim of providing opportunities for employees to play an active role, building a corporate climate conducive to the continuous “taking on of challenges,” “change,” and “growth,” as well as a cor-porate culture in which every employee continues to learn and grow. In conjunction with these changes, we extended the man-datory retirement age for employees in management positions,

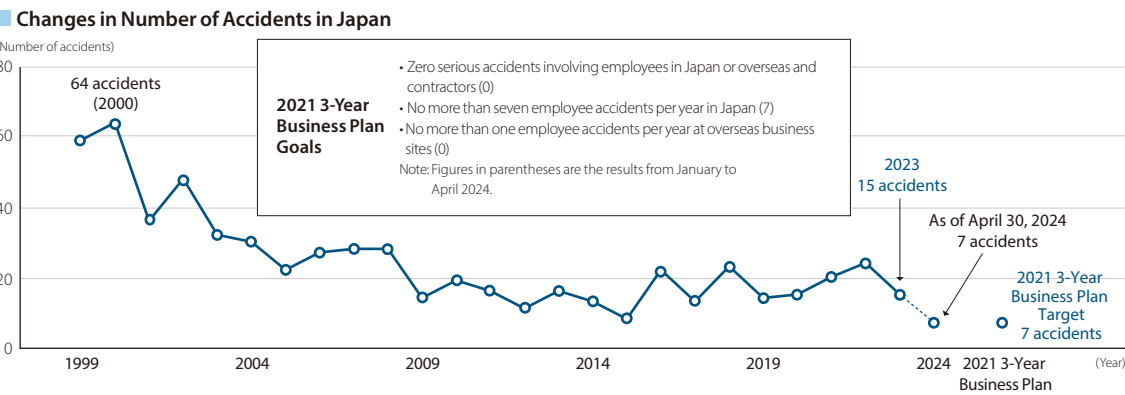
established a program for senior employees (employees over the age of 65 years), and promoted young managerial employees. In step with these efforts, we are revising our human resource development program to improve the competen-cies required for each job classification level, job function, and individual, and have clarified the persons responsible for training by respective job capacity. We are thus engaging with the cross-sectional, Group-wide development and utilization (deployment) of human resources.

4 Strengthening the foundation of business management

● Strengthening safety initiatives

During the term of the 2021 3-Year Business Plan (April 2022 to March 2025), a large number of accidents occurred due to unsafe procedures and there was an increase in accidents involving older workers, and as a result, we did not achieve our goal for employee accidents in Japan. In addition, serious accidents resulting in more than three months of missed work also occurred.

In light of this, we will further develop infrastructure through measures including making equipment inherently safe and providing rank-specific training, and we will take measures to address the safety of older workers in an effort to completely eliminate accidents caused by unaddressed risks and human error.



● Reorganizing and enhancing sustainability promotion framework

In 2020, the SMM Group formulated its Vision for 2030 and has been taking action to achieve that vision. In April 2022, we reorganized our sustainability promotion structure with the aim of engaging in management and sustainability with greater consistency. With this reorganization, we supplemented the seven subcommittees and four working groups that already existed with new organizations responsible for carbon neutrality, DX,

and human resource strategies as subordinate organizations to the Sustainability Committee, which is chaired by the president. To achieve our long-term vision and our Vision for 2030, which is a milestone toward the long-term vision, we will accel-erate the implementation of sustainability measures.

Sustainability Report 2024
https://www.smm.co.jp/en/sustainability/library/sustainability_report/

● Corporate governance

We manage our business portfolio using return on capital em-ployed (ROCE) on a consolidated basis as an indicator for each business. During the term of the 2021 3-Year Business Plan, busi-nesses that fell below the benchmark (5.5%) were positioned as “businesses to confirm the feasibility of continuation,” and the feasibility of continuing the business is examined and improve-ments and reforms are implemented in the following two years,

and in principle, final decisions are made in the following fiscal year. The Board of Directors periodically monitors the status of this process.

■ FY2022 Result

Business	Mineral Resources	Smelting & Refining	Materials
ROCE	8.6%	12.0%	4.8%

Basic Approach to Financial Strategy

Financial Strategy

Because the non-ferrous metals that the SMM Group deals in are resources that can become depleted, we must always be prepared for participation in large-scale projects or M&A to acquire new resource interests. Mineral resources and smelting & refining development projects, including the construction of new smelters and refineries, involve relatively long periods of time between execution and recovery of investment. In addition, development of new resources is becoming increasingly difficult due to higher altitudes and greater depths, and the Group has been impacted by higher costs for material, labor, and so on in recent years. Accordingly, it is important to maintain a sound financial position that can withstand large temporary cash outflows. Based on this thinking, we set a consolidated equity ratio (ratio of equity attributable to owners of parent to total assets) of 50% or more as a foundation for our financial strategy.

Our policy going forward will be to carry out our growth strategy while maintaining a strong financial foundation, and we are taking action to improve the PBR, which is currently below 1.0x.

Specifically, we are focusing on the steady startup of large-scale projects that are expected to make substantial contributions to profits starting in FY2024 including the Cote Gold Project, the Quebrada Blanca 2 Project, and the start of increased production of cathode materials for secondary batteries. Also, in the mineral resources, smelting & refining, and materials segments, we will conduct thorough management that emphasizes return on capital employed (ROCE) and take action to improve the efficiency of invested capital. At the same time, we will enhance ongoing measures to address sustainability issues and non-financial disclosures.

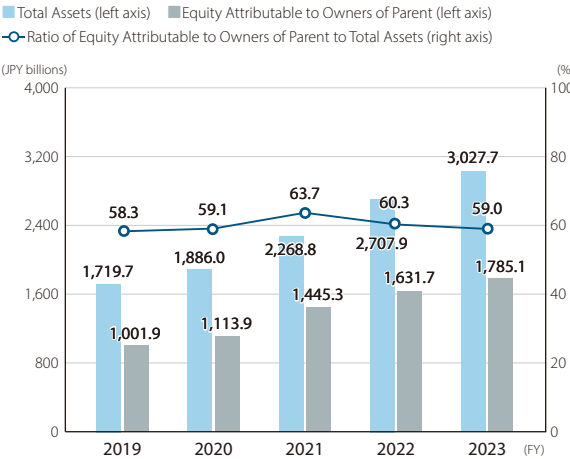
Furthermore, we will reinforce our ability to disseminate information through IR activities so that investors can understand the value of the Company, including showing profit/loss excluding temporary factors and clearly explaining the Company's competitive advantages and how we will

achieve growth by carrying out our strategies.

We are also investigating means of providing appropriate returns to shareholders, and in FY2023 we introduced dividend on equity (DOE) as a minimum indicator. In the past, our dividend policy was to maintain a consolidated dividend payout ratio of at least 35%, but since the Group's business results are affected by changes in non-ferrous metal prices, foreign exchange rates, and other factors, the dividend amount fluctuated substantially depending on market conditions. With the introduction of DOE, we seek to mitigate the impact on dividend amounts and the resulting impact on share prices in the event that the Group's business performance deteriorates due to these market factors and other factors.

Going forward, we will continue to carry out the strategy set forth in the 2021 3-Year Business Plan based on the idea that steadily implementing our growth strategies will lead to improved corporate value over the medium to long term. In conjunction with this, we will continue our consideration of appropriate shareholder returns while maintaining strong financial foundations.

Total Assets, Equity Attributable to Owners of Parent, and Ratio of Equity Attributable to Owners of Parent to Total Assets



Share Price (Share prices calculated with share price at the end of March 31, 2014 set to 100)

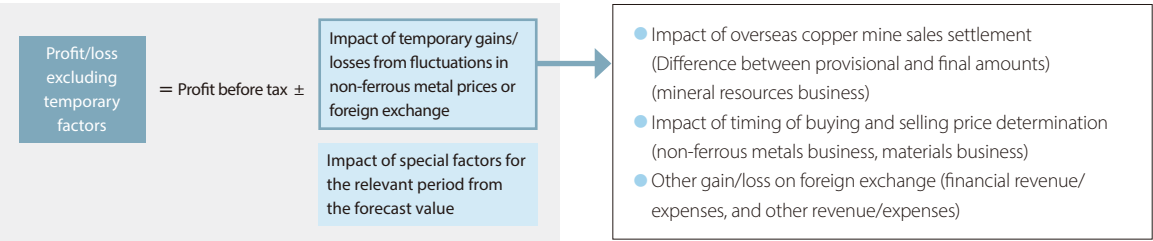


Share Price Performance (TSR)

Investment period	1 year	3 years		5 years		10 years	
	Cumulative and Annualized	Cumulative	Annualized	Cumulative	Annualized	Cumulative	Annualized
SMM	(7.2%)	8.6%	2.8%	64.8%	10.5%	121.6%	8.3%
TOPIX	41.3%	52.5%	15.1%	96.2%	14.4%	188.6%	11.2%
TOPIX Nonferrous Metals	28.9%	43.2%	12.7%	81.4%	12.6%	112.0%	7.8%

Source: Bloomberg
* TSR (Total Shareholder Return): Calculated using [(share price at the end of the fiscal year ended March 31, 2024) – (share price at the end of the fiscal year X years previous to the fiscal year ended March 31, 2024) + [total cash dividend per share for the relevant period]] ÷ [(share price at the end of the fiscal year X years previous to the fiscal year ended March 31, 2024) × (number of years)]
* TOPIX and TOPIX nonferrous metals use indices that include dividends, and accordingly, dividends are not added to the calculation

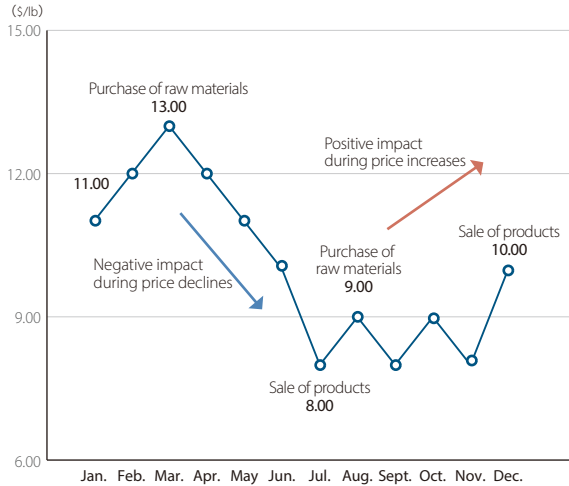
What Is Profit/Loss Excluding Temporary Factors?



Prices of non-ferrous metals (such as copper and nickel) which the Group deals in are determined in trading markets represented by London Metal Exchange (LME), and our profit and loss is characterized by the fact that they are significantly influenced by the market environment, including economic trends. Further, when prices of non-ferrous metals rise, the differences in timing of buying and selling causes profit to temporarily exceed standard levels, and likewise when prices decline profit to temporarily fall below standard levels.

Therefore, we show the profit/loss excluding temporary factors as the profit/loss excluding impact of temporary gains/losses in a situation where non-ferrous metal prices or foreign exchange fluctuate and the impact of special factors during the period concerned.

Image of the Impact of Timing of Buying and Selling Price Determination



Funding/Investment/Return to Shareholders

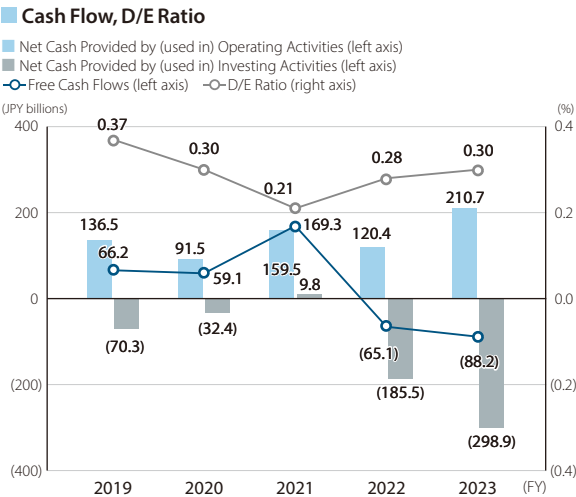
Funding

We believe it is necessary to maintain a certain amount of liquid funds on hand^{*1} based on overall demand for funds such as for large-scale overseas projects in the Mineral Resources and Smelting & Refining businesses, or strategic expansions within the Materials Business. This is essential from the standpoint of management stabilization. Under that premise, we conduct funding in line with the use of the funds, while comprehensively considering the outlook for non-ferrous metal prices and currency exchange, conditions in interest rate markets, and other factors.

In FY2023, net cash provided by investing activities were significantly higher than expenditures due to progress toward completion of the Quebrada Blanca 2 Project and the Cote Gold Project. To cover these expenditures, the Company raised funds under the foreign currency limited loan agreement with the Japan Bank for International Cooperation and procured capital under foreign and Japanese currency loan agreements with commercial banks. We also continued to pursue sustainable financing and procured capital through a syndicated green loan for investment about expansion of production for battery cathode materials. As a result, our interest-bearing liabilities

in FY2023 increased by JPY73.0 billion to JPY530.3 billion, resulting in a consolidated capital ratio of 59.0%.^{*2}

^{*1} Regarding liquidity risk, assuming a decline in cash inflow equal to 1.5 months of consolidated net sales and difficulty refinancing debts due within six months, our policy is to cover this risk by using cash on hand and the unused amount of the CP issuance limit. Also, in anticipation of the risk that CP procurement may become temporarily difficult due to trends in financial markets, in principle, we limit issuance to within the scope of borrowing limits set in accordance with commitment line agreements.
^{*2} Interest-bearing liabilities do not include lease liabilities.



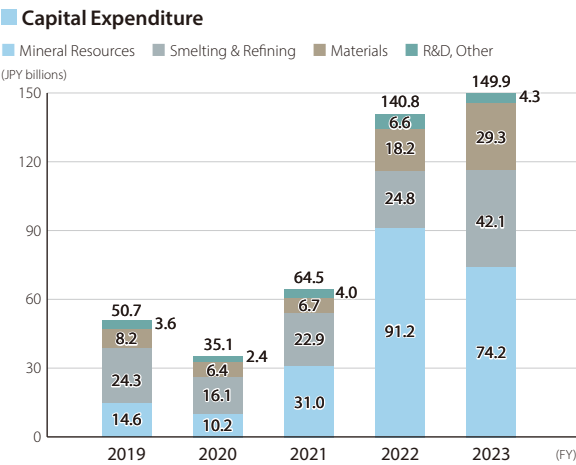
Investment

Raw material ores for non-ferrous metals are subject to sharp price fluctuations related to supply and demand, natural disasters, and other factors, and it is not always possible to secure necessary quantities of ores due to price levels. For this reason, we must secure stable sources of raw materials through the development of overseas mines and acquisition of interests.

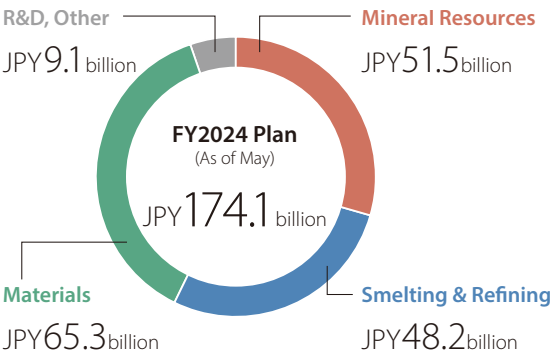
In mine development and acquisition of interests and in large-scale overseas projects in the Smelting & Refining Business, we carry out investments by leveraging our extensive exploration experience, knowledge of mine valuation, and smelting and refining technologies, with country risk and local issues fully taken into account, with an awareness that additional investments may arise, to avoid increases in costs arising from uncertainty. We also carefully select and execute capital expenditure other than large-scale projects, with full consideration of investment effect and efficiency (profitability).

Capital expenditure in FY2023 was JPY149.9 billion, under

large-scale capital investments including the Cote Gold Project and increased production of cathode materials for automobile batteries. Our capital investment plan for FY2024 is as shown in the graph on the upper right (as of May).



Breakdown of Capital Expenditure Plan



Key Projects in FY2024 May Plan

- Expansion of production capacity of cathode materials for secondary batteries for electric vehicles (Besshi District + Harima Refinery): JPY35.5 billion (total outlay: JPY47.0 billion)
- Cote Gold Project (initial interest): JPY18.3 billion (total: USD 1,134 million)

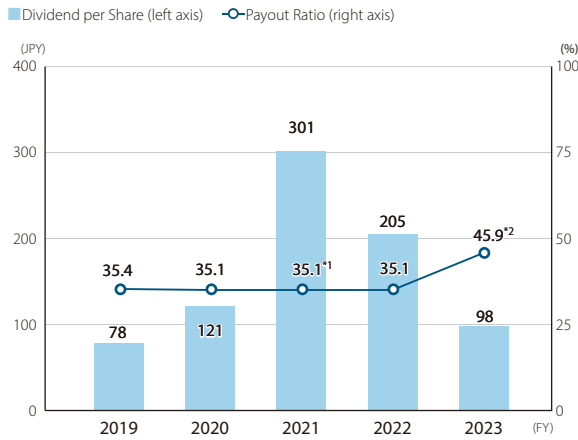
Return to Shareholders

Previously, the Company's financial strategy was based on maintaining a consolidated equity ratio higher than 50%, and the dividend policy was to have a consolidated dividend payout ratio of 35% or more in principle. Due to the nature of our business, however, the Group's performance is affected by fluctuations in metal prices and foreign exchange rates, and the amount of dividends has varied substantially depending on market conditions.

In response to these circumstances, to mitigate the impact of dividends even if the Group's performance deteriorates due to market and other factors, we added DOE of 1.5% as a lower limit indicator in FY2023 and revised the dividend policy to maintaining a consolidated dividend payout ratio of 35% or more with a DOE lower limit indicator of 1.5%.

Under the above shareholder return policy, the annual dividend per share for FY2023 was JPY98, for a payout ratio of 45.9%.

Dividend per Share, Payout Ratio



^{*1} The dividend payout ratio for FY2021 is calculated with adjustments related to the transfer of Sierra Gorda excluded.
^{*2} DOE of 1.5%

Results and Plan

FY2023 Results

In FY2023, consolidated net sales increased compared to the previous fiscal year due to strong sales of materials for automotive batteries and other factors. Consolidated profit before tax decreased compared to the previous fiscal year, mainly due to lower copper and nickel prices, a reduction in temporary factors that resulted in strong profits in the previous fiscal year including foreign exchange gains from the rapid depreciation of the yen, higher production costs due to rising prices globally, and sluggish demand in industries related to the materials business.

Mineral Resources Segment

Segment income decreased year on year due mainly to the decrease in copper prices and higher production costs due to global inflation. Mining operations at the Hishikari Mine remained steady, and the sales volume of gold was 4.0 tons as planned.

Production levels at the Morenci Copper Mine (United States) (in which the Company holds a 25.0% interest, excluding non-controlling interest) declined from the previous fiscal year to 362,000 tons, due mainly to a decrease in mining volume.

Production levels at the Cerro Verde Copper Mine (Peru) (in which the Company holds a 16.8% interest, excluding non-controlling interest) rose from the previous fiscal year to 447,000 tons, due mainly to an increase in processing volume and an improvement in ore grade.

Metal Prices and the Exchange Rate

	FY2023 result	FY2022 result	Change
Copper (\$/t)	8,362	8,551	(189)
Nickel (\$/lb)	8.68	11.63	(2.95)
Gold (\$/toz)	1,989	1,805	184
Exchange (JPY/\$)	144.63	135.48	9.15

Smelting & Refining Segment

Segment income decreased year over year, due mainly to the falling price of nickel and a reduction in temporary factors that resulted in strong profits in the previous fiscal year including foreign exchange gains from the rapid depreciation of the yen.

The production level and sales volume of electrolytic nickel increased from the previous fiscal year, but the production level of electrolytic copper decreased due to periodic furnace maintenance (a large-scale shutdown) at the Toyo Smelter & Refinery and other factors, and sales volume was down year over year.

Production levels of Coral Bay Nickel Corporation (Philippines) and Taganito HPAL Nickel Corporation (Philippines) were generally unchanged from the previous fiscal year.

Materials Segment

Segment income decreased year on year despite higher sales of materials for automotive batteries, due to the impact of lower prices for non-ferrous metals. Also, segment income declined due to lower sales of components for electronic parts in conjunction with declining demand for smartphones, PCs, and other devices as well as the impact of accounting procedures relating to the conclusion of contracts for the transfer of subsidiary shares and other factors.

FY2023 Result (JPY billions)

	FY2023 result	FY2022 result	Change
Net sales	1,445.4	1,423.0	22.4
Profit / loss before tax	95.8	229.9	(134.1)
Equity method profit/loss	33.1	36.5	(3.4)
Net income attributable to owners of parent	58.6	160.6	(102.0)

FY2024 Plan

The global economy remains highly uncertain due to downside factors including economic slowdown in China caused by the protracted downturn in the real estate market and persistent high inflation rates as well as geopolitical risks and a rising risk of fragmentation of the global economy.

Regarding copper supply and demand, a temporary supply shortage is expected as a result of the suspension of operation and production adjustments at some overseas mines and other factors. On the other hand, the oversupply of nickel is expected to continue due to production increases in China and Indonesia. Supply and demand for non-ferrous metals, however, is expected to increase over the medium to long term, primarily due to demand for electric vehicles and renewable energy.

In industries related to the materials business, demand is expected to increase due to decarbonization measures and responses to digital transformation (DX), but the outlook for

the global economy, particularly China, remains uncertain and there is a risk of that market growth will slow, and as a result, and the situation is unpredictable.

For the FY2024 forecast of consolidated operating results, prices of major non-ferrous metals were set based on the projected future balance of supply and demand, taking into account recent levels, and exchange rates were set based on the trend of yen depreciation during the period under review, the monetary policies of Japan and the U.S. at the time of the forecast, and other factors.

Planned production and sales volumes for major products were set based on recent results and other factors. As a result, consolidated net sales are expected to be JPY1,492.0 billion, consolidated profit before tax JPY91.0 billion, profit JPY62.0 billion, and profit attributable to owners of the parent JPY56.0 billion.

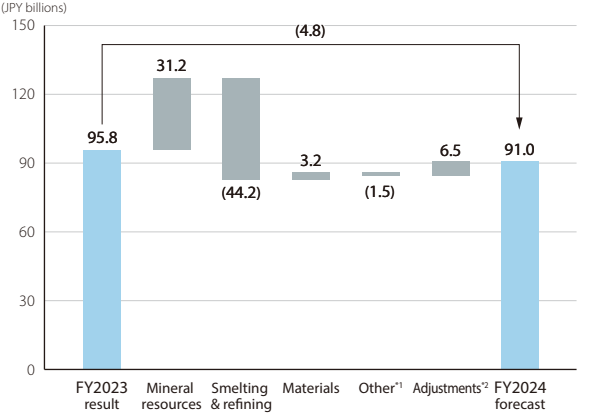
Metal Prices and the Exchange Rate

	FY2024 forecast	FY2023 result	Change
Copper (\$/t)	9,000	8,362	638
Nickel (\$/lb)	8.00	8.68	(0.68)
Gold (\$/toz)	2,000	1,989	11
Exchange (JPY/\$)	150.00	144.63	5.37

FY2024 May Forecast of Consolidated Operating Results (JPY billions)

	FY2024 forecast	FY2023 result	Change
Net sales	1,492.0	1,445.4	46.6
Profit / loss before tax	91.0	95.8	(4.8)
Equity method profit/loss	28.5	33.1	(4.6)
Net income attributable to owners of parent	56.0	58.6	(2.6)

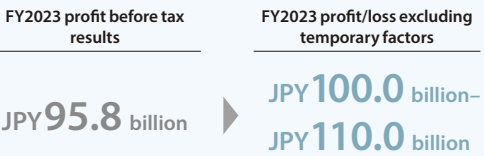
Profit before Tax Analysis (FY2024 forecast vs. FY2023 result)



*1 Other: operating segments and other income-seeking business activities that are under the control of the Head Office divisions/departments, and business segments other than those included in the reportable segments.
*2 Adjustments: elimination of inter-segmental transactions, and general and administrative expenses, finance income and costs, etc. not attributable to reportable segments.

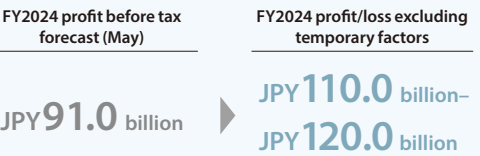
FY2023 profit/loss excluding temporary factors

Profit/loss excluding temporary factors for the FY2023 result (profit before tax), is calculated by excluding the impact of temporary gains/losses from fluctuations in non-ferrous metal prices or foreign exchange and the impact of special factors for the relevant period from the result.



FY2024 profit/loss excluding temporary factors (May 2024 forecast)

Profit/loss excluding temporary factors is calculated by excluding the impact of temporary gains/losses from fluctuations in non-ferrous metal prices and exchange rates (the impact of inventory valuation and impact of overseas copper mine settlement) and the impact of special factors during the period from the May 2024 forecast (profit before tax). The profit/loss excluding temporary factors for FY2024 is expected to improve from FY2023, mainly due to the effects of large-scale projects that have been proceeded so far.



Mineral Resources Business

Aiming for mine development and operation adapted to changes in our society

Hideyuki Okamoto

Director, Senior Managing Executive Officer
General Manager of Mineral Resources Div.



Competitive Advantages in the Mineral Resources Business

- A portfolio made up of highly cost competitive assets
(Large-scale deposits with abundant resources, good locations, advanced facilities, and good relationships with local communities)
- Advanced technological capabilities that enable effective operations under restrictive conditions
- Long-term relationships of trust and partnership with major overseas resource companies
- Organized and systematic development of human resources and cultivation of talented mining engineers with experience in domestic operating mines

Overview of FY2023

Looking back on FY2023, it was a year of milestones with production starting at the Quebrada Blanca 2 Project (Chile) and the Cote Gold Project (Canada), both of which are major projects under the 2021 3-Year Business Plan. Copper production started at the Quebrada Blanca 2 Project in June 2023, following the substantial completion of construction of the main facility in March 2024. This was followed by the first loading of concentrate at the new Quebrada Blanca port facilities. An opening ceremony of the mine was held on-site on October 26, 2023 with approximately 400 people in attendance, including the President of Chile and other government officials, Japanese government officials, local community members, financial institutions, and project personnel. Regarding the Cote Gold Project, construction of the main facility is essentially completed, and production of gold dore started in March 2024. In addition, the most recent assessment of resource volume published in February 2024 by IAMGOLD Corporation, our partner in the project, indicated that the resource volume in the Gosselin Area near the Cote Gold Project was increased from the previous assessment, and as a result, the value of the project is expected to increase even further.

At the Hishikari Mine, we continued the sustainability-oriented

operations that started in FY2022, promoted digital transformation, including a test of the introduction of self-driving heavy equipment, reviewed operational structure, and implemented measures to cut costs.

As for our major overseas operating mines, production by the Morenci Copper Mine (United States) declined from FY2022, primarily due to sluggish mining volume, and production at the Cerro Verde Copper Mine (Peru) remained at the same level as in FY2022.

We are also focusing our efforts on acquiring new nickel resources. Business development initiatives included the acquisition of shares of FPX Nickel Corp., a Canadian exploration company, and in conjunction with this acquisition, preferential negotiation rights for the purchase of a portion of production from the Baptiste Nickel Project if the project, for which FPX is currently evaluating economic viability, is developed.

In this way, in addition to focusing on our existing targets for copper and gold, we are focusing on the acquisition of new nickel resources that will contribute to collaboration among our three business units.

Changes in the Business Environment and Responses to Issues

The COVID-19 pandemic was brought under control worldwide in FY2023, but the aftereffects of the pandemic were considerable, with rising inflation resulting from monetary easing policies implemented in response to the pandemic, followed by an extended period of rising interest rates due to monetary tightening policies, particularly in the United States. In addition, there are no signs of an end to Russia's invasion of Ukraine, which started in 2022, and energy and material prices remained high. As a result of these pressures, there were strong impacts on our domestic and overseas mines and joint venture projects under development, resulting in cost increases. Thus, in addition to the uncertainty of when these circumstances will be resolved, there are various external pressures that affect mine development and operating costs, such as higher capital investment costs and capital procurement costs for investment, and rising labor costs caused by inflation. In response to these circumstances, we focused efforts on improving finishing costs, including raising operating rates and implementing a phased transition to clean energy at each mine. The transition to clean energy will not only bring about structural changes in energy procurement, but is also an important step toward achieving carbon neutrality.

Regarding resource nationalism, the new mining royalty law that has been continuously debated in Chile for many years was

approved by both the Senate and the Chamber of Deputies of the National Congress. The President signed the bill on August 3, 2023, and the law came into effect on January 1, 2024. The bill involves a hybrid method that combines sales ad-valorem criteria and operating profit criteria, imposing additional taxes based on the annual copper production at each mine. Furthermore, Chile announced a National Lithium Strategy in April 2023, indicating that the government will be deeply involved in lithium development and will take a leading role in its promotion.

Other mining industry-related risks seen worldwide include acquisitions of mines by major resource players, the strengthening of environmental regulations, and delays in project approvals due to conflicts with local communities. One example is the issuance by the government of Panama in November 2023 of an order to close an operating copper mine, which had a substantial impact on the supply and demand of copper concentrate. This case highlights the importance of investigating country risks when investing, and we plan to conduct thorough investigations when considering future investment opportunities. We are also cooperating with various parties to gather information and manage risks so that we can respond flexibly if this type of unlikely event should occur with respect to one of our operating mines.

Roadmap					
	FY2022	FY2023	FY2024	FY2025	FY2026 and beyond
Cu Morenci Copper Mine				● Expand concentrate leaching	
Cu Cerro Verde Copper Mine	● Operational system that can process 400 kt/day			● Operational system that can process 420 kt/day	
Cu Candelaria Copper Mine					
Cu Quebrada Blanca 2 Project		● (June) Start of copper concentrate production	● (Within the year) Transition to full production	● (March) Start of molybdenum concentrate production and start of loading from Quebrada Blanca port	● Operations using 100% renewable energy
Au Hishikari Mine	● Implementation of sustainability-oriented operations (continued in FY2024)	● Achieving net-zero CO2 emissions from electricity generation			
Au Cote Gold Project		● (March) Start of gold production		● (Within the year) Achievement of 90% of design capacity	

Mineral Resources Business

Close Up

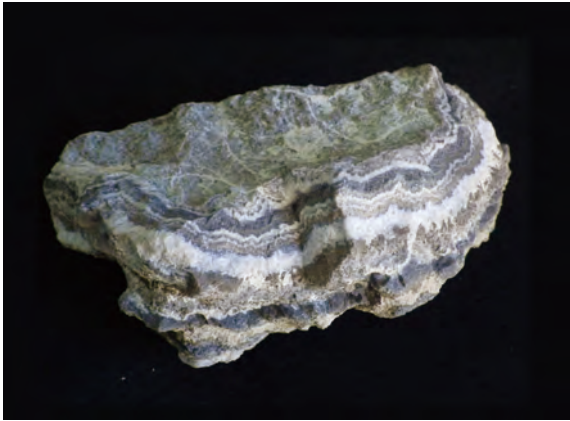
Initiatives for Long-Term Stable Operation of the Hishikari Mine

Since it started operations in 1985, the Hishikari Mine (Kagoshima Prefecture) has produced approximately 268.5 tons of gold as of the end of March 2024. Worldwide, the amount of gold contained in gold ore (grade) is said to be 3–5 grams per ton on average. However, the Hishikari Mine is characterized by its high grade with 20 grams of gold per ton, or about five times the global average. As of the end of December 2023, the mine has recoverable reserves of 155 tons.

To improve the sustainability of core business as provided in the 2021 3-Year Business Plan, we shifted our policy concerning the Hishikari Mine to sustainability-oriented operations based on mining at the average recoverable gold grade. In FY2023, the annual gold sales volume was 4 tons, and the planned sales volume for FY2024 is also 4 tons (in FY2021 and earlier, more than 6 tons were sold annually).

This policy transition is intended to prolong the mine's life and enable a continuation of business for a longer period by mining relatively low-grade ore, and also aims to meticulously extract all of the underground resources without leaving any behind.

At the Hishikari Mine, we are taking action to introduce the latest technologies including digital transformation (DX) technologies. The objectives are to improve safety and workplace hygiene by making in-mine heavy machinery unmanned and autonomous, to increase productivity, and to reduce human resource requirements in anticipation of future declines in the working population by providing our workforce with access to advanced technology to improve operational efficiency. One example of this is the completion of construction inside the mine to install Wi-Fi and the other equipment needed for automated driving. We are now conducting tests for the introduction of automated heavy machinery. Normally, when introducing these



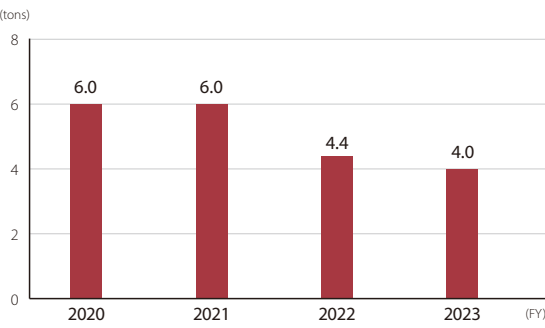
High-grade ore unique to the Hishikari Mine

technologies to narrow underground mines, there are unique constraints and challenges, but by combining the operational know-how we have accumulated over time, with the knowledge of engineers who have experience working in mines overseas, we are able to overcome these constraints and challenges and make the successful introduction of new technologies into our new strength. Now, we are taking action on a daily basis with the aim of promoting and deploying these technologies to other overseas mines.

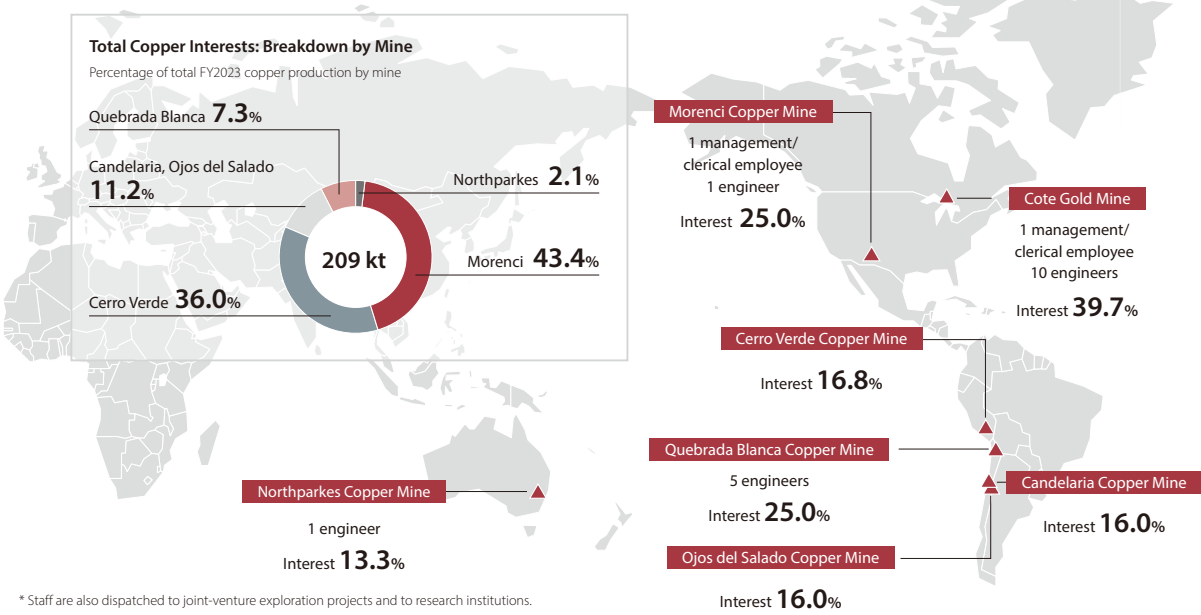
We are able to tackle these challenges because we operate the Hishikari Mine, and use it as a training ground for promising young mining engineers to refine their skills. Then, these engineers are sent to work overseas, in the global market, collaborating with engineers from around the world at overseas mines, where they continue to enhance their skills. Thus, the Hishikari Mine plays a crucial role as a “mining school.” It is a place where young engineers can learn through trial and error while tackling on-site work under the guidance of highly experienced veteran employees and acquire skills and expertise while applying themselves with their colleagues, enabling them to grow into full-fledged engineers who will be able to work effectively, even overseas or in difficult environments. They then become the engineers who take on and prevail over the challenges of modern mining at the Hishikari Mine and at our operations around the world.

We will continue operations at the Hishikari Mine for the long-term, and contribute to the local community with the objective of Hishikari remaining a foundation for our technological capabilities and human resource development, while simultaneously maintaining its competitiveness into the future.

Hishikari Mine's Gold Sales Volume



Overseas Mines and Staff Dispatched to Mines (As of May 1, 2024)



Comment from an Employee

I Want to Become a Mining Engineer Who Can Perform Active Roles on the Front Lines Overseas

I currently work on creating long-term mining plans for the Hishikari Mine with the objective of establishing a foundation for long-term stable operation. By identifying future operating issues based on a long-term mining plan, we will be able to propose and implement operating strategies for solving those issues, which will lead to stable and efficient operations.

I was assigned to the Hishikari mine immediately after joining Sumitomo Metal Mining, and after working here for about six years, I was sent overseas, where I underwent practical training for about a year and a half at the Sierrita Copper Mine in the United States, which is operated by a partner company. I am now back working again at the Hishikari Mine.

When I first started working at the Hishikari Mine, I learned about various technologies and general knowledge relating to mining operations, with a focus on mining technologies. I learned from experienced colleagues through on-the-job training and worked hard to refine my skills. I was later able to use my experience at the Hishikari Mine when I worked at the copper mine in the United States to

prepare mining designs, long-term plans, and so on, and I was recognized as a competent engineer by my local colleagues and superiors overseas. From this experience, I realized that the technological competence and knowledge that I acquired at the Hishikari Mine could also be used overseas. I'm now in a position to pass on my skills to less experienced colleagues at the Hishikari Mine, and in addition to fulfilling my role as an “upperclassman” of the “mining school,” I hope to refine my own skills even further and become a mining engineer who can work even on the front lines of overseas mines, contributing to the development of the Company and solving global-scale issues of resource development.



Naoya Inoue
Mining Support Section Supervisor
Mining Sect.
Hishikari Mine Dept.



Smelting & Refining Business

Using our advanced technological capabilities to provide a stable supply of metal materials that support society

Masaru Takebayashi Director, Senior Managing Executive Officer
General Manager of Non-Ferrous Metals Div.



Competitive Advantages in the Smelting and Refining Business

- Technological capabilities, including HPAL technology, which we were first in the world to successfully put into practical use
- Production of high-purity nickel using a combination of HPAL technology and MCLE technology
- Stable procurement of raw materials based on SMM's superior mine interests overseas and relationships of trust with our partners
- High production capacity, and continuous expansion of those capacity, at the Toyo Smelter & Refinery

Overview of FY2023

In contrast to FY2022 and the years leading up to it, in FY2023 we maintained normal operations at business sites in Japan and overseas without any adjustments to operational workloads, while continuing to institute measures to address COVID-19. Although production volumes of major products fell below planned levels due to issues including troubles at facilities, declines in the grade of raw materials, and raw material shortages, the Toyo Smelter & Refinery undertook a long, shutdown for the first major repairs of its flash furnace in 12 years; replaced deteriorating installations and equipment to prevent troubles at facilities; and carried out maintenance on all facilities.

On the sales front, with the shortfall in planned production volumes, sales volumes also fell below planned values. Nevertheless, sales volumes of major products were generally higher than those of FY2022, as demand for automobiles and electronic equipment in Japan is trending to recovery, with market conditions in China and other Asian markets similarly recovering,

reflecting the emergence from outbreaks of infectious disease.

We are continuing to undertake initiatives to strengthen the value chain and maintain a stable supply of products through the 3-business collaboration as set out in the 2021 3-Year Business Plan. In addition to our search for the next nickel project, we are continuously exploring and implementing measures to develop businesses utilizing intermediate materials currently distributed in the existing market, as well as measure to secure ores for Coral Bay Nickel Corporation (CBNC) and Taganito HPAL Nickel Corporation (THPAL).

We have additionally decided to construct recycling plants to recover copper, nickel, cobalt, and lithium from used lithium-ion secondary batteries (LIBs) and other materials, on the grounds of the Toyo Smelter & Refinery and Niihama Nickel Refinery. Plant construction will commence during FY2024, for scheduled completion in June 2026.

Changes of Business Environment and Response to Issues

Regarding the supply-demand balance of non-ferrous metals, for copper, this was projected to experience a temporary easing due to the development of new mines and expansion of existing mines. However, supply concerns have arisen at existing mines, which is resulting in a tight situation in supply-demand balance. As for nickel, demand is expected to continue to grow for nickel-based lithium-ion batteries for EVs. The supply-demand balance for both copper and nickel is forecast to ease due to increased supply attributable to the ongoing increases in nickel pig iron production in Indonesia as well as the expansion and development of copper smelting and refining plants in Indonesia and India.

However, the prolonged Russian invasion of Ukraine, political instability in the Middle East, inflation remaining high, and record-breaking highs of the dollar, alongside other factors, mean that the outlook for the global economy remains uncertain, and we will continue to actively and closely observe ongoing developments.

Over the long term, trends including decarbonization, clean energy, and the shift to electric vehicles are expected to continue to accelerate globally and provide a tailwind for non-ferrous metal demand. Against this backdrop, we expect non-ferrous metal prices in general to remain firm over the long term.

Despite the peaking-out of soaring energy costs and material prices in 2022, growing inflation has led to continued increases in construction, facilities, and logistics costs as well as material prices. This is threatening to instigate a downturn in revenues while also constituting a risk factor for rising costs and delays in repairs and capital expenditure plans. To achieve our planned production and sales volumes and maximize revenue despite these impacts, we will strengthen our competitiveness through continued efforts to

improve production efficiency and reduce costs.

In line with the growth of nickel demand for use in battery materials, projects for the development of technology to process nickel pig iron into nickel sulfate and other products of use in battery materials, and new projects to turn the nickel-cobalt mixed hydroxide precipitate (MHP) used mainly in battery materials into final products, are underway in Indonesia and elsewhere. The supply-demand balance for nickel sulfate and nickel briquettes, which can be used in battery materials, has eased, due to increased supply volumes and a temporary drop in EV demand. Meanwhile, with the nickel business environment experiencing increasing uncertainty as increased production of nickel pig iron exceeds demand for use in stainless steel, resulting in oversupply, among other factors, we will continue to closely observe developments.

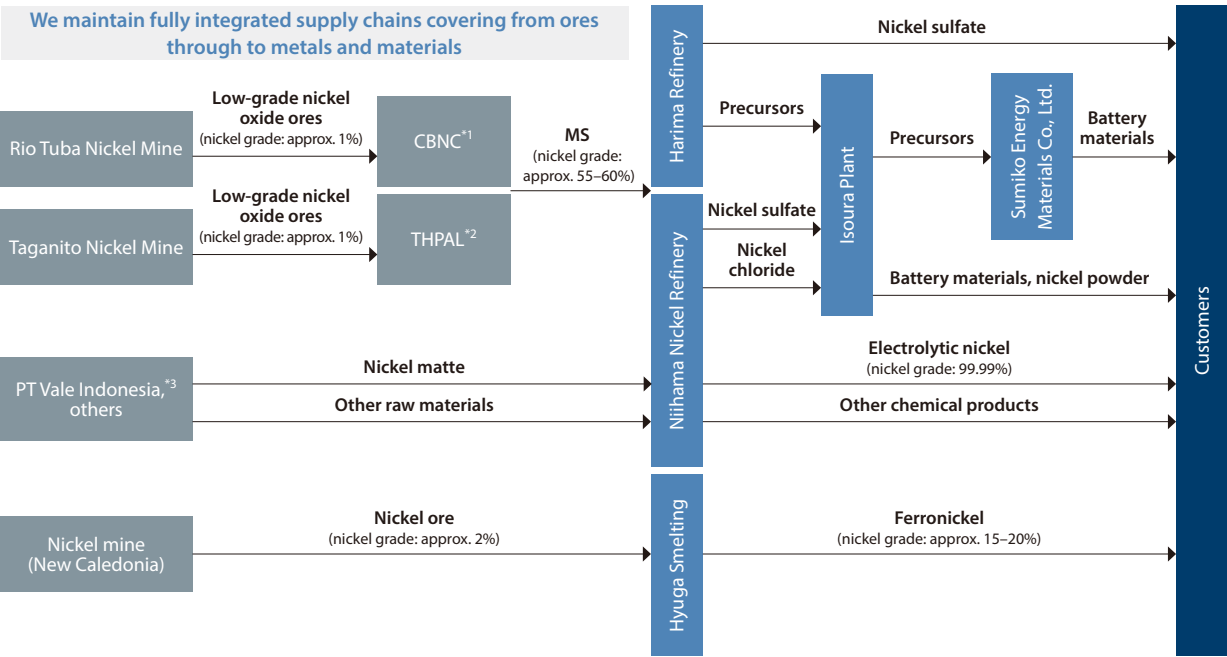
We also continued working to improve and streamline operations through the promotion of digital transformation (DX). While undertaking continuous initiatives for infrastructure development, we also set up a model plant and implemented trials to improve the operating rate through predictive maintenance as well as to support operations with future forecasts, with plans in place to roll these initiatives out to all plants at a future point in time.

To achieve our target of reducing greenhouse gas (GHG) emissions by at least 38% compared to FY2015 levels in FY2030, we have upgraded our plant facilities, converted our boilers to LNG, and conducted biomass feedstock switchover tests. We are meanwhile also proceeding with the switchover to the use of renewable power in plants.

Roadmap					
	FY2021	FY2022	FY2023	FY2024	FY2025 and beyond
Ni Securing nickel resources	● Implementation of Pomalaa Project DFS until FY2021	● Discontinuation of Pomalaa Project ● Strengthening of search for next project		● Commencement of the Kalgoorlie Nickel Project—Goongaree Hub DFS (Australia)	
Ni Taganito HPAL Nickel Corporation				Continuing measures to secure nickel ore supplies	
Ni Nickel sulfate Niihama Nickel Refinery and Harima Refinery				Maximum production and output to meet cathode material demand	
Recycling Batteries				● Commencement of construction of recycling plant	● Planned completion of recycling plant in 2026

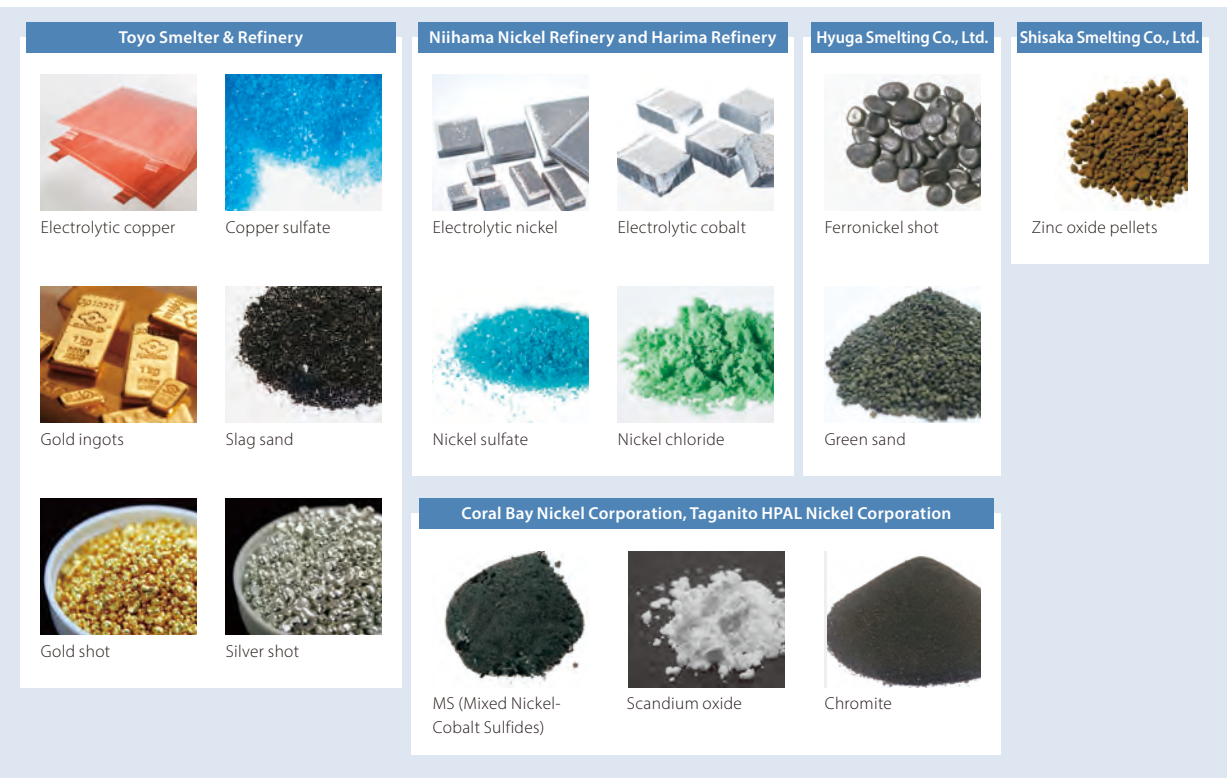
Smelting & Refining Business

Supply Chains for Realizing a Stable Supply of Nickel



*1 Coral Bay Nickel Corporation (CBNC): Shareholders: Sumitomo Metal Mining Co., Ltd. (84.4%); Nickel Asia Corporation (15.6%). Head Office: Rio Tuba, Bataraza, Palawan Province, Philippines.
*2 Taganito HPAL Nickel Corporation (THPAL): Shareholders: Sumitomo Metal Mining Co., Ltd. (75%); Mitsui & Co., Ltd. (15%); Nickel Asia Corporation (10%). Head Office: Taganito, Surigao del Norte Province, Philippines.
*3 PT Vale Indonesia Tbk: Shareholders: Vale Canada Limited (33.9%); Sumitomo Metal Mining Co., Ltd. (11.5%); others (54.6%). As of July 2024

SMM Group Refineries and Their Main Products



Close Up

Toward the Commercialization of Battery Recycling

As automobiles undergo what is expected to be a rapid and long-term shift to electric drive and battery capacity becomes increasingly higher, demand is growing for the copper, nickel, cobalt, and lithium used in lithium-ion secondary batteries (LIBs) for electric vehicles, leading to calls for effective resource recycling.

Since 2017, SMM has been recovering and reusing the copper and nickel contained in LIBs through a process that combines the pyrometallurgical copper smelting processes of the Toyo Smelter & Refinery and the hydrometallurgical refining processes of the Niihama Nickel Refinery. The recovered nickel is processed into a secondary battery cathode material at the Isoura Plant, which has allowed us to realize Japan's first "battery to battery" horizontal recycling using materials recovered from used LIBs. SMM's LIB recycling process facilitates enables efficient processing of used LIBs with high impurity content by using our unique technologies that combining pyrometallurgical smelting and hydrometallurgical refining.

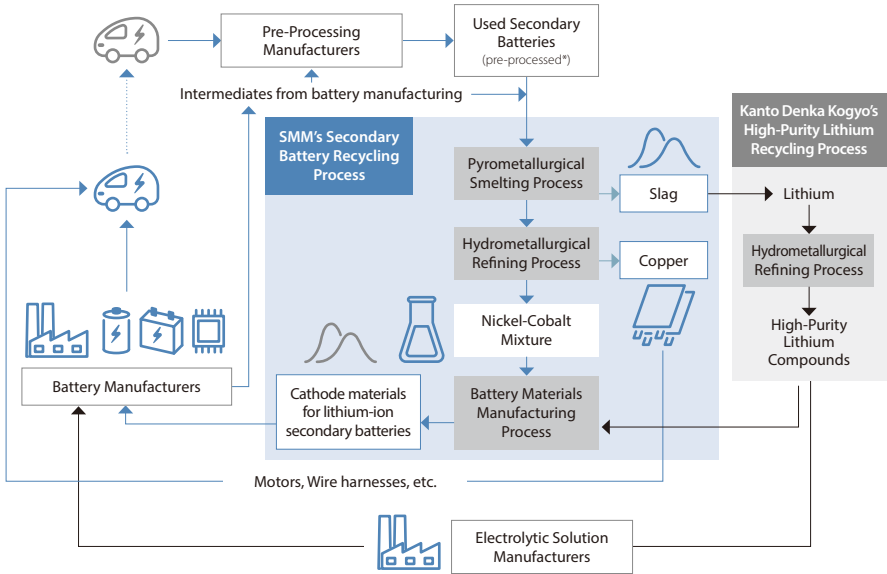
In 2022, through joint development with Kanto Denka Kogyo Co., Ltd., we established technology that recycles lithium from slag containing lithium into high-purity compounds, successfully developing a new process for horizontal recycling of copper, nickel, cobalt, and lithium.

In 2024, we have decided to construct recycling plants to

recover copper, nickel, cobalt, and lithium from used LIBs and other materials on the grounds of the Toyo Smelter & Refinery and the Niihama Nickel Refinery. Construction of the plants is scheduled to start in FY2024 (from April 2024 to March 2025) and be completed in June 2026. The capability of the facilities at the plants, which means the volume of raw material can be processed, is planned to be the equivalent of approximately 10,000 tons of LIB cells per year.

Their design takes into account handling the expecting future increase in used LIB and the metal recovery rate and recycled material inclusion rate defined in EU Battery Regulation in force since August 2023. The plants also incorporate the company's own technology for suppressing CO₂ emissions, and it shall undertake further technology development and optimization with the goal of reducing its carbon footprint. Additionally, in conjunction with the construction of the plants, we have signed partnership agreements with leading recycling companies to establish a supply chain for used LIB recycling. With this as a spur, it shall work together with the partners and accelerate its studies on a collection system for used LIB.

We shall continue with its initiatives towards establishing an LIB recycling system, and shall contribute to the achievement of a sustainable circular economy.



* Pre-processing: Heat treatment to eliminate toxins, crushing, and selection

Materials Business

Battery Materials Business

Contributing to society through the development and supply of highly advanced materials by making effective use of non-ferrous metal resources

Katsuya Tanaka
Managing Executive Officer
General Manager of Battery Materials Div.



Competitive Advantages in the Battery Materials Business

- Our own integrated nickel supply chain from ore and smelting & refining to battery materials
- Strong ties with Japanese manufacturers of automotive LIBs
- Development capabilities for new products and processes leverage accumulated technology in the materials business

Overview of FY2023

Worldwide sales of new passenger electric vehicles (EVs), including battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs) exceeded 10 million units for the first time in 2022, reaching 10.2 million units. In FY2023, sales were up 55% year-on-year, but the pace of the penetration of EVs slowed and fell below that of hybrid vehicles to about 28%. The effects of subsidies in a number of countries came to an end, and amidst indications of effects from concerns regarding charging infrastructure and other factors, environmental regulations are being relaxed in Europe and the United States, and the prevailing view in the short term is that the diffusion of EVs will plateau. However, we believe this is a sign that a somewhat overheated market has returned to normal and EV growth will continue over the medium to long term. On the other hand, Chinese EVs are emerging as a result of an export offensive in Europe and Southeast Asia using low prices achieved through fierce competition in China's EV market, the world's largest, and they recently surpassed the major United States manufacturers in terms of sales volume. There are concerns in Europe and the United States that government subsidies are causing overproduction and unfair competition.

Under these circumstances, the Company has maintained a stable production capacity of approximately 60,000 tons per year of nickel-based cathode materials and secured shipments generally in line with our annual plan. In addition, construction of the new plant in Niihama, which will increase nickel-based cathode materials production by 24,000 tons per year when operations start,

is proceeding at a steady pace, and installation of equipment in the main building began in August 2023. We accelerated measures to expand sales in preparation for the start of commercial production in FY2024. Construction to expand production of products for NMC was completed in May 2023. We are looking into further production increases while closely monitoring customer trends. Also, we are accelerating development of new technologies and new product types in collaboration with the Battery Research Laboratory of the Technology Division and other organizations in order to satisfy the performance requirements of NCA customers relating to cutting-edge products and technologies. In relation to the next production increase, we will continue to closely monitor demand for automotive batteries for electric vehicles (xEVs) and take into consideration the impact on business from changes to national systems and laws, such as the U.S. Inflation Reduction Act (IRA) while continuing to investigate investment in production increases in the next term. Regarding lithium iron phosphate (LFP) cathode materials, we continue to pursue improvements in productivity and cost reductions by developing new manufacturing process technologies, and in September 2023 we launched a small-scale test facility at the Ome District Division, and it is currently in the customer evaluation stage. Also in September 2023, we agreed to invest in and collaborate with Canada-based Nano One Materials Corporation to develop cathode materials using a low-cost, low environmental impact one-pot process.

Changes in the Business Environment and Responses to Issues

According to estimates made in FY2023 by the International Energy Agency (IEA), under the stated policies scenario, global EV sales are forecast to reach 20.5 million units in 2025 (more than 20% of all new car sales including internal combustion engine vehicles) and more than 36.9 million units in 2030 (more than 35% of all new car sales). The growth rate slowed in FY2023 as a result of the end of subsidy programs in various countries and the relaxation of environmental regulations, but tighter environmental regulation will be inevitable to achieve carbon neutrality in 2050, and it is expected that the xEV market will expand and demand for EV parts and materials will grow. On the other hand, the market introduction of low-cost models is an urgent matter to encourage the widespread use of EVs. Against the backdrop of massive markets in the U.S. and Europe, the development of sustainable battery supply chains has been promoted through regulatory and tax measures. The IRA, which came into effect in August 2022, stipulates the provision of incentives for EV parts and materials and to EV producers and buyers in North America, and the detailed operational rules (regulations) were clarified in part at the end of March 2023, but there are still many unclear aspects concerning the definitions of battery parts and materials and processes, and with the U.S. presidential election coming up in 2024 in particular, we need to monitor the situation and gain an understanding of how circumstances will develop under the IRA. Although the impact on the Company's business is not clear at this time, our plans for cathode material production capacity are as follows: 60,000 tons per year now, 84,000 tons in FY2025, 120,000 tons in FY2027, and 180,000 tons in FY2030. We are also renewing our investigation of sites for a plant to further increase production beyond 84,000 tons

per year in the future, and we plan to make an investment decision at the appropriate time.

The estimated breakdown of the market for cathode materials for xEVs is 60% nickel-based and 40% LFP-based. Korean companies hold a 30% share of the nickel-based market, while Chinese companies command a 99% share of the LFP-based market. Chinese battery manufacturers have maintained their strong performance through the use of LFP, which emphasizes cost and has been developed through fierce price competition in the Chinese EV market, which accounts for 70% of the global market. The ratio of LFP in the Chinese EV market has increased sharply to 70%, up 2.8 times from the previous year. Under these circumstances, the operating rates of Korean manufacturers are declining as a result of the slowdown in the European EV market, and they are making moves to enter Japanese supply chains. In terms of nickel-based materials, we are reinforcing the trust of customers that we have developed until now by not only increasing production capacity, but also working to accelerate new product and process development and strengthen competitiveness. Regarding LFP, adoption is expected to accelerate as a means of reducing battery cost, and consequently, developing new processes is an urgent matter.

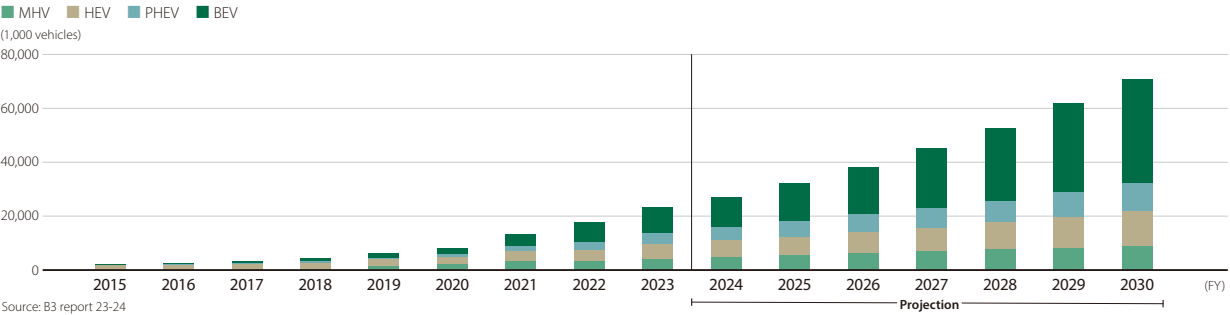
We have increased market share in line with the rapid growth of the market, but this has increased the complexity of our supply chains and inventory management, and accordingly, we are working to develop business foundations for future growth. Specifically, we are conducting Toyota Production System (TPS) activities and working on the introduction of new IT systems.

Roadmap

	FY2022	FY2023	FY2024	FY2025 and beyond
Battery materials	● NCA*1: Increase in production to 58.2 kt/year from mid-2022		● 84 kt/year cathode material production by FY2025 (NCA + NMC*2 + nickel hydroxide)	● Increase in cathode material production to 120 kt/year by FY2027 ● Increase in cathode material production to 180 kt/year by FY2030

*1 NCA: An acronym for a type of secondary battery cathode material composed primarily of N (nickel), C (cobalt), and A (aluminum).
*2 NMC: An acronym for a type of secondary battery cathode material composed primarily of N (nickel), M (manganese), and C (cobalt).

Outlook for xEV Sales Volume



Source: B3 report 23-24

Materials Business

Advanced Materials Business

Aiming to be the lead runner in the market by adapting quickly to technological innovation and changing needs

Shinichi Sato Executive Officer General Manager of Advanced Materials Div.



Competitive Advantages in the Advanced Materials Business

- Provision of products by leveraging multiple core technologies (powder synthesis, surface treatment, and crystal growth and processing)
- Contributions to carbon neutrality through development and expanded sales of highly advanced materials
- Extensive lineup of products with potential for future growth

Overview of FY2023

The surge in raw material prices in conjunction with inflation, the global economic slowdown, and adjustment of inventories that were built up in response to the COVID-19 pandemic continued in FY2023. Also, production volumes of smartphones, PCs, and other devices declined sharply, and demand for electronic components had difficulty recovering from the slump. Nonetheless, the end of inventory adjustments for devices, mainly in China, is spreading, demand for electronic components for use with generative AI, which is spreading throughout the world, is rising, demand in automotive markets is showing signs of recovery earlier than markets for other products and there were other developments, and although only some products have reached full-scale recoveries, markets are gradually returning to their earlier conditions.

Amidst this market environment, we conducted appropriate reviews of business plans in the advanced materials business in line with the drastic changes in demand trends and took action to avoid to the greatest extent possible situations that could lead to a deterioration of profitability such as building up inventories. Also measures for achieving the 2021 3-Year Business Plan failed to make substantial progress, with some exceptions, we made steady progress on the development of new products and new

applications including silicon carbide (SiC) substrates, CWO (near-infrared absorbing nanoparticles), and thick film conductive inks for printed electronics.

New initiatives launched in FY2023 include the Toyota Production System (TPS), which is being promoted in the thick film paste business (Ome District Division) and crystal materials business (Sumiko Kunitomi Electronics Co., Ltd.). We expect that by gaining a bird's-eye perspective of multiple production processes for overall optimization in improving work efficiency through equipment upgrades and automation will curtail the risks of inventory buildup and profitability deterioration mentioned above. Improvements in work efficiency have already been achieved in processes where the system was introduced on a trial basis, and the effects are clearly being felt.

Through the Advanced Materials Business, we seek to contribute to society as the lead runner in the markets for our products, continuously refining our material technology capabilities to meet the needs of every era, and securing high profitability and top-class market shares. We will act with particular emphasis on developing and expanding sales of products that contribute to reducing greenhouse gas (GHG) emissions.

Changes in the Business Environment and Responses to Issues

What we see as the greatest risk factor is the obsolescence of existing products and technologies because of technological innovation and market changes. In fact, in recent years, the Company has been compelled in some instances to change or abandon business strategies due to this type of decline in demand for existing products and other such causes. In this business, we strive to carefully confirm customer desires and needs, develop new applications that leverage the characteristics of existing products without being constrained by existing products or their characteristics, and develop new products that can be expected to generate profits in the future through collaboration with the Technology Division. As one means of doing this, we undertake product development with an awareness of synergy effects, such as investigating new products that combine the characteristics of multiple products that we handle.

In addition, one risk factor with a major impact is a decline in competitiveness caused by delayed ESG responses, particularly responses for reducing GHG emissions. In this regard, we understand that the necessity of highlighting our active measures for achieving carbon neutrality is increasing. Social demands are already increasing from the perspective of carbon footprints (CFP^{*1}) and RBA^{*2}, which have similar meanings in a broad sense, and we see this as an issue that requires urgent and strong responses with a sense of crisis that some companies may be eliminated. In fact, we are undertaking initiatives including measures relating

to the Task Force on Climate-related Financial Disclosures (TCFD) that use internal and external knowledge and collaboration, support for responses to social and customer requirements such as the CFP mentioned above, and support for the provision of information on energy-saving measures and the adoption and expansion of renewable energy use at business sites. In addition to these initiatives, we are contributing to GHG emissions reductions around the world and mitigation of climate changes through the expansion of business including the development of products contributing to lower carbon emissions, such as near-infrared absorbing materials.

Furthermore, we are aware of the China risk as a separate risk. China is advancing a policy of local production for local consumption in response to effects from Sino-American trade friction, competition with local manufacturers in Chinese markets is intensifying, and China has implemented restrictions on the export of some raw materials. In response to these risks, we are expanding sales to customers outside of China, advancing collaboration with Chinese materials makers, working to generate the highest possible profits, procuring raw materials from sources outside of China, and taking other measures to avoid lost opportunities from declining production volumes.

^{*1} A concept for converting greenhouse gas items throughout the processing of a product or service, from procurement of raw materials to disposal and recycling, into an amount of carbon dioxide.
^{*2} A shared assessment scheme relating to the sustainability of electronics devices.

Roadmap

	FY2021	FY2022	FY2023	FY2024	FY2025 and beyond
SiC		● Start of construction of 8-inch bonded substrate development line		● Completion of construction of development lines and start of prototyping	● Target: Create a system for producing 10,000 pieces (6-inch equivalent) /month (pursue additional production and sales in response to growing demand)

SMM Products in Daily Life

1

Lithium nickel oxide cathodes for secondary batteries

2

Lubricants

4

Autoclaved lightweight concrete

7

Functional inks (Near-Infrared absorbing nanoparticles)

1

Nickel hydroxide cathodes for secondary batteries

3

Copper polyimide substrate for the driver ICs of LCD TVs

5

Optical isolators for fiber optic systems

8

Printed wiring boards

1

Materials for rare earth bonded magnets for automobile motors

6

SAW filter LT/LN for smartphones

8

Nickel powder and nickel paste for multilayer ceramic capacitors

9

Auto exhaust catalysts

10

Oil refining catalysts

Materials Business

Close Up

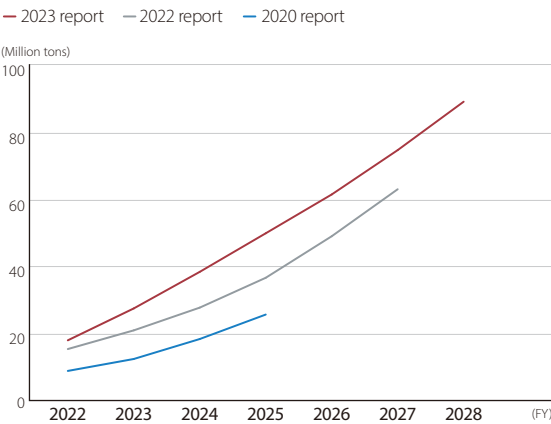
Promotion of the Bonded SiC Business

Overview of the SiC Market and Features of the Company's Products

Silicon carbide (SiC) is a power semiconductor material used in electric power control applications. In the high-capacity (high current and high withstanding voltage) required for drive control devices, particularly for electric vehicles, hybrid vehicles, SiC is an excellent material that can reduce energy loss, and the

market is expanding rapidly. SiCkrest®, a bonded SiC substrate manufactured by Sicoxs Corporation, a subsidiary, is made by bonding thin layers of a high-quality single-crystal onto a support substrate made of low-resistance polycrystalline SiC to achieve low resistance and high strength for the entire substrate while maintaining the characteristics of a monocrystalline SiC. Also, the production of monocrystalline SiC requires a lot of energy, by Sicoxs Corporation's technology enables the production of more than 50 bonded SiC substrates from one monocrystalline I SiC substrate, reducing energy consumption during production while increasing supply.

Market Scale of SiC Power Devices



Source: Power SiC report, Yole Intelligence, 2023

Current Status of and Plans for the Company's SiC Business

Sicoxs Corporation produces 6-inch bonded substrates and sell some of them. The company has received numerous requests from customers for certification evaluation of 8-inch bonded substrates and responded by building an 8-inch development line and starting prototyping the first quarter of FY2024.

Sicoxs Corporation also started granting licenses for its bonding technology to some customers so that it can respond promptly to market requests for increased supply.

By deploying its bonding technology to the market in various forms, it is contributing to the efficient use of energy and reduction of greenhouse gas emissions.

Comment from an Employee

We Want to Make SiCkrest® the Global Standard

So far, Sicoxs Corporation has established manufacturing technology for 6-inch substrates. To meet customer expectations for 8-inch substrates, we built a new 8-inch substrate development line at Ohkuchi Electronics Co., Ltd., an SMM subsidiary, and started sample prototyping. As substrates become larger, the difficulty of manufacturing increases, including maintaining processing uniformity and performing substrate handling, but we hope to quickly establish 8-inch substrate manufacturing technology based on the experience accumulated to date and expand the use of SiCkrest® so that it becomes the global standard.



Naoyuki Nakahigashi
Supervisor,
Technical Group,
Oguchi Factory
Sicoxs Corporation

X-Mining® Co-creates New Value

X-Mining® (pronounced “cross mining”) is an information distribution site that was launched in 2020. The objective is to co-create value that leads to the generation of new value by combining the issues of visitors to the site with the Company's materials. Accordingly, the site includes not only basic introductions of product information, but also various articles on product functions, use cases, discussions with experts, and more. As a result of continuously expanding the content, improving the design, and making other changes, the number of site visitors increased by tens of thousands in FY2023.

We are also acting on X-Mining® to expand offline points of contact with markets by participating in domestic and international exhibitions such as the Japan Mobility Show (JMS) 2023 (Held at the Tokyo Big Sight) and SXSW 2024 (held in Texas, USA). In addition, we are implementing measures that combine both online and offline aspects, such as issuing press releases before exhibitions and using Web advertising and social media, X-Mining is effectively increasing awareness of our material brands around the world.



Case SOLAMENT® Sunlight Control Material

We began branding our near-infrared absorbing material in FY2023, and as a part of these initiatives, we created a landing page on the X-MINING site. This product was previously sold under the CWO® trademarked name, primarily as a window material for automobiles, but we plan to expand applications to a wide range of fields in the future including apparel and agriculture. To make the brand recognizable and relatable to a broad range of people, we created the brand name SOLAMENT® with a new logo and registered it as a trademark. This new trademark is a combination of the words “solar” and “element,” and is intended to evoke an image of a material that controls sunlight.

Among the new applications, we are first working on marketing use in clothing. SOLAMENT, even if the amount is very small, absorbs near-infrared radiation in sunlight and converts it to heat, which makes it possible to manufacture nearly transparent heat-generating fiber. The fiber can be dyed and used in general casual wear as well as work clothes, outdoor items, and clothing in general as a thin, lightweight fabric that warms up in sunlight.

Another expected application is as a cover material in agriculture. By using SOLAMENT fiber in cover curtains used in agricultural green houses, the interior temperature can be controlled and the wavelengths of light necessary for photosynthesis can reach the plants, improving crop growth and yields. This application has social significance in terms of improving food production efficiency and reducing energy consumption, and we expect that it will be adopted worldwide.



DOWN-LESS DOWN JACKET Using SOLAMENT Wins iF Design Award

DOWN-LESS DOWN JACKET (DLDJ) was created with the idea of making a visually-striking prototype that expresses the feature of SOLAMENT®—a transparent material that warms up in sunlight and is warm even though it is lightweight. The DLDJ does not use feathers or padding, but when exposed to sunlight, the SOLAMENT® fibers generate heat, and the jacket becomes as warm as a conventional down jacket.

A prototype DLDJ was exhibited at JMS 2023 and SXSW 2024 to convey the potential of SOLAMENT® and attracted considerable attention. In March 2024, it won the world-renowned iF Design Award 2024.



Research & Development

Strengthening development of new products and processes for the sustainable growth of the Group



Toru Motoki
Managing Executive Officer
General Manager of Technology Div.

Future Strategies

Research and development strategy

Our company focuses on mineral resources, smelting and refining, and materials as its core business. In research and development, we have positioned “exploration, mining, and mineral processing,” “smelting and refining process,” “powder synthesis and surface treatment,” and “crystal growth and processing” as our core technologies.

Additionally, we define “analysis” and “computer simulation” as our foundational technologies, clearly delineating our technological domains to execute focused development.

Specifically, in the mineral resources field, we are working on the development of ore mining and flotation methods, and in the smelting and refining field, pyro- and hydrometallurgical processes, and in the materials field, we are working on the development of the automotive, energy, and information and communications fields.

In all these fields, we are promoting development toward carbon neutrality, which has become a growing social demand in recent years. In addition, we are focusing our efforts on the development of human resources who can perform challenging research

and development activities so that we can achieve our growth strategies.

Strengthening new product development capabilities

To ensure the sustainable growth of our business, it is essential to strengthen our new product development capabilities.

Particularly in the Materials business field, where short product life cycles prevail, it is necessary to continuously propose attractive new products to the market.

We closely analyze market and technology trends, draft research and development strategies from a long-term perspective that takes into account product life cycles and the emergence of innovative technologies, and engage in selection and concentration of research and development themes. Moreover, we are not only focusing on current development themes, but also dedicating efforts on fundamental research in the field of powder materials with a view to the future.

SMM’s Research and Development

SMM’s four research laboratories and centers and five departments of the Technology Division conduct research and development on reinforcing and developing existing businesses, improving their competitiveness, and identifying and developing new businesses.

Niihama Research Laboratories
As the company’s sole research facility dedicated to the R&D of resource and smelting technologies, Niihama Research Laboratories work on improvement of existing smelting and refining process and mineral processing. It also engages in the development of new

smelting processes such as LIB battery recycling and metal reduction methods using hydrogen that contribute to the realization of a sustainable society.

Battery Research Laboratories
To accelerate the expansion of the cathode materials business for secondary batteries, which is a growing market, we are engaged in research and development of cathode materials and their manufacturing processes. By improving the performance of our main products, we aim to increase our market share among existing

customers, and we are also advancing the commercialization of new nickel-based lithium-ion battery cathode materials. Additionally, we are conducting fundamental research and establishing battery evaluation technologies based on a long-term vision for next-generation battery materials, thereby broadly advancing our research and development of cathode materials for secondary batteries.

Materials Laboratories

The Materials Laboratories conducts research and development of new materials that add functions to non-ferrous metals by leveraging SMM’s powder synthesis and surface treatment technologies and crystal growth and processing technologies, our core technologies. It also collaborates with the Computer Aided Engineering and Development Department and the Analytical Laboratory, which are located at the same Ome District Div., to perform efficient searches for materials and elucidate the mechanisms behind functional expression to advance research and development of new materials with the aim of creating new business.

Ichikawa Research Center

The Ichikawa Research Groups are conducting basic research on powder materials that exhibit new functions and innovative powder synthesis technologies, and work with the Ichikawa Analytical Laboratory, which is equipped with the latest advanced analytical equipment, to carry out efficient material development.

Planning & Administration Department

The Planning & Administration Department oversees the company’s research and development division, promoting company-wide R&D by formulating technology strategies and R&D strategies, as well as discovering and planning new R&D themes. Additionally, it supports

the promotion of departmental R&D conducted by business units, providing assistance to ensure the efficient achievement of R&D goals and the early commercialization of projects.

Intellectual Property Department

The Intellectual Property Department provides support relating to intellectual property including development support through monitoring of patents related to research and development and analysis of patent information, supporting the creation of patent portfolio from the results of development, and providing advice on execution of technology contracts.

Computer Aided Engineering and Development Department

The Computer Aided Engineering and Development Department provides engineering support and material design support using computer simulations and AI, which are essential for advancing research and development, elucidates mechanisms through data analysis, and develops production control support technologies.

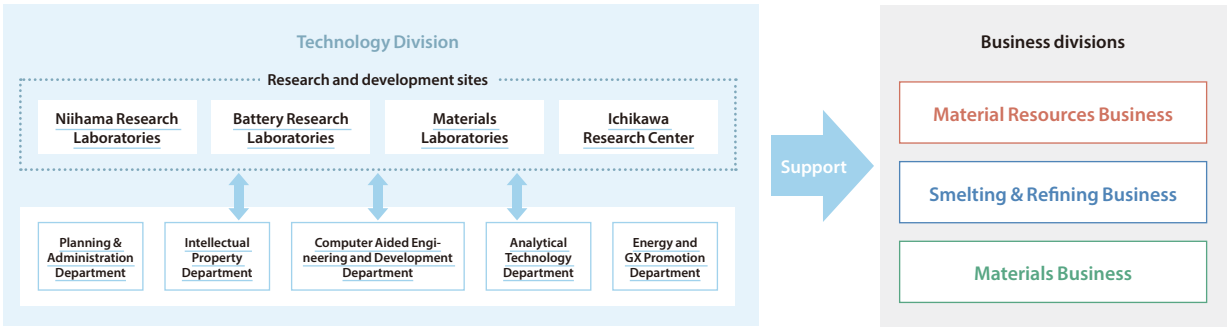
Analytical Technology Department

The Analytical Technology Department utilizes evaluation and analysis technology, a fundamental technology, to solve issues in R&D and business divisions, and continues to develop and introduces new analysis methods. The department is also responsible for guiding on and promoting the improvement of QCDS in SMM’s evaluation departments.

Energy and GX Promotion Department

The Energy and GX Promotion Department oversees the Group’s energy management, proposes group-wide policies, targets, and plan for achieving carbon neutrality, and promotes measures to address important issues.

Research and Development Structure



Approach to Intellectual Property

SMM protects and effectively uses intellectual property through the creation of a patent portfolio or tacit knowledge from the results of development, in accordance with its intellectual property strategy based on business and R&D strategies while respecting the intellectual property rights of others. The Intellectual Property Department focuses on implementing these initiatives in close collaboration with business divisions and R&D divisions. It also conducts employee training on the creation of intellectual property, responses to technical agreements, and other topics, raising awareness of intellectual property.

Through these activities, we hope to support the creation of new business and the sustainable growth of business from an intellectual property perspective, contributing to the Company’s development.



Masao Naito
General Manager
Intellectual Property Dept.

Research & Development

Close Up

Discussion with R&D Personnel

Developing New Technologies to Secure Lithium Resources



Takuya Kaseyama
Niihama Research Laboratories,
Technology Div.

I began working for SMM in 2010. After working in research and development at the Niihama Research Laboratories, I was assigned to mines in South America. I returned to the Niihama Research Laboratories in 2021 and am now participating in a project to recover lithium from a salt flat.



Osamu Ikeda
Niihama Research Laboratories,
Technology Div.

I joined SMM in 1989. I performed fieldwork in metal processing and catalyst recycling, and in 2011, I was assigned to the Niihama Research Laboratories. Since 2017, I have been involved in this project.

The company has identified "effective utilization of non-ferrous metal resources" as one of the key challenges in realizing our long-term vision. As part of our efforts, we are advancing technology development for the stable procurement of lithium resources and have commenced a pilot-scale testwork to recover lithium from salt flats in Chile in FY2023.

Here, two engineers involved in this testwork discuss the current status of the project.

Q. Please discuss the background to the initiatives for developing lithium recovery technology.

Ikeda: As solutions for global warming countermeasures become a common issue worldwide, lithium-ion secondary batteries are rapidly spreading for the realization of carbon neutrality. The recovery and refining of lithium, which is a raw material for these batteries, is precisely the practice of our company's commitment to the effective utilization of non-ferrous metal resources. Additionally, I believe there is great value in our company's efforts, as we can leverage the hydrometallurgical technology we have developed over the years.

Kaseyama: That's right. What is even more important is the perspective of 'how to procure resources without environmental impact.' In the recovery of lithium from salt flats, the conventional process involved evaporating brine, which is water with a high

concentration of salt. However, lithium is mainly produced in globally arid regions. Evaporating water in such regions is becoming increasingly problematic.

The technology our company is currently developing is called 'Direct Lithium Extraction (DLE).' This method uses a unique adsorbent to recover only lithium from the brine without evaporating the water, making it a method with low environmental impact. Moreover, it is a technology that only our company is working on domestically, so it is an important initiative as we aim to become a 'global leader in non-ferrous metals.'

Q. What are your roles in this project?

Ikeda: Since I began working for the company, I have accumulated field experience in metal material smelting and processing. I believe that I was selected to participate in this project in recognition of my abundant field experience.

Kaseyama: Mr. Ikeda is very knowledgeable about the onsite equipment, so we rely on him a lot. He has been with SMM the longest in our team and acts as a kind of coordinator. On the other hand, I have less experience, so I always consult Mr. Ikeda first if anything comes up.

I have had the experience of working in South American sites, such as the Cerro Verde mine in Peru, for five years. Since this pilot-scale trial is being conducted in Chile, I believe my main role is to leverage that experience to build relationships with the local people. In the field, it's important to become amigos (friends) first,



The Maricunga Salt Flat, a potential source of brine

rather than just business partners.

Ikeda: In order to communicate with local partners, it is necessary to understand not just the language, but also the culture. For this reason, Mr. Kaseyama, who has experience working in South America, is an invaluable presence. For this experiment, if we can't procure brine locally, we can't start.

Q. What is the current status of the project, and what are the aspirations for the future?

Kaseyama: Currently, we are in the stage of relocating the pilot plant to the site and preparing to start the experiment. Although it is a large-scale project that will still require a considerable amount of time to reach practical application, the challenge from here on is how quickly we can proceed.

Ikeda: DLE is a technology that has not yet been practically implemented in the world. For our company to commercialize this technology, we need to increase our partners and expand the scale of our testwork. To be recognized as a partner worth collaborating with, the achievement of a 'successful trial' is a crucial indicator. Therefore, it is essential to ensure the success of this pilot-scale testwork at all costs.

While our company is the first in Japan to undertake this, we are a latecomer on the global stage. Many companies are already advancing their DLE experiments, so our goal is to accumulate successful results first.

Kaseyama: Meanwhile, domestically, we are continuing research aimed at improving the adsorbent.

While many companies are developing technologies to handle high-purity brine, our strength lies in extracting lithium from brine that contains many impurities and has a relatively low lithium concentration. By targeting a different field than our competitors and enhancing our technology, we aim to differentiate ourselves.

Ikeda: It is certainly true that there are still many challenges that we have to overcome, but this project is highly significant for the Company's business growth and for achieving carbon neutrality. We will do whatever we can to ensure that it is a success.

Kaseyama: There are very high expectations both in Japan and overseas concerning lithium recovery and refining. I feel a lot of pressure, but I will do my best to achieve success.



Human Resources Strategy

The business environment surrounding companies is a difficult one, in which the future is difficult to foresee. We believe that our Company, too, will face difficulty in aptly adapting to changes through the continuation of conventional approaches and are, in particular, creating an organization and developing employees undaunted by the prospect of undergoing change and of actively changing themselves.

Securing, Developing, and Utilizing Human Capital in the 2021 3-Year Business Plan

The environment in which the Group conducts business is undergoing major changes, and it is necessary that we implement growth strategies, enhance enterprise value, and build solid management foundations as a company that can adapt to that change. Human resources are at the center of these efforts, and we believe that it is important that diverse human resources respect one another’s ideas and that we achieve growth strategies as an organization that can demonstrate maximum capabilities for working toward the same goals. To be an organization where diverse human resources can play active roles, we are working to develop human resource strategies linked to management strategies, establish human resource development structures and systems that encourage independent growth and career development by individual employees, and create an internal environment that facilitates work by diverse human resources.

The Company-wide Group on Human Resources is positioned within the Corporate Value Enhancement Strategic Committee to link management strategy with human resources strategy, with meetings held on an ongoing basis at least once per quarter. With the executive officer in charge of the Human Resources Department as the Chair and the General Manager of the Human Resources Department as the Deputy Chair, the Group promotes the rational assignment of human resources and engages in discussions of cross-company human resources strategies related to the securing, fostering, and utilization of human capital, including the systematic development of the next generation of management and future managers.

Active investment in human resources is also ongoing as part of the 2021 3-Year Business Plan. In July 2023, we revised the personnel system for managerial track employees with the aim of providing opportunities for employees to play an active role, building a corporate climate conducive to the continuous “taking on of challenges,” “change,” and “growth,” as well as a corporate culture in which every employee continues to learn and grow. Alongside this, we developed a career challenge (internal job posting) system to improve employee motivation for growth. In step with these efforts, we are revising our human resource development program to improve the competencies required for each job classification level, job function, and individual, and have clarified the persons responsible for training by respective job capacity. We are thus engaging with the cross-sectional, Group-wide development and utilization (deployment) of human resources.

In the 2024 3-Year Business Plan, which is set to be formulated going forward, we will actively promote a variety of human resources strategies. However, we also consider it necessary to institute a human resources policy to serve as a basis for our human resources strategies, in order to facilitate the implementation of our management strategies aimed at achieving both the sustainable development of society and sustainable growth of the Company.

We plan to institute our human resources policy to reflect our values and organizational culture, with the aims of promoting the “taking on of challenges,” “change,” and “growth” for every employee and having it serve as the basis for decision-making on human resources matters.

Initiatives for Securing, Fostering, and Utilizing Human Capital

Securing	Fostering	Utilizing
<ul style="list-style-type: none">Enhancing recruiting capabilities and increase recruitment staffExpanding the long-term engineering internship programImproving corporate brandingIntroducing scholarships	<ul style="list-style-type: none">Promoting the evolution and deepening of OJT(1on1 meetings)Enriching the coaching training programIntroducing a career building programIntroducing a talent management systemEnhancing the management leadership training program for selected employees	<ul style="list-style-type: none">Reviewing the remuneration and performance evaluation systems, allowances, and benefitsHiring and utilizing diverse human capitalImplementing mental health care management and health promotion programs
Aggressive investment in human capital		
<ul style="list-style-type: none">Launching a training program designed to foster next-generation leadersWork Experience Program (Renewed acknowledgement of capabilities and skills, mid-career development, life stage support for employees 65 and older)Diversifying online learning opportunities as a way to support self-motivated career building (reskilling, recurrent training)Promoting health and productivity management: Raising of retirement age to 65 to support employees wishing continue to work and stay active for life		

1. Progress of the Human Resources Strategy Measures

Revision of our managerial track personnel system

To realize our Vision for 2030, we consider it imperative to adapt to the constantly changing market environment and evolve into a company which will successfully achieve sustainable growth. By realizing increased alignment between job duties/responsibility and compensation for every employee and maximizing the potential of each individual, we will in turn realize the building of a corporate culture conducive to the continuous “taking on of challenges,” “change,” and “growth.” In July 2023, we introduced a personnel system for managerial track employees (job grading system), to embody and manifest this aspiration. The value of each employee’s duties is determined by the magnitude of “job responsibilities,” “degrees of difficulty,” “impacts,” etc. and we provide opportunities for active participation by increasing the consistency between duties/responsibility and remuneration, regardless of an employee’s age or years of continuous service, thereby endeavoring to raise the motivation of all managerial track employees. The introduction of this system now means that treatment of employees is not dictated by their age and years of continuous service. This is enabling the clear statement of employee treatment aligned with duties descriptions for mid-career hires and the appointment of early career employees in their 20s to management positions, where the earliest age allowed was around 35 under the previous system. It has also enabled the retention of outstanding personnel who can be assigned to duties which fall in higher job grade categories.

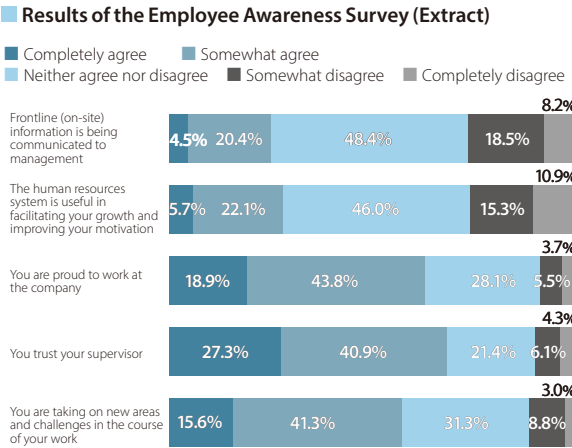
Alongside the revision of this system, we extended the retirement age for managers from 60 to 65 and introduced a system for senior employees (employees over 65 years of age). Furthermore, in December 2023, we introduced a career challenge (internal job posting) system to facilitate higher levels of achievement of the objectives of the managerial track personnel system.

In addition, in FY2024, we plan to revise the treatment of core employees who mainly support our company’s regular core operations and manufacturing workplaces from the age of 60 until the retirement age of 65.

Employee awareness survey

SMM conducts an employee awareness survey annually to ascertain the current statuses of employee awareness and motivation, as well as factors of their satisfaction or dissatisfaction, and to utilize this information in measures aimed at instituting improvements.

The FY2023 survey revealed issues such as lack of communication between managers and employees and issues in the human resources system that is not leading to increased employee motivation for growth. Meanwhile, feelings of pride in the company, good supervisor-subordinate relationships, and a culture of taking on challenges in the workplace are among the areas which the SMM Group is aspiring to further develop as its existing strengths. In addition, in the survey questions relating to corporate culture, the answers to the question on what our employees regard as the aspects of SMM’s corporate culture that they wish to cherish and maintain going forward were “taking on challenges/change,” “on-site first,” “flexible,” and “open and vibrant.” A “bureaucratic” organizational culture was singled out as one area which employees would like to see eliminated at the earliest possible juncture.



Comment from an Employee

Following My Career Path under the New System

After joining the company in April 2012, I worked as an accountant at business sites and Group companies in Japan, and in the Internal Audit Department from April 2019. In July 2024, I was reassigned under the career challenge(internal job posting) system established in December 2023, to allow me to take on new challenges in my career in terms of both accounting matters and general office administration. This I feel has proven a meaningful opportunity to fully reflect on my past, present, and future career. Since joining the company, I have benefitted from the guidance and instruction of my supervisors, senior colleagues, and all of my coworkers at my various workplaces and I will use this experience to achieve results in the position I desire and work hard to realize the career I envision.



Hirokuni Morimoto
Administration Sect.
Hinikari Mine Dept.

Human Resources Strategy

2. Actively Invest in Human Resources

Training Programs for the Development of Next Generation Management

SMM believes in the importance of expanding our human resources pool for next generation management through planned development. Toward that end, we implement selection-based programs (Middle Management Programs, training to develop the next generation of executive managers, Officers' Coaching School, etc.) for specific target groups as a way to develop the next generation of management, and are implementing training in a systematic manner. Under the Middle Management Programs, we select the human resources who can be expected to lead organizations in the future, with members of our management team serving as lecturers on sustainability issues and ESG themes toward improving our corporate value and thereby raising the level of mid-level managers. As part of training to develop next generation executive managers, we select the leaders among our human resources who will, in the near future, lead the path forward for our Company. We implement a practical program for those thus selected aimed at fostering their commitment and motivation, facilitating the acquisition of the necessary knowledge, and training them in the thinking skills that will be required of them as executive managers. At the Officers' Coaching Schools, executive officers serve as principals, decide the important themes to be covered at each school, which is composed of early- and mid-career employees, and work to learn together and put their studies into practice at their workplaces.

We also actively dispatch personnel to external programs and, through training and seminars with next-generation management resources outside the company, work to equip employees with high perspectives not obtainable within our Company.

Supporting Career Self-Development

We believe that self-driven growth by every employee will lead

to sustainable growth of the SMM Group. Self-development and practical on-the-job training (OJT) carried out through everyday work, along with appropriate assignment of personnel to foster their development, form the foundation for employee growth. We are consolidating our systems for self-study by offering numerous programs including online video-based learning and e-learning, to actively support the education of employees. To enable employees to independently envision their careers and continue working, in the second-year employees join the Company, and again at the ages of 35, 43, 50, and 58, we conduct career design training that gives employees the opportunity to clarify their future career goals and action plans. In addition, to assist with career self-development, we offer support measures and systems matched to changes in life stages, such as joining the Company, marriage, childbirth, childcare, nursing care for elderly parents, and reaching retirement age, while also providing platforms for consultation and opportunities for imparting information through training programs.

Expansion and Promotion of Health and Productivity Management

From an early stage, our Group has made securing the safety and health of officers and employees a priority from the standpoint of occupational health and safety. To ensure that all employees in our Group can work with greater health and motivation, in FY2022, we formulated the Employee Health Promotion Roadmap, which specifies medium- to long-term initiatives and targets, and a one-year Health and Productivity Management Plan, and are undertaking and rolling out effective maintenance and promotion measures for mental and physical health.

We host regular health seminars and mental health training for employees on topics such as the risk of onset of lifestyle-related diseases, the risk of obesity, female health, as well as mental health training, in addition to walking events using a health management support system (smartphone app).

Comment from an Employee

Online Video Learning Tools to Put Cross-Sectional Learning into Practice

I attend courses in a wide range of categories using online video learning tools, to equip myself with a flexible mindset and allow me to adapt to changes in my surroundings, as well as to take on new challenges. Attending a series of courses in which one is interested can lead to unexpected discoveries and insights. There are also many courses for beginners, which are ideal for getting an outline of knowledge and skills outside my area of expertise. Taking courses on cross-sectional topics allows me to renew previous learning and to acquire tips and ideas for my work.



Takanobu Hagiwara
Administration Dept.
Non-Ferrous Metals Div.

3. Ensuring Understanding of DE&I and Strengthening the Management Foundation

Each employee has different perspectives and ways of thinking, and it is necessary to create work environments where employees respect and collaborate with each other with equal opportunities while accepting and acknowledging the differences of the diverse members and making the most of their characteristics (DE&I). In addition to diversifying visible characteristics such as gender, nationality, and age, promoting diversification of skills and experience will lead to the generation of innovative ideas and enhance the flexibility and competitiveness of organizations. We believe that this will lead to the creation of new value that will be a driving force for generating innovation in the Company.

The SMM Group engages in initiatives toward gender balance (women's active engagement); promotion of employment for people with disabilities and support for their retention; increasing the number of foreign employees; as well as measures to raise understanding of sexual minorities (LGBTQ+), in the context of its promotion of DE&I. For the promotion of women's active engagement, in 2011 we set up a working group to discuss "Challenges and Measures to Encourage Women's Active Engagement," the first initiative of its kind at SMM. Subsequently, after six months of activities, the working group proposed measures to management, and concrete initiatives commenced following the establishment of a dedicated organizational apparatus, the Women's Advancement Support Group (now the Diversity Promotion Section) within the Human Resources Department. The Company has since then continued to engage in initiatives for the expansion of opportunities for women. These include the promotion of women to management positions and assignment to production sites and mine sites, as well as their stationing not only at sites in Japan but also those overseas. Furthermore, we have stipulated the target of 50 female managers and a ratio of female employees of 20% or higher in our Vision for 2030, while also establishing the target of having 30% female executive officers by 2030. To achieve these goals, we have instituted targets for the ratios of women in regular and mid-career hire

recruitment, dispatched female employees to outside training for the development of next generation of leaders, and convened "Roundtable Discussions by Officers and Female Managers," to ensure that the voices of those involved are reflected in management measures.

In addition, as stated in the SMM Group's Corporate Philosophy, we aim to be a forward-minded and vibrant company that recognizes the dignity and value of people based on respect for all individuals, and have since FY2019 designated December of each year as Human Rights Month, and are undertaking human rights training throughout the Group. Acts of harassment in the workplace which unjustly harm the dignity of workers are moreover unacceptable in our society, impeding the creation of comfortable working environments as well as the fulfilment of workers' capacities. The SMM Group has traditionally promoted awareness on harassment prevention through means including various training courses. To further enhance these initiatives, and to create more comfortable working environments for our employees, from FY2023, we decided to continue to roll-out, on an annual basis at all Group companies, the dissemination of information and education on harassment as regards its nature (types/categories), as well as on the Group's harassment prevention policies and consultation system.



Cross-industry training program for women's exchange /Internal debriefing session

Comment from an Employee

The Challenges of a Member of the Workforce Pursuing a Doctorate in Balancing Professional and Family Life

Since joining the company in 2007, I have consistently been engaged with research and development utilizing computer simulations. After taking maternity and childcare leave on two occasions and availing of SMM's unique system of voluntary leave (accompanying my husband on his job transfer overseas), and returning to the workplace, I am currently working at graduate school as a professional with doctoral degree, where I am involved in developing new calculation technologies for smelting and refining processes. I aspire to leveraging both my strengths as a computational technician and the opportunity I have been afforded to research at university to contribute to further increases in the efficiency of SMM's smelting and refining processes.



Yuko Goto
(Tohoku University)
Computer Aided Engineering
and Development Dept.
Technology Div.

Digital Transformation (DX) at the SMM Group

The SMM Group established its DX promotion policy to address the management challenges of business reform and creation of new businesses, human resource response in an age with a declining birthrate, and improvement of management efficiency, and we are taking systematic action in accordance with our roadmap. FY2024 will be a transition phase when we will execute key measures including utilization of data and development of DX human resources, and by steadily implementing these measures, we will seek to strengthen competitiveness and to achieve sustainable growth.

Overview of DX as a Whole

DX Promotion Policy: Three Objectives and Strategies

Business reform and creation of new businesses

- Utilize DX in business reform and development of new products and processes, and accelerate the speed of these in order to respond flexibly to changes in the social environment that will become ever more intense.
- Create new businesses by leveraging digital technology and discovering new value to further strengthen the SMM Group's competitive advantage.

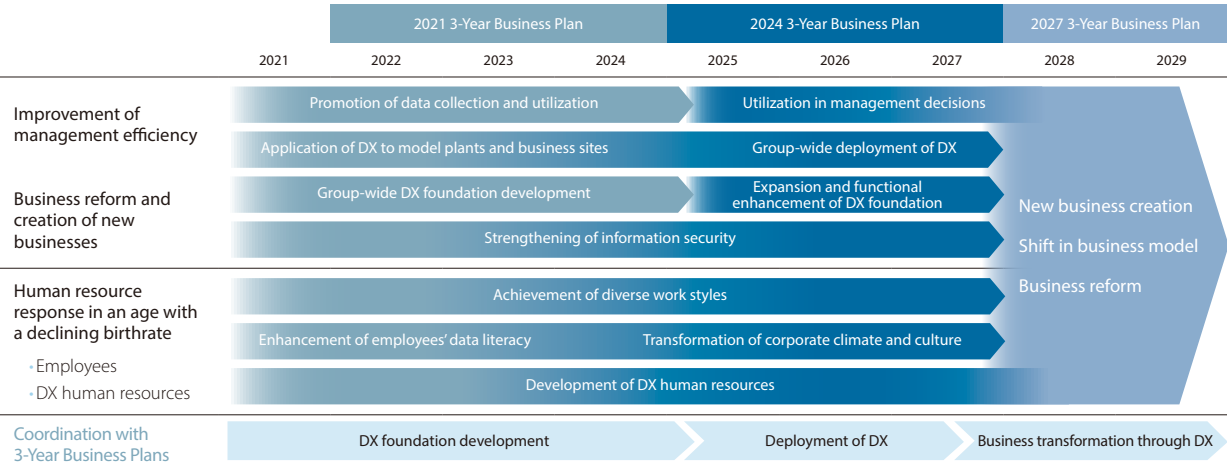
Human resource response in an age with a declining birthrate

- Enable business continuity and development amid a declining birthrate by promoting automation and unmanned operations at manufacturing sites, and drastically streamlining indirect operations.
- Become a company that is attractive to workers through the creation of safe workplaces and the achievement of diverse work styles that consider work-life balance.

Improvement of management efficiency

- Use data to make speedy management decisions.
- Carry out operational streamlining and enhancement of labor productivity to improve competitiveness in all fields of business.
- Build a foundation for high-speed
- Respond to ever-changing and growing information security threats.

Roadmap



Progress

Plan for FY2023	FY2023 progress	Plan for FY2024
Improvement of management efficiency	Started renewal of Group wide-area networks ▶ P.85	Complete renewal of Group wide-area networks
Business reform and creation of new businesses	Formulated a plan and concept for a data utilization platform ▶ P.85	Determine the requirements for a Group-wide deployment platform
Human resource response in an age with a declining birthrate	Completed the overall concept for DX human resource development ▶ P.83 Started internal use of ChatGPT ▶ P.84	Set the DX human resource development curriculum and start level 1 training Promote use of AI and increase operational efficiency

1. Positioning of DX in Our Value Creation Model

We believe that DX undertaken by the SMM Group will affect our business activities in the value creation process and the value we provide (six types of capital). By actively addressing DX, we will be able to improve this performance and value, which will contribute to improving corporate value through business reform and creation of new business, human resource responses in an age with a declining birthrate, and improvement of management efficiency, which are management issues.

Review of priority areas in DX

When setting key performance indicators (KPIs) for the DX measures undertaken in FY2023, we organized the issues, key measures, and their objectives in each priority area, and as a result, we made the following changes and redefined the areas.

“Materials business and R&D DX” divided into “advanced materials DX” and “R&D DX”

In the past, the materials business and R&D were considered one area, and the objective of activities was the development of new products. As DX initiatives have advanced, however, the scope of DX activities has expanded to include areas not only those related to new product development including simulation technology support, advanced analysis, and the introduction of new technologies such as materials informatics (MI), particularly in R&D divisions but also process improvement. In response to this, we separated advanced

materials DX and R&D DX to avoid the drawbacks of narrowly limiting the scope of measures and KPIs while maintaining new product development as a priority topic.

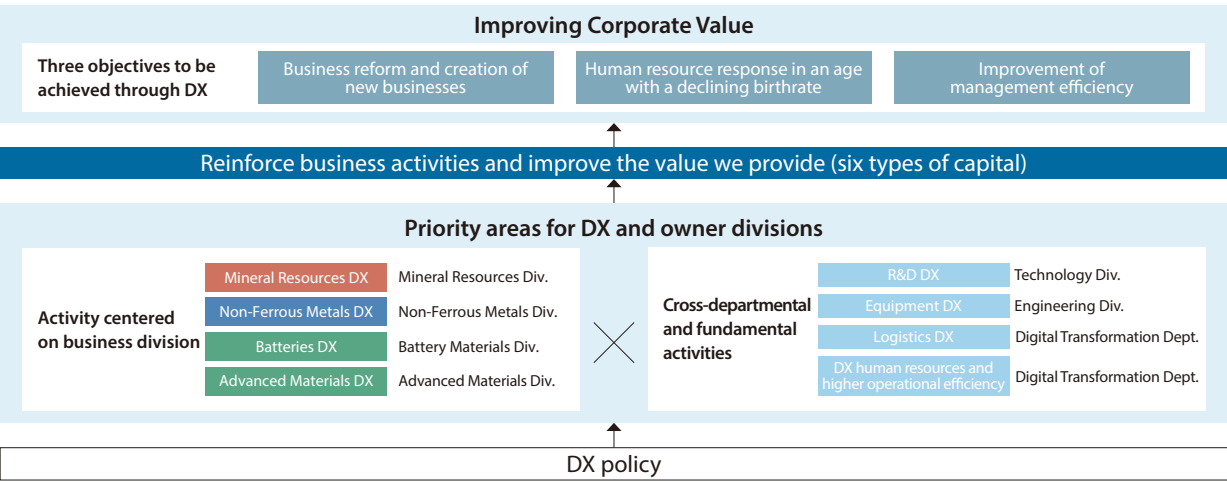
“Reform of indirect operations and work styles” revised to “DX human resources and higher operational efficiency”

We are currently implementing a diverse range of activities including internal introduction of ChatGPT, RPA, and other tools, expansion of data utilization, support for smart factories, and development of DX human resources as measures for increasing labor productivity, which are the objectives of activities in these priority areas. Considering that the scope of these activities is not limited to indirect operations and that the importance of development of human resources involved in DX is increasing, we revised the name of this priority area to “DX human resources and higher operational efficiency.”

Priority area framework redefined

In conjunction with these changes to priority areas, we streamlined activities that were managed across multiple divisions and re-clarified the owner divisions with responsibility for implementing measures in each area and achieving the KPIs.

Furthermore, among these eight priority areas, the business divisions are the owners of four, and the other four areas in which cross-departmental and fundamental measures are implemented are positioned as activities centered on business division and cross-departmental fundamental activities, respectively.



Digital Transformation (DX) at the SMM Group

2. Setting Key Measures and KPIs in Each Area

In the second half of FY2023, we set KPIs for key measures in each priority area. We expect that this will serve to promote information sharing among divisions concerning the objectives of measures and their approaches and that periodic reviews by the Digital Transformation Committee based on these KPIs will facilitate more effective implementation of the PDCA (Plan, Do, Check, Act) cycle, thereby promoting smoother and accelerated implementation of DX initiatives.

The key measures and examples of their objectives and KPIs set in each priority area are indicated below. Quantitative target values are set every three years for each KPI.

Examples of Key Measures		Objectives	Examples of KPIs
Business divisions	Mineral Resources DX	<ul style="list-style-type: none">Automate heavy machinery at the Hishikari MineRemotely operate heavy machinery from above groundImprove drilling accuracy (use image processing, etc.)	<ul style="list-style-type: none">Reduce dust and noise exposureRaise productivity <ul style="list-style-type: none">Dust exposure time reduction rateNumber of devices operated per personOvercutting reduction rate
	Non-Ferrous Metals DX	<ul style="list-style-type: none">Increase operating rates through predictive maintenanceForecast using data analysis	<ul style="list-style-type: none">Reduce loss of opportunityRaise productivity <ul style="list-style-type: none">Breakdown prediction rateRate of reduction of applicable work hours
	Batteries DX	<ul style="list-style-type: none">Advance digitalization at the Niihama PlantIntroduce and optimize a new inventory management system	<ul style="list-style-type: none">Raise productivity <ul style="list-style-type: none">Reduce management man-hours
	Advanced Materials DX	<ul style="list-style-type: none">Conduct regular evaluations and raise levels using DX implementation indicatorsCreate smart factories	<ul style="list-style-type: none">Raise DX literacyRaise productivity <ul style="list-style-type: none">Evaluation values based on customized IPA indicatorsNumber of sites where measures to create smart factories are implemented
Cross-departmental and fundamental	R&D DX	<ul style="list-style-type: none">Effective use (quantification, etc.) of analytical data (SEM images, etc.) and integration with MIAI collaboration with R&D databases	<ul style="list-style-type: none">Increase the pace and efficiency of development <ul style="list-style-type: none">Number of quantified technologies implementedNumber of AI searches per person
	Equipment DX	<ul style="list-style-type: none">Develop and utilize collaborative robotsRaise the level of maintenance operationsAnalyze operational data	<ul style="list-style-type: none">Save laborReduce lost opportunitiesOptimize operations <ul style="list-style-type: none">Number of robots installedPercentage of sites with equipment management systems installedRate of yields improvement
	Logistics DX	<ul style="list-style-type: none">Introduce DX in conjunction with updating of backbone systems	<ul style="list-style-type: none">Increase operational efficiency <ul style="list-style-type: none">Reduce work times in relevant areas
	DX human resources and higher operational efficiency	<ul style="list-style-type: none">Develop in-house DX human resourcesPromote digital workPromote use of digital data	<ul style="list-style-type: none">Promote and advance of DX activitiesIncrease efficiency and raise levels of operationsUse data and raise management levels <ul style="list-style-type: none">Number of human resources developedTotal reduction of hoursCreation of foundations and development of DMO* <p>* Data management offices</p>



A seminar on ChatGPT taught by an outside instructor (a hybrid event for all sites in Japan and overseas)



Remote operation of heavy equipment at the Hishikari Mine from above ground

3. Reinforcing Digital Foundations

(1) Development of DX human resources

We believe that developing DX human resources will have a major impact on the speed and performance of measures to address management issues and will affect a wide range of factors in day-to-day work including improvement of operational efficiency, promoting innovation, improving adaptability to change, and reinforcing security. With the objective of enhancing these effects even further, in FY2023 we reviewed the overall image of DX human resources and development within the Group. The image for human resources was divided into the literacy field, which is based on knowledge and mindsets, and the project field, which is based on the roles of DX approaches in projects and other initiatives. For both fields, we referred to the digital skill standards of the Information-technology Promotion Agency (IPA) to specify our own skill sets and curricula, and we are now working to develop DX human resources.

Human resource development in the literacy field

We assess the digital skill proficiency of employees on a three-level scale. Level 1 is “digital user human resources,” and all

employees are required to reach this basic level. Level 2 is “digital operations human resources,” and this covers approximately 3,500 employees who use PCs and mobile devices in their day-to-day work. Level 3 is “digital utilization human resources,” and this level requires more advanced digital knowledge. We will begin human resource development on all three levels starting in the second half of FY2024.

For employees who seek to reach level 2 or level 3, we first perform an assessment to determine their current skill level, and we created a system that enables individual employees to efficiently acquire the skills that they are lacking based on the results of this assessment.

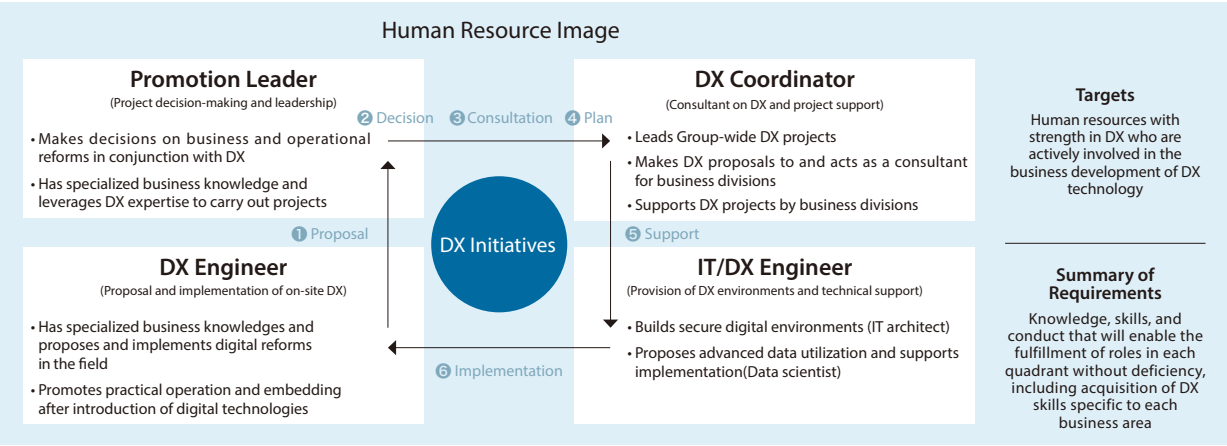
Human resource development in the project field

The roles of measures undertaken in project formats from a DX perspective are divided into four quadrants. Regarding this development, in addition to the skills needed to perform their roles, we believe that it is important for personnel to gain experience through actual projects, and this point is reflected in the curriculum. We are currently making preparations with a target of starting human resource development in this field in FY2025.

Literacy Field

Human Resource Image		Target Personnel	Summary of Requirements
Lv 3	Digital utilization human resources	Day-to-day users of PCs and mobile devices Approx 3,500 personnel	Acquire digital tools skills that can be used in any business and knowledge in areas such as networks and data utilization
Lv 2	Digital operations human resources		
Lv 1	Digital user human resources	All employees; approx. 7,500 personnel	Acquire a risk hedging-centered mindset and basic knowledge

Project Field



Digital Transformation (DX) at the SMM Group

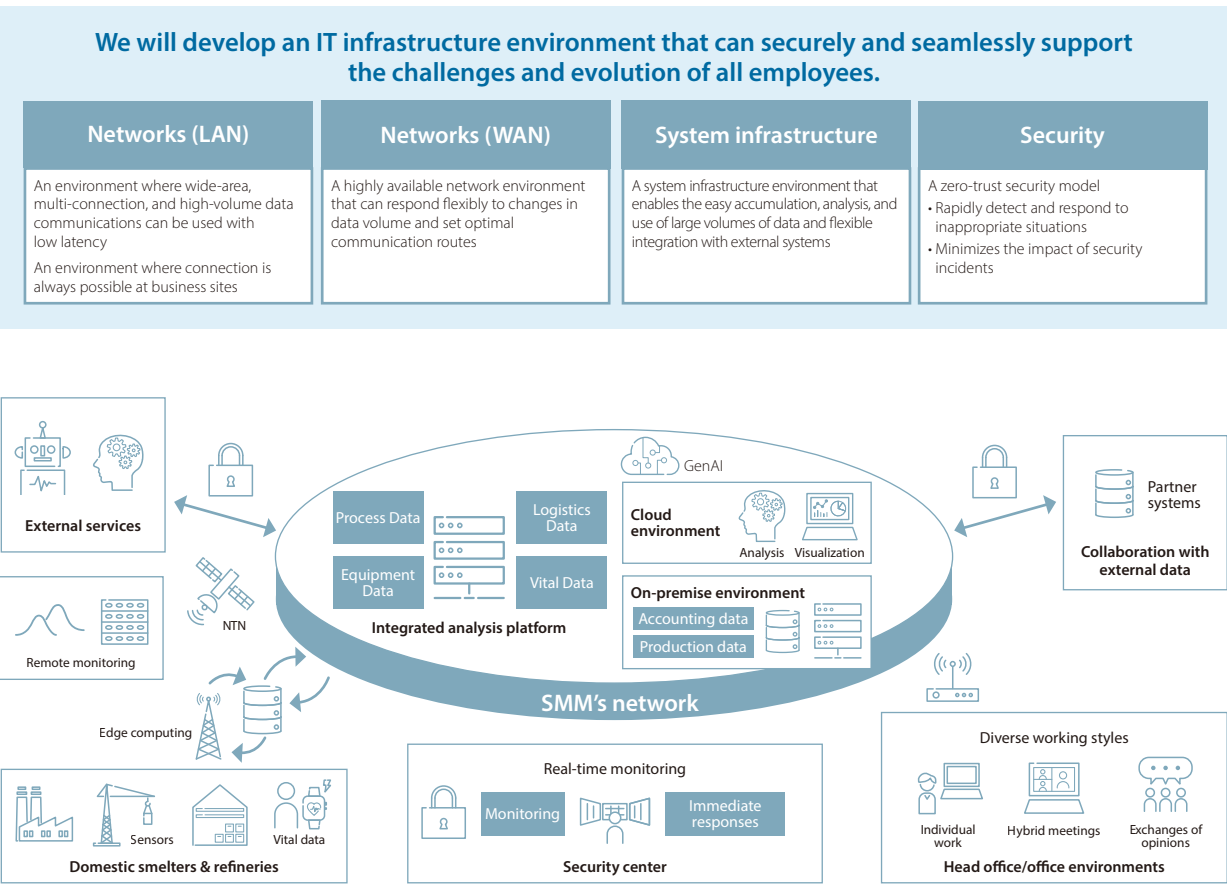
(2) Increasing operational efficiency through digitalization

The use of various digital tools is expected to have effects that include higher operational efficiency, higher quality, reduced errors, decision-making support, enhanced communication and collaboration, and facilitation of flexible working styles. Accordingly, we are actively introducing and deploying a variety of IT solutions.

ChatGPT

After creating a closed and secure environment that can be used as an in-house network, we began using the environment within the Group in November 2023. Subsequently, we have been actively adding functions including links with internal databases, image generation AI, and Web linking and promoting the use of ChatGPT. In addition, as of April 2024, approximately 30% of users, more than 1,500 employees, are participating in a community platform that we launched specifically for ChatGPT, asking questions, making requests, sharing information on uses, and so on.

SMM IT Infrastructure Grand Design



Deployment of other digital tools

We also promoting the use of other digital tools with a focus on the use of Power Platform applications, business automation through RPA, introduction of an electronic contract system, and Group-wide introduction of a BOX system.

(3) Developing DX foundations

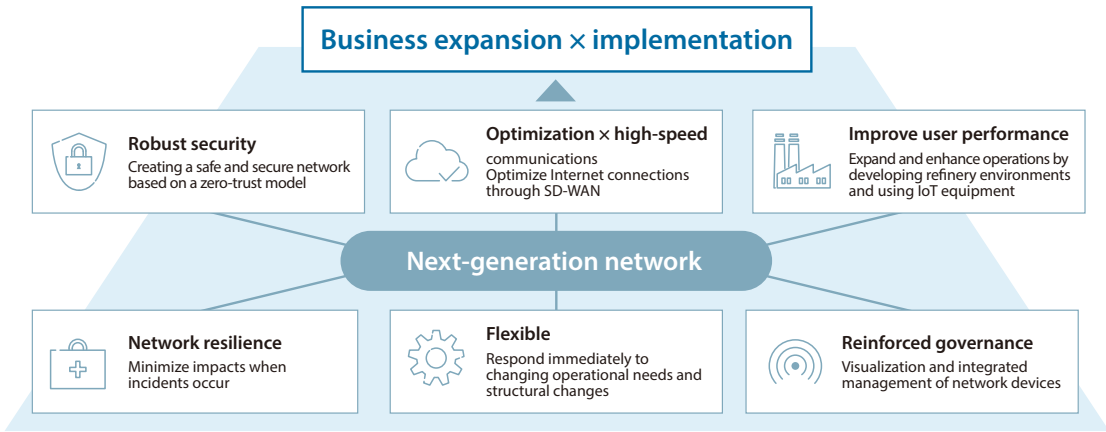
Formulation of an IT infrastructure grand design

We grew up a vision of the future of our business in the form of the infrastructure development that will be necessary for SMM to implement DX and defined the IT infrastructure that will be necessary to achieve this vision as our IT Infrastructure Grand Design. We are now developing individual elements of the infrastructure based on this grand design.

Renewal of the SMM group wide-area network

We are building a new network that can respond to the rapid increase in network traffic and increasingly severe and complex cyber security issues and achieve a flexible use

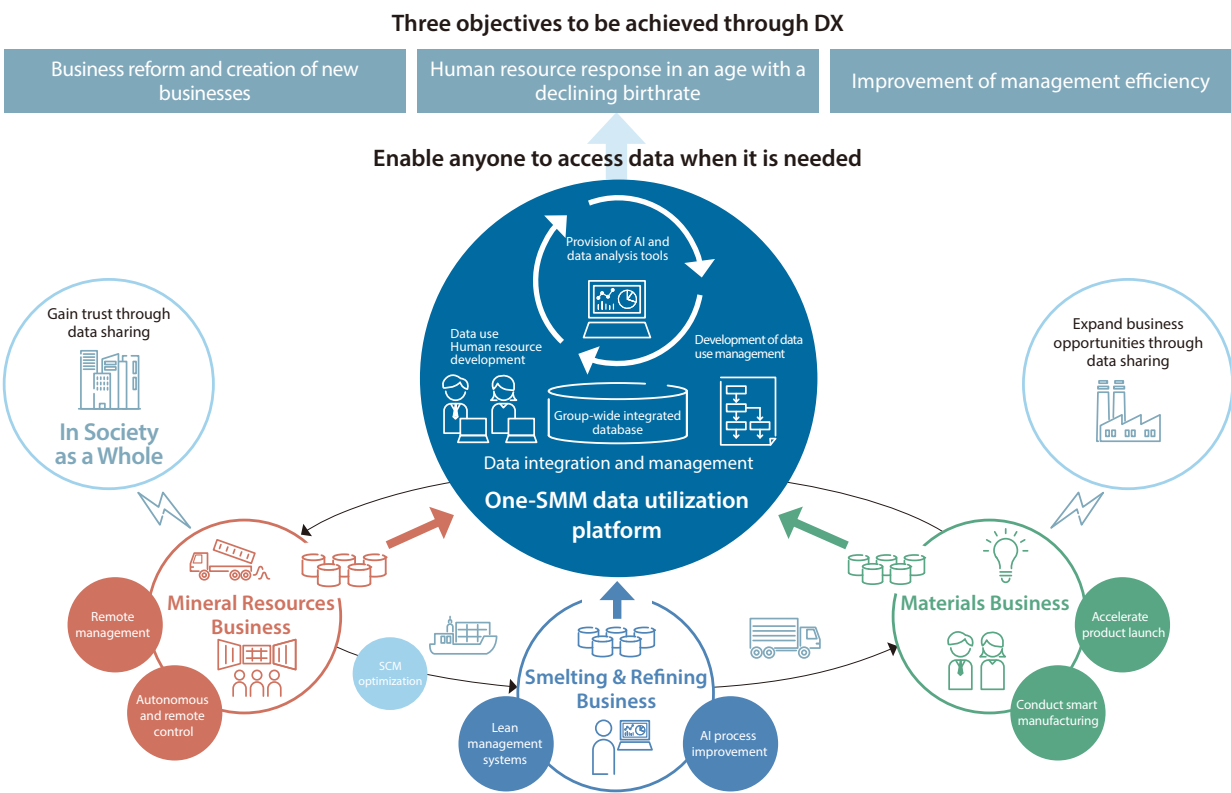
environment. We created a software-control network based on a zero-trust network model, and the switch over to the new system was completed at approximately half of Group sites including major sites in FY2023.



Data utilization platforms

We have started building mechanisms for achieving Group-wide data utilization based on the concept of "tackling challenges and evolving in response to "changing times" by retrieving the democratization of data." Although we have implemented measures to increase efficiency by using data in refinery processes and specialized areas in the past, there are many instances where data collection, processing,

management, and so on in management and administration in particular rely on manual work by individuals. As the pace of business increases even further, the working population declines, veteran employees retire, and other changes occur, we believe that creating an environment where anyone can easily access and effectively use the data that they need when they need it is an essential measure for maintaining and reinforcing our competitiveness.



Sustainability Management

Sumitomo Metal Mining Group Sustainability Policy

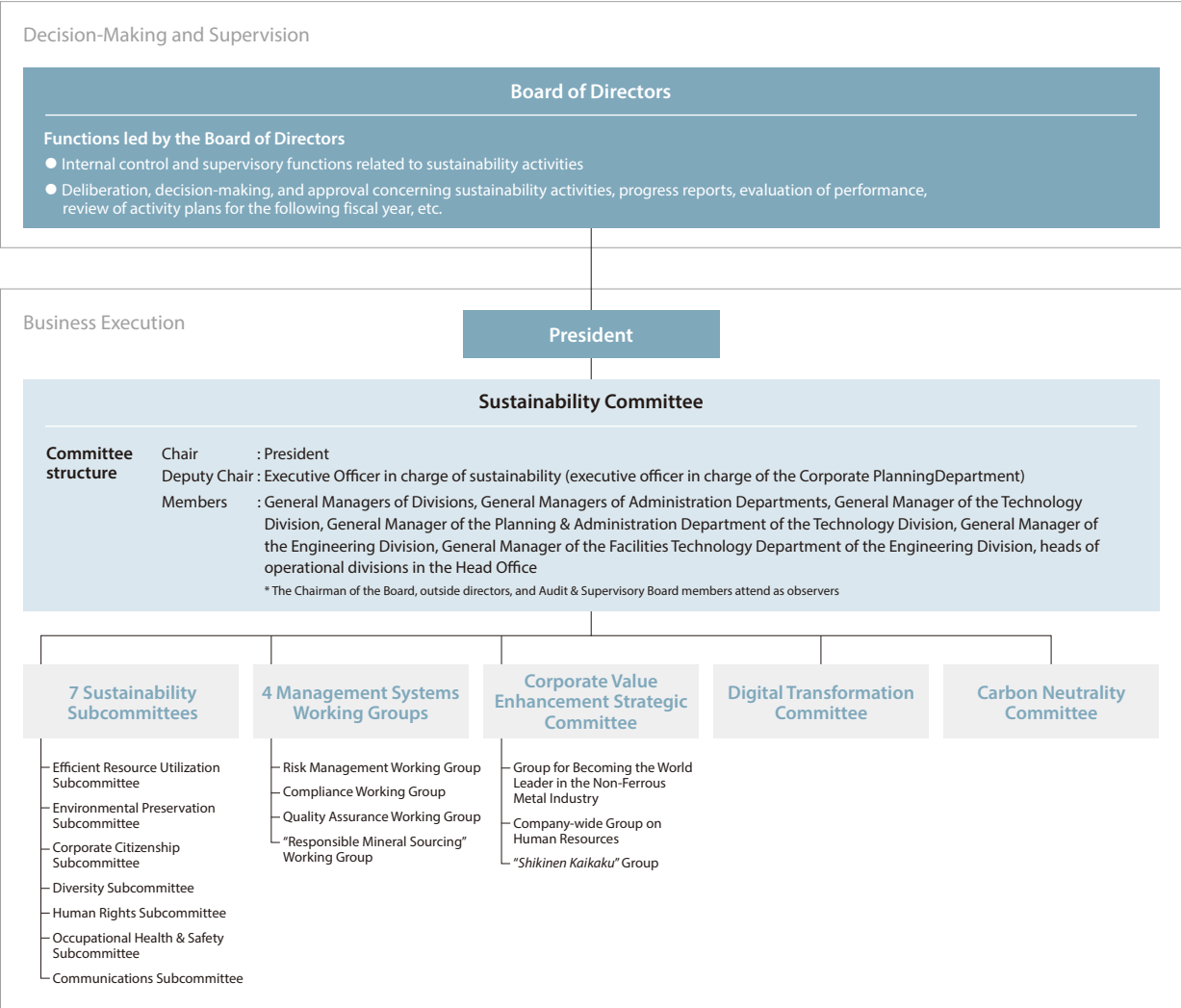
The SMM Group will tackle management issues that contribute to society's sustainable development, and will strive to achieve continuous growth in our business and improve our corporate value.

Sustainability Promotion Structure

Our Group advances sustainability activities primarily through our Sustainability Committee. Since setting out our Vision for 2020 in 2008, we have consistently undertaken solutions to social issues through our business. In April 2022,

we reorganized our sustainability promotion structure with the aim of engaging in management and sustainability with greater consistency.

Sustainability Promotion Framework



Matters for Deliberation in the Promotion of Sustainability

Sustainability Committee	<ul style="list-style-type: none">Deliberation and decision-making concerning important items related to annual plans and other sustainability promotion activities, and indicators for evaluating our level of achievement toward Vision for 2030Regular evaluation of sustainability promotion activities reflecting issues and opinions obtained through engagement with stakeholders, and invoking of corrective measures
Corporate Value Enhancement Strategic Committee	<ul style="list-style-type: none">Deliberation on candidates for new large-scale projectsInstruction to the Group for Realizing the World Leader in the Non-Ferrous Metal Industry, the Company-wide Group on Human Resources, and the "Shikinen Kaikaku" Group regarding examination of matters specified as issues
Digital Transformation Committee	<ul style="list-style-type: none">Deliberation and decision-making on fiscal year plans for DX promotion activities and other key mattersRegular evaluation of DX promotion activities and invoking of corrective measures
Carbon Neutrality Committee	<ul style="list-style-type: none">Drafting of company-wide policy, goals, and roadmap for the achievement of carbon neutrality, and deliberation on material issuesDeliberation and decision-making on fiscal year plans and other key matters related to carbon neutrality promotion activities

Putting Sustainability Promotion Activities into Practice

The 7 Sustainability Subcommittees manage and advance the progress of our sustainability promotion activities, with the Sustainability Committee at the center. However, responsibility for putting activities into practice is assigned across different levels through job classification-based management. In conjunction with our 2021 3-Year Business Plan, the subcommittees also formulated plans for organizations in areas related to Vision for 2030 during the period of the 3-Year

Business Plan, and are managing the progress of these plans. The 7 subcommittees assess details of organizations' activities through the subcommittees' members or secretariats, and check progress through the Sustainability Committee. Through dialogue with shareholders and investors and through briefing videos for business partners, we explain our Group's sustainability promotion activities to outside stakeholders and call for their cooperation.

Diffusion of Sustainability Promotion Activities

For Vision for 2030 and other sustainability promotion activities, we distribute simple, illustrated booklets with specific examples of activities to all Group employees, and post interviews and columns on specific activities in our in-house bulletins and on our portal site. We also conduct education on sustainability in annual training (new employee training, mid-career hire training, grade-specific training, selective training, etc.).

In conjunction with the adoption of the Sustainable Development Goals (SDGs) by the United Nations General Assembly in September 2015, we have also set every September as a month for thinking about the Sumitomo Metal Mining Group's Vision for 2030. As a part of this, we hold the Sumitomo Metal Mining Group Vision for 2030 Awards, in principle every year, to recognize individuals and groups for their contributions to achieving the Vision for 2030. We also engage in awareness-raising activities, such as communicating messages from top management and conveying progress toward our Vision for 2030 to employees in a clear and easy-to-understand manner.

Vision for 2030 (Material Issues and KPIs)

1 Effective Use of Non-Ferrous Metal Resources

Vision for 2030		A company that generates resources through high technological capabilities	
		1. A company that stably provides non-ferrous metals to society 2. A company that contributes to society by effectively using impurities through collaborative, open technological development among industry, academia, and government 3. A company that contributes to the construction and maintenance of recycling systems for non-ferrous metals 4. A company that develops and supplies highly advanced materials that contribute to the resolution of social issues	
KPI	Indicators		Goals
	1. 1) Advance copper mine projects		• Strengthen production structure at JV mines to achieve and maintain copper production levels of 300 kt/year from interests • Achieve steady copper production level by reinforcing exploration of surrounding and deep areas in JV mines, expanding mineral processing technology, and improving operations leveraging IoT and AI • Advance Phase 2 and later projects at the Quebrada Blanca Copper Mine
	2) Acquire new superior copper and gold resources		• Develop new mines for which we have operatorship
	3) Improve productivity by introducing new technology		• Promote remote operation and unmanned operation of heavy machinery and information infrastructure equipment inside and outside of the Hishikari Mine
	4) Advance nickel ore projects and improve productivity		(1) Nickel production: 150 kt/year (2) Recovery rate compared to FY2018: +2% (3) Recovery of scandia by-product (4) Recovery of chromite by-product
	2. 1) Develop technology to separate, stabilize and bleed off impurities, and create value from impurities generated by smelting processes and mines		• Develop technology to stabilize and bleed off impurities: Develop and demonstrate the process
	2) Develop technology to create value from unused non-ferrous metal resources		• Contribute to existing (e.g. marine resource development) and new development projects
	3) Recover non-ferrous metals from hard-to-process resources		• Participate in business and technology for recovery of lithium from salt-lake water in the presence of high levels of impurities
	3. Demonstrate and commercialize automobile secondary battery recycling technology		• Demonstrate, commercialize, and expand scale of recycling technology that recovers cobalt from automotive lithium-ion batteries Commence commissioning and commercial operation of pre-commercial plant: FY2026
	4. 1) Leverage our strengths to create new products and new businesses that contribute to society		• Research, develop, and commercialize new advanced materials in the fields of energy, automobiles, and information communications
KPI	2) Hold raw materials in-house for favorable and stable procurement		• Commercialize NiO for fuel cells following demonstration project
	3) Expand sales of low-cost battery cathode materials through favorable, stable procurement of our own nickel raw materials		• Maintain top class global share in the expanding cathode materials market

2 Climate Change

Vision for 2030		A company that actively undertakes climate change countermeasures, by reducing emissions and stably supplying products contributing to a low-carbon society, a future with zero greenhouse gases (GHGs)	
KPI	Indicators		Goals
	Reduce GHG emissions		1. Reducing GHG emissions by 38% or more compared to FY2015 (more than 50% in Japan, 24% outside of Japan)*; promote various measures to achieve "net zero GHG emissions by 2050" 2. Cut GHG emissions intensity by at least 26% compared to FY2013 3. Expand contribution of GHG reduction by products contributing to a low-carbon society: 600 kt-CO ₂ or more

3 Significant Environmental Accidents 4 Biodiversity

Vision for 2030		A company that values water resources and biodiversity, and protects the richness of the sea and land	
KPI	Indicators		Goals
	1. Zero significant environmental accidents		1) Promote improvements through the use of risk management and environmental management systems 2) Reinforce and improve equipment and infrastructure to address increases in sources of natural hazard
KPI	2. Reduce emissions of hazardous substances (year-on-year)		1) Optimize water use; reduce emissions of hazardous substances to the atmosphere and water 2) Promote various environmental preservation and biodiversity preservation activities, such as regular reforestation

5 Employees' Occupational Health and Safety

Vision for 2030		A company where all employees work together with safety first the priority in a comfortable working environment as well as safe facilities and operations	
KPI	Indicators		Goals
	1. Prevent occupational accidents		Serious accidents: zero (in Japan and overseas, including contractors) All accidents: reduce year-on-year, with aim of eventually reaching zero
KPI	2. Prevent occurrence of occupational diseases		Number of workplaces that present higher health risks: reduce year-on-year Occurrence of occupational diseases: zero

* Some underlined KPIs have been revised. The material issues have not changed.

For details of initiatives relating to each material issue, see the Sustainability Report 2024.

Sustainability Report 2024
https://www.smm.co.jp/en/sustainability/library/sustainability_report/

6 Diverse Human Resources 7 Development and Participation of Human Resources

Vision for 2030		A company where all employees can take a vibrant and active part	
		1. A company that respects the humanity of each and every employee, and where employees feel pride, motivation, and joy in work 2. A company that provides each and every employee with opportunities to improve his/her capabilities, and grows together with employees	
KPI	Indicators		Goals
	1. Promote working style reform and create workplaces that make use of digital technology, enabling diverse human resources to play vibrant and active roles		1) Improve scores for "Management by managers and superiors," "Appeal of job," and "Work environment" in employee awareness survey 2) (1) Number of female managers: 50 (SMM non-consolidated) (2) Ratio of female employees: 20% or higher (SMM non-consolidated) 3) Expand number of managerial track employees of foreign nationality 4) Percentage of employees with disabilities: 3% or higher (SMM non-consolidated) 5) Assign jobs and provide support matched to employees' life stages
	2. Support employees' mental and physical health		1) Reduce the number of employees taking long-term leave 2) Percentage of employees with abnormal findings indicated in health checkups: 50% or lower
	3. Diversify opportunities to enhance the abilities of employees according to employee needs and work needs		1) Utilize one-on-one meetings that bring out the motivation and potential of every employee and boost the growth of subordinates through regular dialogues between superiors and subordinates 2) Reconstruct the human resources development program (in-house education, external education, etc.) to provide opportunities to employees to enhance their abilities in line with their roles 3) Provide opportunities for self-development matched to each employee's life plans and needs (correspondence courses, online training, etc.)

8 Engagement with Stakeholders

Vision for 2030		A company that is appreciated and understood to be the world leader in non-ferrous metals	
KPI	Indicators		Goals
	1. Further penetrate our Group brand among employees		• Improve results of employee awareness survey (increase ratio of employees who feel pride in working at the Company)
	2. Ensure quality and quantity in communication of information and dialogue at the level of "world leader in the non-ferrous metals industry"		• Expand opportunities for dialogues with media and investors • Achieve positive evaluations of our Integrated Report from outside the Company
	3. Increase in recognition and understanding of our goal of "world leader in the non-ferrous metals industry"		• Improvement in findings of surveys by external bodies (degree of recognition and understanding, etc.)

9 Co-Existence and Mutual Prosperity with Local Communities

Vision for 2030		A company that contributes to regional development and earns trust as a member of the local community	
KPI	Indicators		Goals
	Participate in local communities through dialogue and collaboration		Accurately identify local issues through dialogues with local communities, and execute the following measures
	1. Support the local community via employee participation		• Implement employee participation programs (from 2023)
	2. Hire and procure locally		• Continually implement and assess of performance
	3. Support for nurturing of the next generation		1) Implement programs to nurture the next generation in collaboration with government, local bodies, NPOs, etc. (one or more times/year) 2) Establish and award scholarships in Japan and maintain existing overseas scholarships (from 2023)
	4. Support for people with disabilities and the elderly		• Implement programs to support people with disabilities and the elderly in collaboration with government, local bodies, NPOs, etc. (one or more times/year)
KPI	5. Support during and after disasters		• Support regions affected by large-scale disasters

10 Rights of Indigenous Peoples

Vision for 2030		A company that understands and respects the traditions and culture of indigenous peoples	
KPI	Indicators		Goals
	1. Understand indigenous peoples and their traditions and culture		• Percentage of SMM Group sites implementing in-house education: 100% by the end of FY2023
KPI	2. Support initiatives that lead to respect for the traditions and cultures of indigenous peoples		1) Provide scholarships for indigenous peoples (continue existing initiatives) 2) Support indigenous people-related initiatives by NGOs, academic societies, etc.: one initiative or more each year

11 Human Rights in the Supply Chain

Vision for 2030		A company that undertakes sustainable procurement across the supply chain	
KPI	Indicators		Goals
	Promote sustainable procurement, particularly responsible mineral sourcing		1. Responsible mineral sourcing 1) Establish a sustainable procurement management system in line with international standards by the end of FY2021 2) Maintain a record of zero mines, smelters, and refineries complicit in child labor or other infringements of human rights in the supply chain 2. Sustainable procurement 1) Business partners that have received and agreed with the Sumitomo Metal Mining Group Sustainable Procurement Policy: 100% by the end of FY2030 2) Establish a sustainable procurement management system in line with international standards by the end of FY2024 3) Continue implementing due diligence (DD)

Focus 1 Carbon Neutrality

See Sustainability Report 2024 for more details of respective initiatives.
Sustainability Report 2024
https://www.smm.co.jp/en/sustainability/library/sustainability_report/

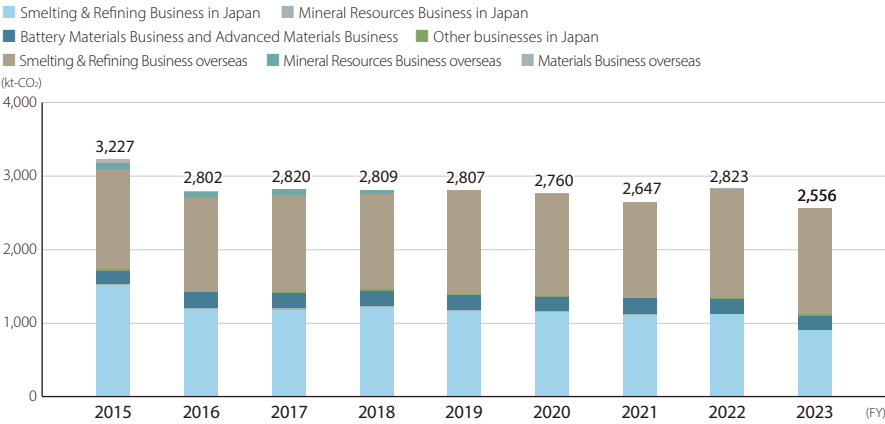
Fundamental Approach to Achieving Carbon Neutrality by 2050

SMM has set climate change as a material issue, and our Vision for 2030 is to be a company that actively undertakes climate change countermeasures, by reducing emissions and stably supplying products contributing to a low-carbon society, a future with zero greenhouse gases (GHGs). In December 2023, we revised our KPI goals to reduce GHG emissions by at least 38% compared to FY2015, the reference year, in conjunction with the formulation of a roadmap for achieving carbon neutrality by 2050.

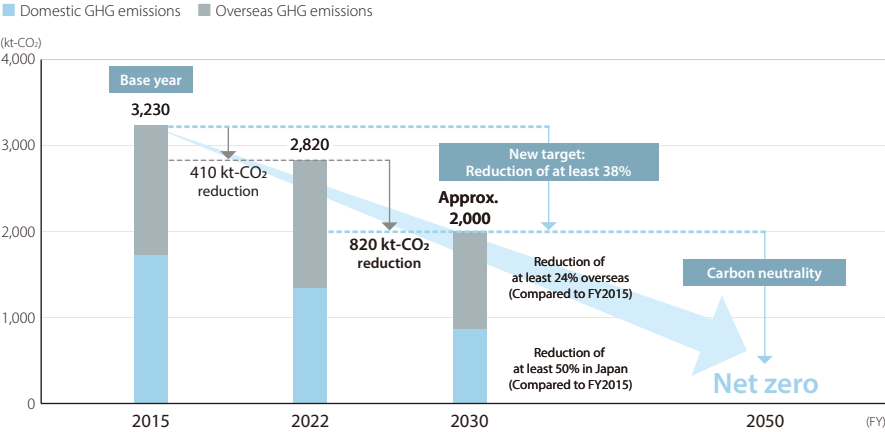
The SMM Group's GHG emissions from FY2015 to FY2023 are as shown in the graph below. Emissions in FY2023 were 2,556

kt, of which 90% was from the smelting and refining business. In the smelting and refining business, we are taking measures to conserve energy and increase efficiency, large amounts of energy are needed to maintain product quantities and quality due to a decline in the grades of ores and increases in impurities. As a result, GHG emissions have remained flat. Under these circumstances, it will be difficult for SMM to achieve its goals through existing measures to conserve energy and increase efficiency, and we believe that it will be important to identify the sources of GHG emissions and take measures suitable for each source.

GHG Emissions (Scope 1^{*1} and 2^{*2})



Roadmap for Achieving Carbon Neutrality by 2050



Governance and Risk Management by the Carbon Neutrality Committee

Regarding climate change, which is a material issue, we established and operate the Carbon Neutrality Committee* under the Sustainability Committee to formulate policies, targets, and plans for achieving our Vision for 2030, deliberate on material issues and projects subject to the Internal Carbon Pricing (ICP) program, and share external information (guidelines of affiliated organizations, international trends, regulatory revisions, etc.). The Technology Division, which serves as the secretariat for the Carbon Neutrality Committee, is a functional guidance department that undertakes measures through collaboration and cooperation with individual departments including collecting performance data and developing case studies.

Individual business divisions and business sites set their own targets based on the overall policies and targets established by the Carbon Neutrality Committee and take action to address climate change through environment management systems and other means.

Carbon Neutrality Committee

Chair	Executive officer in charge of Carbon Neutrality (Executive officer in charge of the Technology Division)
Deputy Chair	Executive officer in charge of the Safety & Environment Control Dept.
Members	General managers of divisions, General Manager of the Technology Div., General Manager of the Engineering Div., General Manager of the Safety & Environment Control Dept., General Manager of the Corporate Planning Dept., General Manager of the Sustainability Dept., General Manager of the Finance & Accounting Dept., General Manager of the Public Relations & Investor Relations Dept., General Manager of the Purchasing Dept., General Manager of the Besshi-Niihama District Div.
Secretariat	Energy & Green Transformation Dept.
Number of times convened	Two or more times per year
Content of deliberations	<ul style="list-style-type: none">Drafting of company-wide policy, goals, and roadmap for the achievement of carbon neutrality, and deliberation on material issuesDeliberation and decision-making on fiscal year plans and other key matters related to carbon neutrality promotion activitiesRegular evaluation of carbon neutrality promotion activities, review of goals, and invocation of corrective measuresProvision of information on carbon neutrality promotion, exchanges of information, explanation of key measures, and sharing of awarenessDeliberation and decision-making on other key issues related to carbon neutrality promotion activities

Measures to Achieve Carbon Neutrality by 2050

In the lead up to FY2030, we will take action to maximize the use of existing technologies including comprehensive energy conservation and increases in efficiency, fuel conversion of fossil fuels, and expanded introduction of renewable energy. To achieve carbon neutrality by FY2050, we will tackle the challenges of de-

veloping innovative technologies for refining processes, an area where it is currently difficult to achieve reductions, and introduce new technologies including next-generation energy and carbon dioxide capture and storage premised on innovative decarbonization technologies and their social implementation.

	Action up to FY2022	Action until FY2030	Action until FY2050
Process improvements	<ul style="list-style-type: none">Energy conservation and increases in efficiencyReconstruction of production processes (Harima Refinery, Hyuga Smelting, and other sites)	Maximum utilization of available technologies <ul style="list-style-type: none">Comprehensive energy conservation and increases in efficiency	
Energy transition	<ul style="list-style-type: none">Transition from heavy oil to LNG (Isoura Plant and Niihama Nickel Refinery)Introduction of solar and geothermal binary power generation (Hishikari Mine, Ome District Div, and other sites)	<ul style="list-style-type: none">Expansion of transition from heavy oil and coal to LNG and woody biomass fuelElectrification of equipment that uses heatExpanded introduction of renewable electric powerUtilization of carbon credits	Ongoing initiatives
Emissions from purchased power Improvement of coefficient	<ul style="list-style-type: none">Switch to renewable energy (Harima Refinery, Hishikari Mine)	<ul style="list-style-type: none">Expanded use of renewable energyUse of renewable energy certificates	Introduction of new technologies
Technology development	<ul style="list-style-type: none">Exploratory and basic research	<ul style="list-style-type: none">Pilot tests and verification tests	<ul style="list-style-type: none">Verification and practical implementation of innovative smelting and refining processes unique to SMM
Utilization of outside technologies		<ul style="list-style-type: none">Investigation and preparation of new technology applications	<ul style="list-style-type: none">Use of green hydrogen, green ammonia, and synthetic methaneCO₂ separation, capture, and storage technology (CCUS)

Focus 1 Carbon Neutrality

Main Initiatives (1)

Development of Innovative Smelting and Refining Processes for Achieving Carbon Neutrality

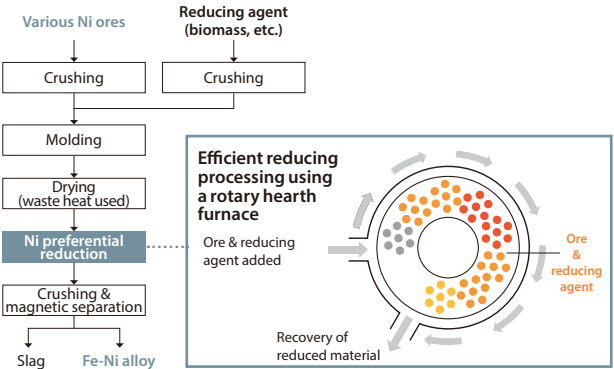
For the Group to achieve carbon neutrality by 2050, it will be necessary to make improvements to innovative smelting and refining processes that dramatically reduce GHG emissions in the smelting and refining business, a main source of GHG emissions.

To do this, we are developing new low CO₂ nickel smelting and refining methods, direct lithium extraction methods for recovering lithium from salt lakes, CO₂ absorption and fixation technologies using waste ore, and other technologies.

Low CO₂ Nickel Smelting and Refining Methods

Ni preferential reduction method

This is an efficient nickel reduction process that uses a reactor device known as a rotary hearth furnace. With this method, processing at lower temperatures and in shorter times than earlier methods is possible, and it is expected that this method will substantially reduce GHG emissions and energy usage. Also, GHG emissions can be reduced to zero by using biomass fuels as the reducing agent and green electricity as the heat source.



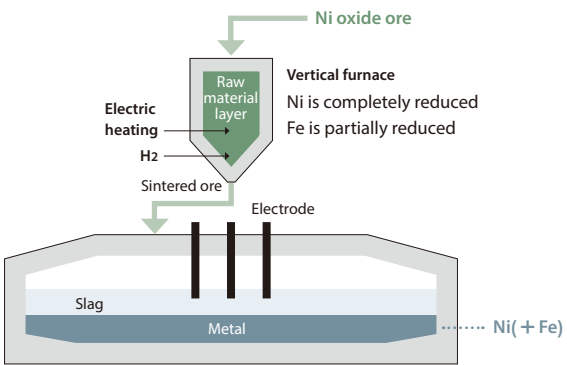
Processing at low temperature and in a short time is possible

- Substantial reduce in GHG emissions and energy usage
- Reduce GHG emissions to zero by using biomass reducing agent and green electricity as the heat source

Target
Start operation by 2050

Hydrogen reduction method

This recovery method recovered reduced nickel metal from nickel oxide ore using hydrogen, which had been considered difficult in the past. By investigating the feasibility through fundamental testing, we achieved the target of recovering reduced nickel metal. We are currently developing the process as a whole, including investigation of devices to achieve recovery, and aim to start pilot testing by 2030.



Reduction of Total Volume Using Hydrogen

- Complete carbon neutrality with zero GHG emissions
- Target nickel recovery rate achieved in basic tests

Target
Start pilot testing in 2030

Main Initiatives (2)

Reducing GHG Emissions Using ICP

The SMM Group set Internal Carbon Pricing (ICP) to develop technologies for decarbonization and to promote energy conservation and introduced an ICP system that reflects GHG reduction effects in the effects of investment. We introduced ICP in September 2020 and have actively invested in decarbonization using ICP at business sites. Specifically, in addition to energy-saving investments, such as introducing LED lighting and switching to highly

efficient air conditioning equipment, we are actively taking on challenges including introduction of solar power and a fuel transition from heavy oil to LNG, which previously were difficult under existing investment standards. Going forward, we will continue reviewing ICP as necessary in consideration of changes in social conditions and other factors and to promote decarbonization.

ICP price

JPY20,000/t-CO₂
(increased from JPY5,000 in FY2022)

Scope of ICP

Projects that contribute to enhancing the SMM Group's technological capabilities and improving corporate value through GHG reductions, after evaluating profitability

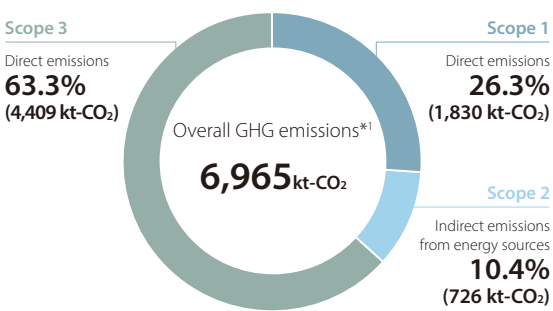
* Applies not only to capital expenditure, but also to expenses for introducing renewable energy

Examples of Application

LNG fuel conversion, biofuel co-firing, fan efficiency improvement, solar power generation, reduced steam usage, waste heat recovery, boiler water supply quality improvement, etc.

Scope 3 Measures

Scope 3 GHG emissions generated in FY2023 amounted to 4,409 kt-CO_{2e}. Starting from the categories with the highest emissions ratios, we will communicate with business partners to make the emissions calculations more accurate, confirm the status of their GHG reduction initiatives, and set Scope 3 reduction targets.



*1 Scope includes the entire SMM Group (however, data for Category 5 to 7 only covers Group companies in Japan)

Scope 3 Emissions and Percentage of Overall Emissions

Category	Emissions (kt-CO _{2e})	Percentage	Calculation Method
Total Scope 3 Emissions	4,409	63.3%	
1 Purchased goods and services	3,603	51.7%	Σ (weight of key raw materials x emissions intensity)*2
2 Capital goods	551	7.9%	Σ (amount of capital expenditures x emissions intensity x 1.05)*3 Capital expenditures include construction in progress, used equipment, and intragroup transactions
3 Fuel- and energy-related activities not included in Scope 1 or Scope 2	221	3.2%	Σ (electricity and fuel consumptions x emissions intensity [electricity*3, fuel*2])
4 Upstream transportation and distribution	23	0.3%	Emissions from domestic transportation are calculated based on the Japanese laws the "Act on Rationalizing Energy Use" and "Act on Promotion of Global Warming Countermeasures."
5 Others	11	0.1%	—

*2 For emissions intensity, we used values from the Research Institute of Science for Safety and Sustainability AIST, IDEA Laboratory LCL Database AIST-IDEA Ver. 3.4.

*3 For emissions intensity, we used values from the Database for Calculating GHG Emissions of the Supply Chain, Ver. 3.4, prepared by the Ministry of Environment and the Ministry of Economy, Trade and Industry in Japan.

Focus 1

Carbon Neutrality

Providing Products That Contribute to A Low-Carbon Society

Among the SMM Group's products, we position those products that contribute to reducing GHG emissions as low-carbon products, and the Group places the highest priority on contributing to reducing GHG emissions throughout society by developing these products and expanding business.

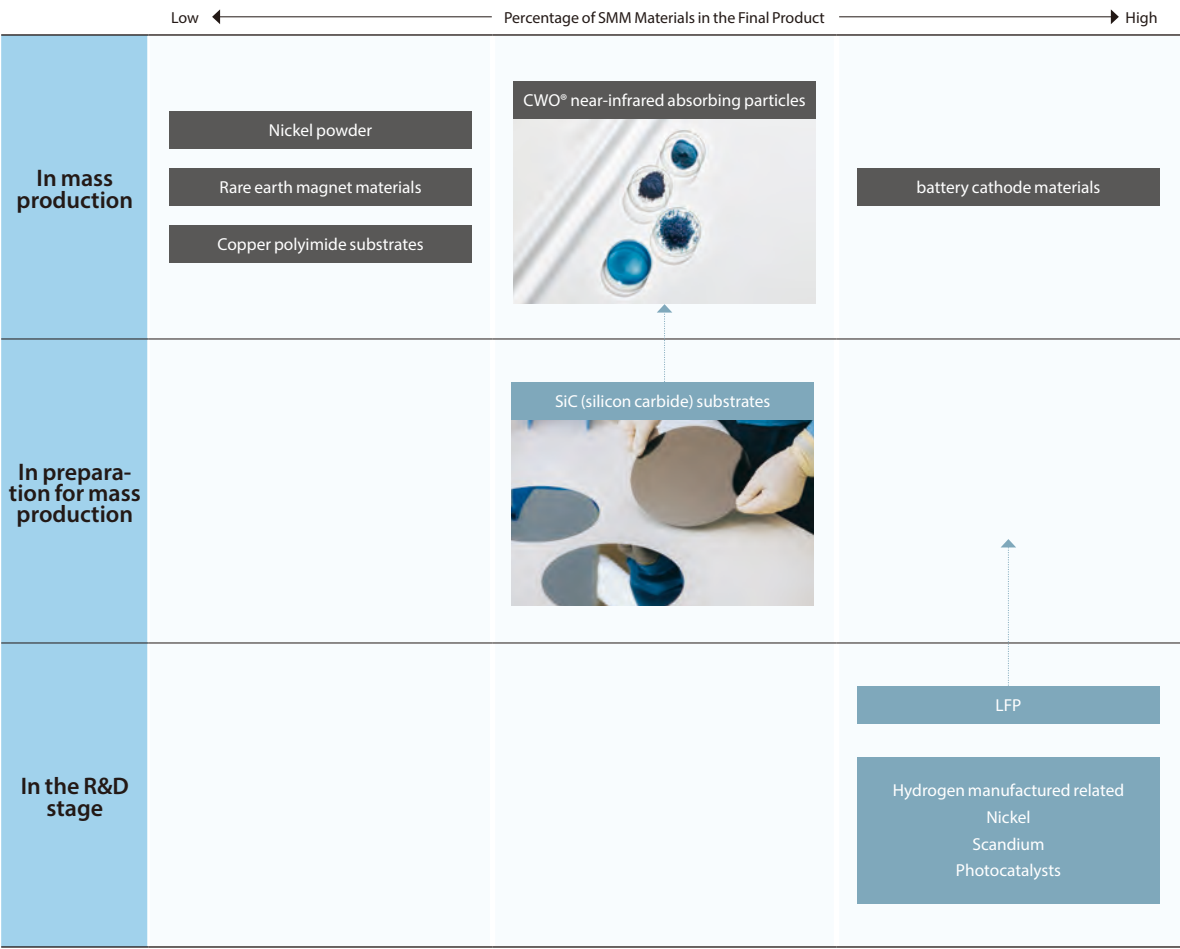
Our current target is to contribute to a reduction in GHG emissions of at least 600,000 tons through low-carbon products by 2030. The GHG reduction contribution in FY2023 was 567,000 tons.

We will continue to actively develop technology for new processes for lithium iron phosphate (LFP) cathode materials and materials relating to hydrogen manufacture while we expand business for existing low-carbon products.



SMM Vietnam, which produced LFP cathode materials

Examples of Low-Carbon Products



Action for TCFD

Governance	The Group's material issues related to sustainability, including climate change, are identified along with KPIs through discussion by senior management members and confirmed through a resolution of the Board of Directors. Climate risks, opportunities, and strategy pertaining to the Group are also reflected in 3-Year Business Plans, annual budgets, KPI targets, and other areas, and are confirmed through a resolution of the Board of Directors. The Carbon Neutrality Committee meets regularly to deliberate on and manage climate change-related matters pertaining to the Group. Initiatives and performance in regard to KPI targets are then reviewed by the Sustainability Committee and an overview is reported to the Board of Directors.
Strategy	Regarding climate change risks and opportunities that could arise in business activities, the SMM Group assumes that changes in the business environment due to the external environment include regulatory changes, technological progress, market changes, and natural disasters, and we consider the impact of each of these on business and strategy in each area, such as products and services, R&D investment, operations, and GHG emission reduction and response measures. Based on the results of this analysis, we formulate Group strategies, and these are reflected in 3-Year Business Plans. These strategies are also discussed by the Carbon Neutrality Committee and reviewed by the Sustainability Committee.
Risk management	The climate change risks identified through scenario analysis are monitored and measured by the Carbon Neutrality Committee, which also takes corrective measures and revises strategies when necessary, and are reviewed by the Sustainability Committee. Climate change risk is also managed by the Group's risk management system and Risk Management Working Group, based on consideration of the impact on other individual risks such as occupational accidents, environmental pollution, quality failures, and legal violations.
Metrics and targets	<div>To achieve carbon neutrality by 2050 we formulated interim targets for 2030 and announced roadmap. We have also set and are pursuing targets for contribution to reducing GHG emissions at a society-wide level through the supply of secondary battery cathode materials for use in automobiles and near-infrared absorbing materials produced by the Group.</div> <div><div>KPI and Results</div><div><div>1</div>Take action to reduce GHG emissions by at least 38% (at least 50% in Japan and at least 24% overseas) compared to FY2015 and achieve net zero GHG emissions by 2050 FY2023 GHG emissions: 2,556 t-CO₂e Reduction of 21% compared to FY2015; 36% in Japan and 3% overseas</div><div><div>2</div>Reduce GHG emissions intensity by at least 26% compared to FY2013 GHG intensity in FY2023 increased 3% compared to FY2013</div><div><div>3</div>Expand contribution of GHG reduction by products contributing to a low-carbon society: At least 600 kt-CO₂ FY2023 : 567 kt-CO₂</div></div>

Focus 2

Managing of Tailings Facilities

See Sustainability Report 2024 for more details of respective initiatives.

 Sustainability Report 2024
https://www.smm.co.jp/en/sustainability/library/sustainability_report/

Fundamental Approach

The SMM Group undertakes responsible tailings facility* management throughout its business and secures the management resources necessary to implement tailings facility management measures, thereby minimizing risks and environmental impacts

throughout the lifecycle including planning, design, construction, operation, decommissioning, and post-decommissioning of tailings dams.

* Slag storage facilities (sites for storing unneeded minerals that are generated during ore sorting and other process)

Management of Operated Tailings Facilities

Accumulation sites for tailings and other materials generated by mines pose a risk of major damage if they burst.

In August 2020, Global Tailings Review (GTR) formulated the Global Industry Standard on Tailings Management (GISTM). The International Council on Mining and Metals (ICMM) is committed to compliance with GISTM, and as a member of ICMM, we are responding to the standard.

Our Group thoroughly implements measures to prevent significant environmental accident at decommissioned and closed mines that it manages and tailings facilities managed by CBNC and Taganito HPAL Nickel Corporation (THPAL), both of which are located in the Philippines.

In FY2023, we disclosed information concerning high-risk tailings facilities in accordance with the provisions of the GISTM, established a working group under the Environmental Preservation Subcommittee, and took measures to ensure compliance with the GISTM.

On August 1, 2024, we formulated the Sumitomo Metal Mining Group's Tailings Facility Management Policy based on the GISTM in order to clarify guidelines concerning governance and implementation structures, principles, allocation of management resources, collaboration, preparations for and responses to emergency situations, reviews, and disclosures. In this policy, we make a commitment to securing the resources necessary for conducting tailings facility management activities, cooperating with stakeholders including local communities, mitigating risks throughout the lifecycle from tailings facility planning to decommissioning, and reducing impacts on the environment, as well as providing support for the safety management of tailings facilities at mines and other facilities in which we have invested

 Tailings Facility Information Disclosures in Accordance with the GISTM
https://www.smm.co.jp/en/sustainability/management/pdf/Tailings_GISTM_2024.pdf

Rehabilitation

CBNC and THPAL produce intermediates for electrolytic nickel and nickel sulfate. At tailings facilities, the slurry after the recovery of nickel through the production process is treated through neutralization to eliminate toxins and precipitate heavy metals. The treated slurry is then pumped to the tailings facility where it

allows the solids to settle down.

CBNC has three tailings facilities and THPAL has one. The CBNC #1 tailings facility reached its storage capacity and completed its role, and accordingly, we are rehabilitating the site to establish an independent and sustainable ecosystem. Rehabilitation

does not simply mean greening, but also making it possible for the area to return into its original state which is conducive to sustaining a natural ecosystem. This involves agroforest technology wherein the forest is established alongside agricultural farming. Thus, vegetables and fruits are also grown in the area. Many local residents and indigenous people are involved in this work, and rehabilitation plays an important role in creating local employment. We perform regular monitoring, and safe and effective management of tailings facilities throughout their lifecycles is confirmed by independent organizations and other concerned parties.



The CBNC Tailings facility after greening

Managing Decommissioned and Closed Mines

We manage the nine decommissioned and closed mines and the associated tailings facilities in Japan indicated in the below table .

Wastewater from mines is generated from mine tunnels and accumulation sites where tailings and other materials were accumulated during mining operations. Such wastewater is primarily acidic and contains heavy metals, and as a result, it is properly treated at a water treatment facility before release.

We conducted assessments of accumulation sites in accordance with statutory management standards, which were revised following the Great East Japan Earthquake in 2011, and through 2018 we invested a total of approximately JPY4.5 billion to strengthen the 11 accumulation sites that failed to meet the standards. As a result, all accumulation sites now satisfy the standards.

In addition, we have responded to the increasing severity of natural disasters in recent years by completing the installation of emergency power generation equipment at each site and taking other measures by FY2023 to prepare for interruption of external power supplies and discontinuation of traffic for up to three days.

Accordingly, going forward, we will continue to soundly manage decommissioned and closed mines while also engaging in facility and infrastructure strengthening and improvement.

Decommissioned and Closed Domestic Mines (as of July 1, 2024)


Mine Name	Location	Date of Decommissioning or Closure
Kounomai Mine	Hokkaido	October 1973
Kitami Mine	Hokkaido	October 1963
Yoichi Mine	Hokkaido	October 1963
Kunitomi Mine	Hokkaido	March 1945
Omiya Mine	Fukushima	June 1950
Yaso Mine	Fukushima	October 1970
Sazare Mine	Ehime	July 1979
Besshi copper Mine	Ehime	March 1973
Okuchi Mine	Kagoshima	September 1977

Basic Approach to Respecting Human Rights

Business operations in resource industries require large-scale development, in many instances which means they often have significant impacts on the local communities. Mineral resource development in particular poses risks of causing human rights violations including child labor. In light of these business characteristics, the SMM Group takes measures to respect the human rights of stakeholders with an emphasis on local residents and indigenous peoples, employees in the supply chain, and Group employees. Our Group supports the UN Guiding Principles on Business and Human Rights, and our Group Corporate Philosophy espouses “respect for all individuals” as its foundation. In accordance with our Group’s human rights policy, promotes initiatives to uphold human rights, including the implementation of due diligence and the operation of grievance (remedy) mechanisms.

Membership of the Japan Center for Engagement and Remedy on Business and Human Rights (JaCER)

In addition to the Whistle-blowing System as a grievance mechanism, the SMM Group actively utilizes the platform provided by the third-party organization of JaCER as a mechanism for the potential use of external stakeholders. Zero complaints relating to the SMM Group were fielded through JaCER in FY2023.

 JaCER
<https://jacer-bhr.org/en/about/>

Respecting the Human Rights of Employees

The SMM Group takes action in accordance with its human rights policy to prevent not just violations of human rights, such as child labor and occupational health and safety at Group mines, smelters, and other facilities, but also the occurrence of workplace discrimination and harassment.

Setting December of every year as Human Rights Month, we undertake human rights training throughout our Group. In FY2022, we conducted e-learning on the revised human rights

policy, and we are conducting human rights training with “embracing diversity in creating workplaces where all employees can actively participate” as the themes in our 2021 3-Year Business Plan (FY2022 to FY2024). The SMM Group (domestic) conducts surveys (employment environment surveys) on topics including harassment and communication issues. Based on surveys conducted through questionnaires, we conduct interviews as necessary and take action to correct problems.

Human Rights in the Supply Chain

The SMM Group aims to build a sustainable supply chain in cooperation with its stakeholders. In our supply chains, we monitor risk related to human rights and labor, compliance, quality assurance, and environment and local communities based on international standards and in accordance with “the SMM Group Sustainable Procurement Policy.” Should any issues occur, they are corrected. In regard to the sourcing of minerals in particular, in order to avoid procuring minerals that may have negative impacts such as child labor and other human rights abuses or environmental pollution, we carry out activities with respect to the Organisation

for Economic Co-operation and Development (OECD) guidance and in accordance with “the SMM Group Responsible Mineral Sourcing Policy.”

 Sumitomo Metal Mining Group’s Sustainable Procurement Policy
https://www.smm.co.jp/en/sustainability/management/csr_procurement/

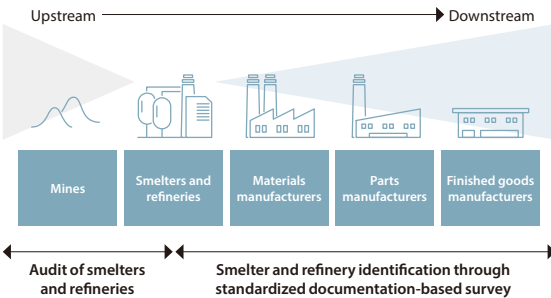
 SMM Group Responsible Mineral Sourcing Policy
<https://www.smm.co.jp/en/sustainability/management/procurement/>

Responsible Mineral Production and Sourcing

We are aware of the importance of ensuring transparency throughout the entire supply chain with respect to the mineral sourcing, which has a long and complex supply chain from upstream to downstream, we undertake responsible mineral sourcing initiatives in line with mechanisms advanced by the international Responsible Minerals Initiative (RMI) to ensure supply chain transparency (see figure on the right). These mechanisms aim to ensure transparency in the supply chain in a more efficient manner by starting with smelters and refineries, which are relatively few in number.

Upstream of smelters and refineries, we regularly undergo third-party, international standards- based audits of responsible mineral sourcing mechanisms at our smelters and refineries, covering matters including risk assessments of suppliers. Since audit standards vary from mineral to mineral, we work to ensure that each standard is met by conducting due diligence, developing internal systems and regulations, and providing internal training.

At the finished goods manufacturers downstream from the smelters and refineries, a standardized survey is extended for the purpose of identifying the smelters and refineries that produced the minerals used in their products. We have established an approval process for responses to these surveys, which are sent from supply chain to customer companies, and are working to ensure unified responses across the SMM Group.



Rights of Indigenous Peoples

Mine development, smelting, and refining can have a considerable effect on the environment and local communities and there is a risk that the rights of the indigenous peoples living on the land, who generally occupy a vulnerable position in society, will be violated. Therefore, we think it is most important to proceed while gaining the understanding and trust of these indigenous peoples. The Group respects international norms including the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), which provides for consideration of the right to “free, prior and informed consent (FPIC),” a distinctive right of indigenous peoples, as well as at the Position Statement of the International Council on Mining and Metals (ICMM). We will continue to engage in dialogue based on an understanding of the traditions and cultures of indigenous peoples with the aim of developing mutual understanding and trust while cooperating with relevant stakeholders including local governments in the areas where we conduct business.

Dialogue with Experts, NGOs, and NPOs

We work to raise the direct contribution we make to the local economy through measures such as recruiting from areas surrounding our business site and procuring from local suppliers, and we also contribute to improving the living standards of these communities, particularly in emerging nations, by providing infrastructure such as roads and ports, building needed facilities, building and operating public facilities such as schools, hospitals, and marketplaces, providing teaching materials as educational support and the goods required to operate facilities, supporting free healthcare for local communities, and promoting activities that help households to support themselves. When implementing these measures, we establish opportunities for regular communication with local communities and move forward while also checking the requirements of local residents. In addition, twice a year we exchange opinions with the international environmental NGO FoE Japan regarding issues such as the water quality of rivers around Coral Bay Nickel Corporation (CBNC) and Taganito HPAL Nickel Corporation (THPAL), in the Philippines. Those opinions and recommendations are referred to when implementing necessary improvements.

Focus 3

Human Rights

The Sumitomo Metal Mining Group Policy on Human Rights

We, the SMM Group (hereinafter referred to as the Group), support the UN Guiding Principles on Business and Human Rights and promote initiatives to respect human rights based on these principles.

Our SMM Group upholds “Coexistence with the Earth and society” and “Respect for all individuals as the basis” in our corporate philosophy. Our Group aims to focus on its social mission and responsibility as a manufacturing company, and aims to contribute to the formulation of a sustainable society by securing resources and providing society with non-ferrous metals and high-performance materials.

The Group's long-term vision is to become a “World Leader in the Non-Ferrous Metals Industry”, and our sustainability policy upholds that we will “contribute to the development of a sustainable society, and we are working to improve both our sustainable growth as a business and our corporate value”.

From among the key social issues that are closely related to our Group, 11 material issues have been identified, including “Diverse Human Resources”, “Development and Participation of Human Resources”, “Co-Existence and Mutual Prosperity with Local Communities”, “Rights of Indigenous Peoples” and “Human Rights in the Supply Chain”. Our SMM Group has also formulated the “SMM Group Vision for 2030” and KPIs as milestones in its long-term vision to address these issues, and is promoting initiatives.

We will continue to follow the Sumitomo Business Spirit, which is the basis of our Group, and aim to become a company recognized by society as the “World Leader in the Non- Ferrous Metals Industry”.

1. Our Group's approach to respect for human rights

Our Group understands that all our business activities may directly or indirectly affect human rights.

Our Group takes utmost care not to infringe on the human rights of all people, avoids causing or contributing to adverse human rights impacts through our business activities, and works towards correcting and remedying any such situation that may arise.

Where stakeholders, in particular business partners such as suppliers, are involved in adverse human rights impacts, the Group encourages them not to infringe on the human rights and cooperates with efforts for correction and remedy.

In actual efforts, we will particularly focus on the three areas of “Employees”, “Local Residents and Indigenous Peoples” and “Supply Chain (including employees therein)”.

2. Commitments on fundamental human rights issues

- 1) Respect for children's rights and prohibition of child labor
We respect the fundamental human rights of children under 18 years of age and engage in relevant business activities and social contribution activities. We do not permit child labor, especially the worst forms of child labor, such as slave labor through forced recruitment in times of conflict, and labor that is harmful to the health and safety of children.
- 2) Prohibition of forced labor
We do not recognize modern slavery in the form of forced labor, debt labor (work in situations where a person is forced to work for an employer to repay a debt) and human trafficking.
- 3) Prohibition of discrimination
Discrimination, harassment and bullying on the basis of race, religion, gender, age, sexual orientation, disability, nationality and other factors are not permitted in employment and work situations.
- 4) Respect for basic labor rights
We respect basic labor rights (such as freedom of association and workers’ right to collective bargaining) and engage in constructive dialogue between labor and management.
- 5) Working hours and wages
We endeavor to properly manage working hours, holidays and leave in accordance with laws and regulations, including reducing excessive working hours, and we pay wages at or above the minimum wage stipulated by laws and regulations.
- 6) Occupational health and safety
We actively address to ensure a safe and healthy working environment and give top priority to safety and health for life and limb.

3. Scope of application

This policy applies to all executives and employees of the SMM Group (Sumitomo Metal Mining Co., Ltd. and its subsidiaries). Our SMM Group also expects and encourages stakeholders directly linked to our operations, products or services, in particular business partners, to understand and support this policy.

4. Respect for International Norms on Human Rights

Our Group, in cooperation with its stakeholders, will address to respect human rights in accordance with the following international norms and standards.

In addition, our Group will comply with all applicable laws and regulations in the regions where we operate.

In the unlikely event of a conflict between these laws and regulations and international norms on human rights, we will seek

ways to respect international norms while complying with the laws and regulations.

- UN Guiding Principles on Business and Human Rights
- International Bill of Human Rights (“Universal Declaration of Human Rights”, “International Covenant on Civil and Political Rights”, and “International Covenant on Economic, Social and Cultural Rights”)
- International Labor Organization (ILO) Declaration on Fundamental Principles and Rights at Work
- ILO Tripartite Declaration of Principles on Multinational Enterprises and Social Policy
- United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)
- The 2030 Agenda for Sustainable Development (SDGs)
- Convention on the Rights of the Child
- OECD Due Diligence Guidance for Responsible Business Conduct
- OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas
- International Council on Mining and Metals (ICMM) Mining Principles
- Voluntary Principles on Security and Human Rights

5. Governance and Promotion Structure

The Diversity Subcommittee and the Human Rights Subcommittee, which are subordinate organizations of the Sustainability Committee chaired by the President, shall report regularly on the status of compliance with this policy and the Group's efforts to respect human rights to the Sustainability Committee, which is overseen by the Board of Directors, and reflect this information in the Group's business policies and procedures.

6. Human Rights Due Diligence

In accordance with the OECD Due Diligence Guidance for Responsible Business Conduct and other guidelines, our Group will conduct the human rights due diligence in the following steps. In doing so, our Group will strive to utilize the human rights expertise and engage in meaningful consultation with stakeholders.

- 1) Identify and assess adverse impacts associated with our Group's operations, either directly or indirectly.
- 2) Integrate the results of the assessment into the company's processes, including allocating budgets to address any adverse impacts identified as a result of the assessment.
- 3) Seek to cease, prevent and mitigate adverse impacts.
- 4) Monitor and track the status of implementation and carry out assessments of the effectiveness of our Group's initiatives.
- 5) Disclose information on the status of the implementation and the effectiveness.

7. Grievance Mechanism

Our Group will establish a grievance mechanism that is accessible to all stakeholders, including not only employees of our Group but also employees in the supply chain, local residents and indigenous peoples, and that aims to resolve grievances by consensus through dialogue

8. Dialogue and Consultation with Stakeholders


Our Group will engage in dialogue and consultation with stakeholders, including human rights experts, labor unions, customers and business partners, to promote comprehensive measures based on expertise and a broad range of perspectives for the adaption and the revision of this policy and for our Group's efforts to respect human rights.

In addition, we will raise awareness and provide training to all executives and employees of our Group to promote their understanding of this policy and their engagement in initiatives to respect human rights.

9. Reporting and Information Disclosure

Our Group will regularly disclose the progress of its initiatives based on this policy.

This policy was formulated with the assistance of human rights experts, discussed within the Sustainability Committee of Sumitomo Metal Mining Co., Ltd. and approved by the Board of Directors.



Akira Nozaki
President and Representative Director
Amended on June 1, 2022