

The DNA of Mitsubishi Materials Corporation

We've met society's needs for 150 years. And now we're making full use of the strengths we've developed over that time to improve our corporate value even more.

Naoshima Smelter & Refinery (1932)

Carbide tools

Los Pelambres Mine

Valuable metals recycling facility at Naoshima Smelter & Refinery

Hot rolling of a rolled copper product

Onuma Geothermal Power Station



Our Commitment

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

The opening of Naoshima Smelter & Refinery and the start of the MMC Group's Metals business

We were first established in 1871 when Tsukumo Shokai, precursor to Mitsubishi Group, entered the mining industry and began managing coal and metal mines. 1917, Mitsubishi Goshi Kaisha, our forerunner, established Naoshima Smelter & Refinery and began smelting ore from Yoshioka Mine and other mines. Naoshima Smelter & Refinery began as Japan's first reverberatory furnace and dramatically evolved with the introduction of the world's first copper smelting process, the Mitsubishi Process, in 1974. Today, Naoshima Smelter & Refinery is a world-class smelter symbolized by its recent E-Scrap business, and is positioned as an important base for the Group.

Commencement of Metalworking Solutions business and tungsten research

In 1917, the same year Mitsubishi Goshi Kaisha opened Naoshima Smelter & Refinery, it opened the Mining Research Institute, the forerunner of our Innovation Center. It was initially opened for research on analysis and selection of ore, but from the 1920s it also commenced research on tungsten and cemented carbide alloys. This was the beginning of our Metalworking Solutions business. Taking advantage of our strength as a manufacturer capable of integrated production of tungsten, a rare metal that is the main raw material of carbide tools, from raw materials to finished products, the Group is working to recycle used carbide tools, which also leads to more stable raw material security.

Related Information:

Integrated Report ▶ Metalworking Solutions Business P40

Investment in overseas copper mines and further strides toward globalization

In the mid-1950s, Japan's economic recovery was picking up speed. We began branching out into overseas mine development to provide a steady supply that could keep up with the growing demand for copper in Japan. Today, we are investing in overseas mines to ensure steady procurement of clean copper concentrates. We began mining at Escondida Mine in Chile in 1985, Los Pelambres Mine in Chile in 1997, and Copper Mine in Canada in 2009. Our investments in overseas mines have played a significant role in our growth, and are one of the key strategies in the FY2031 Strategy.

Related Information:

Integrated Report ▶ Resources Business P30

Advancing into E-Scrap operations and leading the global market

In the 2000s, Naoshima Smelter & Refinery entered the recycling business, opening new recycling facilities for melting fly ash and valuable metals. We began using the Mitsubishi continuous copper smelting method to recover copper and precious metals, accepting and processing various recyclable materials including fly ash, shredder dust from vehicle and home appliances and waste circuit boards. In recent years, we have expanded our raw material collection area. Accepting recyclable materials such as E-Scrap and home appliances from around the world, this business was developed based on our copper smelting and refining technology, and marks a major step into the recycling market.

Related Information:

Integrated Report ▶ Smelting & Resource Recycling Business P31

Enhancing the supply of high-performance materials and products

Our Osaka Smelter & Refinery not only smelted and refined metals such as gold and silver, it also produced a variety of products, including copper and copper alloy products, electronic materials and high-purity materials. After the Osaka Smelter & Refinery relocated, the copper & copper alloy products were taken over by our Sakai Plant, the electronic materials by the Sanda Plant, and the precious metal smelting and refinery by Naoshima Smelter & Refinery. Today, we also operate Luvata's sites around the world in the global expansion of our copper alloy sales. Our electronic materials business encompasses four areas: functional materials, electronic devices, chemical products and sealing products. We also supply products and solutions related to semiconductors and xEVs.

Related Information:

Integrated Report ▶ Copper & Copper Alloy Business, Electronic Materials & Components Business P36

Development of Renewable Energy business

The Group opened a hydroelectric power station in 1898 to supply electricity to the Osarizawa Mine (now closed). We also developed geothermal power generation technology from our mine excavation technology. We have run our geothermal power generation business using our underground resource exploration technology for over 40 years. We are operating five hydroelectric power stations and three geothermal power plants, along with solar power and biogas plants, in order to realize a sustainable society as a renewable energy business.

Related Information:

Integrated Report ▶ Renewable Energy Business P42

Company history

- 1871 Tsukumo Shokai leases a coal mine from the Shingu clan in Kishu, and enters the mining business.
- 1873 Mitsubishi Shokai acquires the Yoshioka Mine in Okayama Prefecture, and enters the precious metals mining business.
- 1893 Mitsubishi Goshi Kaisha is established.
- 1898 Nagata Power Plant opens
- 1917 Establishes the Mining Research Institute, now the Innovation Center.
- Establishes the Naoshima Smelter & Refinery.
- 1918 Mitsubishi Mining Company Ltd., established (this company takes over the mining assets of Mitsubishi Goshi Kaisha).
- 1942 Tokyo Metals Plant (now Tsukuba Plant) is established and begins production of cutting tools.

- 1950 Metal section separates from the company due to law regarding decentralization and is established as Taihei Mining Co., Ltd. (later Mitsubishi Metal Corporation).
- 1963 Establishes Onahama Smelting & Refining Co., Ltd. and Japan New Metals Co., Ltd.
- 1973 Establishes Gifu Plant.
- 1974 Establishes MITSUBISHI METAL ESPAÑA, S.A. (now MITSUBISHI MATERIALS ESPAÑA, S.A.).
- 1976 Onuma Geothermal Power Station opens.
- 1983 Establishes Ceramics Plant.
- 1984 Establishes Mitsubishi Metals America Corporation (now Mitsubishi Materials U.S.A. Corporation.).
- 1985 Begins mining at Escondida Mine in Chile.
- 1987 Establishes MMC ELECTRONICS (THAILAND) Ltd.
- 1989 Establishes Sakai Plant and Sanda Plant.

- 1990 Mitsubishi Metal Corp. and Mitsubishi Mining & Cement Co., Ltd. merge to form Mitsubishi Materials Corporation.
- 1991 Establishes JEMCO Inc. (now Mitsubishi Materials Electronic Chemicals Co., Ltd.)
- 1993 Establishes MMC ELECTRONICS (MALAYSIA) Sdn. Bhd.
- 1996 Establishes PT. Smelting.
- 1997 Begins mining at Los Pelambres Mine in Chile.
- 1999 Establishes East Japan Recycling Systems.
- 2000 Acquires Shinko Kobelco Tool Co., Ltd. (now Akashi Plant)
- 2008 Mitsubishi Shindoh Co., Ltd. becomes a wholly owned subsidiary.
- 2010 Mitsubishi Cable Industries, Ltd. becomes a wholly owned subsidiary.
- 2013 Begins Zafrañal Copper Project in Peru.
- 2014 Establishes MMC ELECTRONICS Lao Co., Ltd.

- 2015 Hitachi Tool Engineering, Ltd., becomes a consolidated subsidiary and changes its name to Mitsubishi Hitachi Tool Engineering, Ltd.
- 2017 Acquires the Luvata Special Products Division from Luvata.
- 2018 Establishes New Energy Fujimino Co., Ltd.
- 2019 Yuzawa Geothermal Power Corporation's Wasabizawa Geothermal Power Plant opens.
- 2020 Merges with Mitsubishi Shindoh Co., Ltd. and establishes Wakamatsu Plant and Sambo Plant.
- Mitsubishi Hitachi Tool Engineering, Ltd. (now MOLDINO Tool Engineering, Ltd.) becomes a wholly owned subsidiary.
- 2021 Mantoverde S.A. becomes an equity method affiliated company.
- 2023 Onahama Smelting & Refining Co., Ltd. becomes a wholly owned subsidiary.

Value Creation Process

Our Commitment

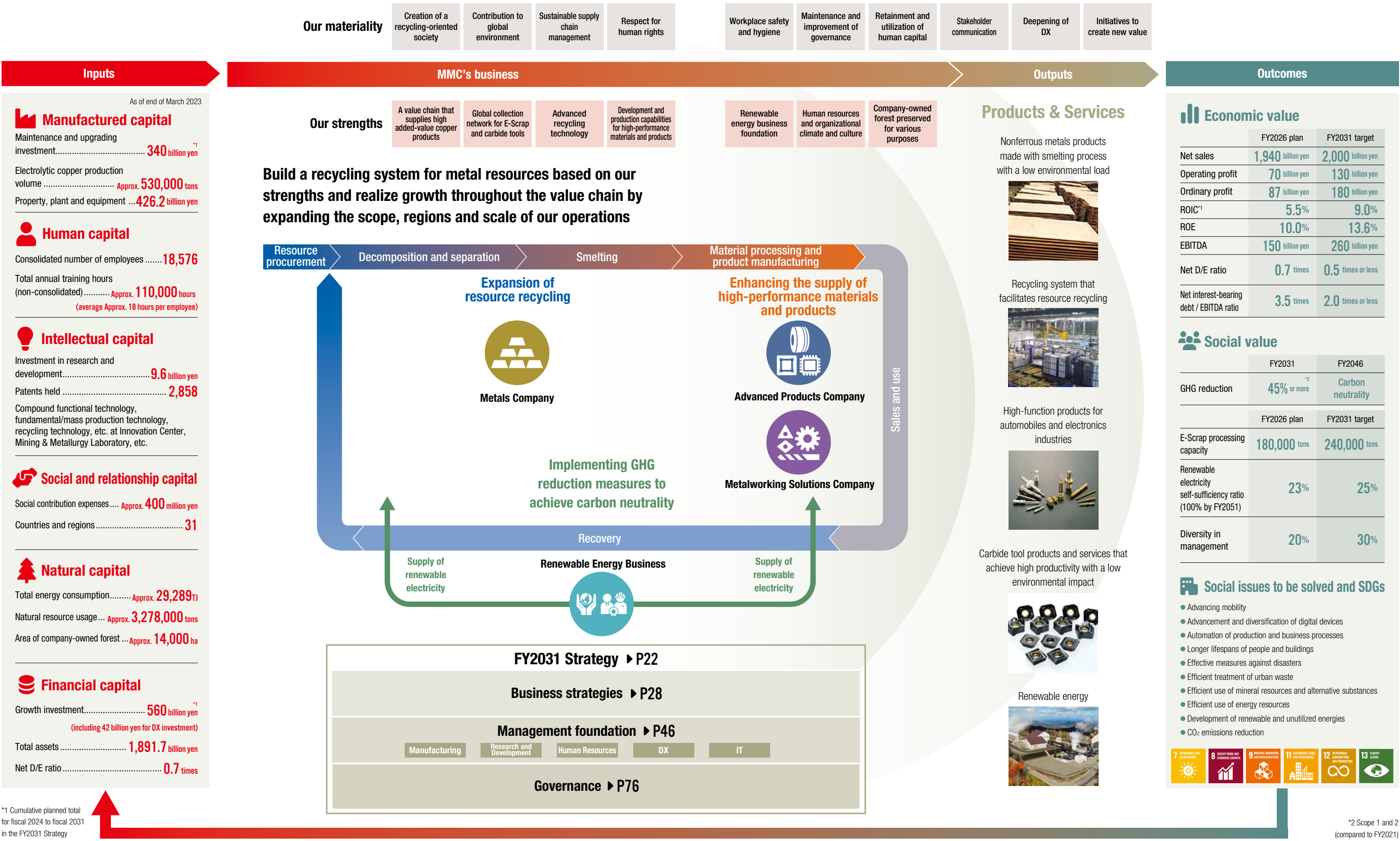
For people, society and the earth, circulating resources

for a sustainable future

Prosperous society

Recycling-oriented society

Decarbonized society



^{*1} Cumulative planned total for fiscal 2024 to fiscal 2031 in the FY2031 Strategy

^{*2} Scope 1 and 2 (compared to FY2021)

Strengths that put us at the forefront of the global market

Our coal and metal mining business dates back to 1871. In 1917, we opened our Naoshima Smelter & Refinery, which marked the beginning of the Group's Metals business. Since then, the Group has developed unique strengths that have driven further development of our business.

Investment in overseas mines and advancement into the copper and copper alloy business has led to the building of a robust value chain and improvement of our technology and know-how for recycling materials such as E-Scrap.

We are also using the knowledge and assets we have amassed through our domestic mining business to develop hydroelectric and geothermal power generation businesses, and are utilizing and conserving forests owned by the Company.

Other strengths lie in intangible assets such as our personnel and organizational climate and culture.

A value chain that supplies high added-value copper products

- Investment in overseas copper mines through long-term friendly relationships with major resource companies
- Processes enabling efficient, environmentally friendly smelting and refining of clean copper concentrate
- Strong customer base and Japan's top capabilities for processed copper production



Mantoverde Copper Mine (Chile)

Global collection network for E-Scrap and carbide tools

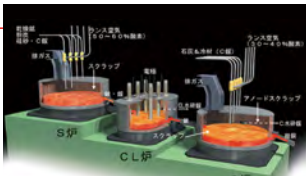
- Global E-Scrap collection network through overseas bases such as MM Metal Recycling BV in the Netherlands
- Domestic network for the collection of used carbide tools



Example of E-Scrap for being accepted/processed

Advanced recycling technology

- Efficient processing of E-Scrap through the Mitsubishi Process for continuous copper smelting
- Material Grid framework enabling collection of a wide range of nonferrous metals including platinum group metals, lead and tin
- Automatic dismantling and sorting processes for items such as home appliances, enabling recycling of a wide range of resources
- The technology and know-how to recycle tungsten recovered from carbide tool scrap, etc. as a raw material



The Mitsubishi Process for continuous copper smelting

Development and production capabilities for high-performance materials and products

- Development and production of oxygen-free copper, copper alloy, lead-free brass, etc.
- Supply of materials and components for semiconductor manufacturing equipment (columnar crystal silicon, sealing products)
- Supply of high-efficiency carbide tool products that utilize our materials and coating technologies



Products made from GloBrass®, a lead-free brass material with superior machinability

Renewable energy business foundation

- Advanced exploration and analysis technology for geothermal resources
- Decades of business experience in areas such as geothermal and hydroelectric power generation



Appli Geothermal Power Plant (entire construction area)

Human resources and organizational climate and culture

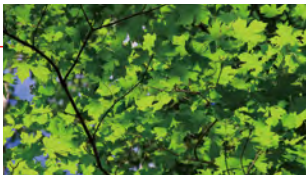
- Talent with wide-ranging expertise in a variety of roles
- A team that can unite to resolve issues
- Mutual trust between colleagues and between management and employees



Company-wide Implementation of 1-on-1

Company-owned forest preserved for various purposes

- Appropriate development and management of company-owned forest to preserve biodiversity and carry out sustainable forestry operations (SGEC certified)
- Company-owned forests are utilized for education and community exchange activities
- Wood from company-owned forests is utilized as a building material



Acer miyabei Maxim in Hayakita Forest (vulnerable species)

Materiality

We have identified material issues from various perspectives and plotted them on two axes according to their importance to our stakeholders and their importance in light of Our Commitment.

Our material issues were evaluated through a series of discussions by our Strategic Management Committee and Board of Directors to determine the priority order.

We have designated 10 material issues, including four key material issues that are of particular importance.

Selection and Development Process

Step 1

Identification of issues

We identified social issues from the perspective of social, environmental and economic trends, trends in markets related to the company, and initiatives undertaken by the Group to increase our corporate value in the medium- to long-term. We also considered international guidelines and principles when selecting elements of these issues.

Step 2

Organization and assessment of issues

In addition to these elements of social issues, we set two axes on which to rank our material issues, including those established in fiscal 2021: the importance to our various stakeholders, and the importance in light of Our Commitment.

After all of our Executive Officers and Directors have organized the issues and key themes, they are discussed from the perspective of their importance to our stakeholders and the Company.

Step 3

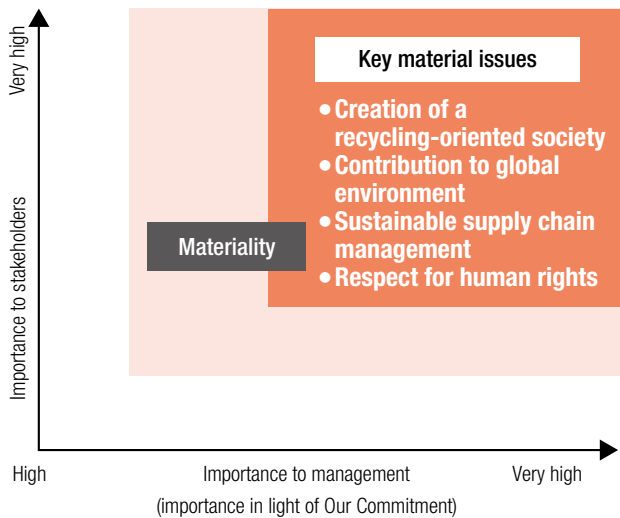
Selection of issues

The material issues and key themes established in fiscal 2021 are revised and redefined, with priority given to issues that are ranked as "very high" or "high" on both axes. We have designated four key material issues that are of particular importance.

Step 4

Establishment of nature and objectives of initiatives

The nature and objectives of initiatives to address the redefined material issues and key themes are established. The progress and results of these initiatives are regularly disclosed.



Materiality
Creation of a recycling-oriented society
Contribution to global environment
Sustainable supply chain management
Respect for human rights
Workplace safety and hygiene
Maintenance and improvement of governance
Retention and utilization of human capital
Stakeholder communication
Deepening of DX
Initiatives to create new value

Initiatives and objectives for material issues

The Group has established the nature and objectives of initiatives to address our redefined material issues and key themes.
We aim to create both social and economic values and improve corporate value.

Related Information:
Sustainability Report
▶Initiatives on Material Issues
<https://mmc.disclosure.site/en/>
"Sustainability Report 2023" will be published at the end of August 2023

Materiality	Key Themes	Main Initiatives	Objectives, etc.
Creation of a recycling-oriented society	Developing and providing recyclable products	Securing the capacity to recover and recycle used carbide tools globally	FY2031: Use of 80% or more recyclable raw materials
	Advanced technology-based waste recycling	Increase of the recycling rate by expanding the treatment of recycled products containing metal resources	FY2031: Building of a framework with an E-Scrap processing capacity of 240,000t per year
Contribution to global environment	Initiatives for building a decarbonized society	Measures to achieve carbon neutrality such as expanding renewable electricity, improving and developing technology, energy conservation, and the use of external technologies	By FY2031: Expansion of renewable electricity, improvement of technology and implementation of energy conservation FY2031-2046: Development of new technology and utilization of external technologies FY2046: Carbon neutrality
	Developing and promoting the use of renewable energy	Establishment of geothermal power generation and expansion of this business; expansion into new renewable energy generation, mainly wind power	23% self-sufficiency in renewable power by FY2026, 25% by FY2031, 66% by FY2036, 100% by FY2051
	Reducing environmental impact and preventing environmental pollution	Appropriate development of forest to improve functions for public benefit, as well as future revenue, and effective utilization of forest resources that can be used for wood resources, community recreation, etc.	Acquisition of certification of Natural Symbiosis Sites for company-owned forests; contribution to achieving global goal of 30 by 30
		Compliance with environmental laws and regulations; thorough education about laws and regulations Sharing of information on how to address environmental issues; visualization risks of each project; risk management Use of electronic data manifests to collect, analyze and provide information on various emissions at sites associated with the Company	Visualization and management of risks from a medium- to long-term perspective to reduce environmental impact and prevent environmental accidents in our operations Improvement of production processes and reduction of risk of environmental disasters
Sustainable supply chain management	Diversifying procurement of raw materials	Acceleration of business developments in Japan and overseas (E-Scrap, copper scrap, home appliances, automobile recycling)	FY2031: Building of domestic recycling center, 30% share of domestic home appliance recycling, building of new automobile recycling plant
	Providing nonferrous metal materials, mainly copper	Strengthening of network with customers through expansion of electrolytic copper production capacity	FY2028: Increase of processing capacity of copper concentrate and E-Scrap at Naoshima Smelter & Refinery FY2031: Participation in hydrometallurgy business at copper mines
		Establishment of a dominant position as Japan's No. 1 manufacturer of wrought copper products	FY2031: 4.3% CAGR of xEV terminal and busbar sales, production capacity + 1,800t per month (compared to FY2022) 3.7% CAGR of automobiles terminal and busbar sales, production capacity + 1,100t per month (compared to FY2022)
	Providing high added-value functional materials and products	Launch of a research and development system that cuts across all Business Divisions; and acceleration of the search for new businesses and products, especially for semiconductor-related materials and components	April 2023: Launch of a cross-organizational research and development system FY2024-FY2031: Acceleration of the search for new businesses and products; development of businesses and technologies centering on semiconductor-related materials and components
Respect for human rights	Respect for individuals and fundamental human rights	Commitment through policy; implementation of human rights due diligence and remedial actions	Building of frameworks to uphold international human rights standards, assess risks and address issues FY2024: Building and implementation of frameworks for human rights due diligence; formulation of implementation plan and road map; deliberation on enhancements of remedial action framework and strengthening of framework
	Consideration of human rights in value chain	Respect for human rights in supply chain; Responsible Minerals Initiative	Building a value chain with consideration for human rights fair trading FY2024: Assessment of risks through assessments of suppliers and addressing serious risks that have been identified; maintaining certification for responsible mineral procurement for gold, silver, tin and tungsten; acquisition of for responsible mineral procurement for copper and lead
Workplace safety and hygiene	Preventing occupational accidents	Thoroughly implementation/continuation of safety measures at facilities according to risk assessments; elimination of accidents such as fires and explosions	Continuation of record of zero occupational accidents resulting in four or more lost days and zero fires, explosions, etc. over the long term
	Creating mentally and physically pleasant workplaces	Driving health and productivity management	Acquisition of Health & Productivity Management Outstanding Organization and Healthy Company Declaration Gold Certification
Maintenance and improvement of governance	Reinforcing compliance	Implementation of measures to eliminate serious compliance violations and improve awareness of compliance; strengthening of compliance overseas	Elimination of serious compliance violations
	Expand internal control through Group Governance	Governance Review and Meeting for Sharing Governance Information; assessing and addressing risks through group risk management	Being an organization where personnel act autonomously according to Company-wide strategies and policies and our internal control function appropriately through mutual communication Consideration of adoption of risk-based audits from FY2025
	Enhancement of corporate governance	Organization of issues through evaluation of the effectiveness of the Board of Directors and carry out remedial measures	Medium- to long-term competitive advantage for the Company, sharing of information between the Nomination Committee and other Directors; supervision of human resources strategy by the Board of Directors; improvement of the functions of various committees
Retainment and utilization of human capital	Talent retention and development	Talent retention and development for business growth (continuous retention and development of management leader candidates)	Ratio of candidates on the Next-generation Leadership Talent Development Program to successors of Executive Officers: 70% in FY2026, 80% in FY2031
	Diversity & inclusion	Acceleration of transformation through integrating diverse talents and values	Ratio of diverse attributes among managers (women, non-Japanese people, mid-career hires, people with disabilities): 20% in FY2026, 30% in FY2031
	Promotion of flexible work styles	Fostering job fulfillment through well-being (continuous improvement of employee engagement)	Positive response rate in Engagement Survey: 75% in FY2026, 80% in FY2031
Stakeholder communication	Engagement with stakeholders	Maximal utilization of framework of existing measures, centering on activities to foster recognition and understanding of Our Commitment; expansion this within and outside the company	Objectives for employees FY2024: 70% recognition of Our Commitment (56.4% in FY2023) FY2031: Ownership of Our Commitment
	Improving customer satisfaction	Provision of better products and services; customer satisfaction surveys as part of quality management activities; analysis of information on complaints	"Quality excellence" as corporate brand equity of the Group
	Engaging in dialog and coexisting with local communities	Promotion of activities for contribution to local communities	Disclosure of results of surveys on outcomes of social contribution activities; social service activities by new employees
Deepening of DX	Business process innovation	Thorough transition to paperless and seal less operation; promotion of consolidation and elimination of operations; utilization of IT tools and smartphones for innovation of our communications	Optimization of operations to ensure that the company continues to be one where each employee can actively engage in our fundamental operations; realization of a functional and agile organization with quick decision-making
	Operational enhancement	Utilization of digital technologies such as IoT and AI to strengthen cooperation between the manufacturing and sales sides and achieve proactive quality management and take manufacturing capability to the next-level	FY2026 onward: Commencement of global demand management operations for cutting tools; gradual expansion sites and products By FY2031: Strengthening of manufacturing capabilities through measures such as improvement of processes and process technologies; conversion to smart factories
	Acquisition of new added-value	Enhancement of customer contact points; reform of business model based on the needs of customers and society (Smelting and Resource Recycling business: enhancement functions of E-Scrap business platform (MEX); Copper & Copper Alloy business: advanced cost management; Metalworking Solutions business: deepening of cutting solutions utilizing DX)	FY2025 onward: commencement of service for selection of the best cutting tools; expansion of cutting solutions FY2026: Enhancement of supply chain by improving satisfaction of MEX users By FY2027: Enhancement strategies for each product through faster calculations of raw costs and visualization of granularity
Initiatives to create new value	Creation of innovation	Building and execution of new business creation processes for continuous creation of businesses to be developed (increase in themes; business commercialization; growth of new businesses)	FY2024: Launch of acceleration program By FY2028: Establishment of organization system; ongoing investment and lending strategies (new business creation, M&A, etc.) FY2031: Operation multiple businesses of a prescribed size
	Exploration and creation of social value	Creation of rare earths and rare metals recycling business	Black Mass processed: 900t per year in FY2026, 3,000t per year in FY2028, 6,000t per year in FY2031
	Strengthening of manufacturing	Execution of basic policy for strengthening manufacturing capabilities (strengthening of manufacturing capabilities through PDCA cycles for strengthening our manufacturing constitution; reinforcement of the manufacturing foundation technology development and improvement)	Pursuing issue setting, problem solving and plant capability evaluation from businesses and plants vision based on the FY2031 Strategy; continuation of working on innovation to improve manufacturing capabilities = continuation of specialization