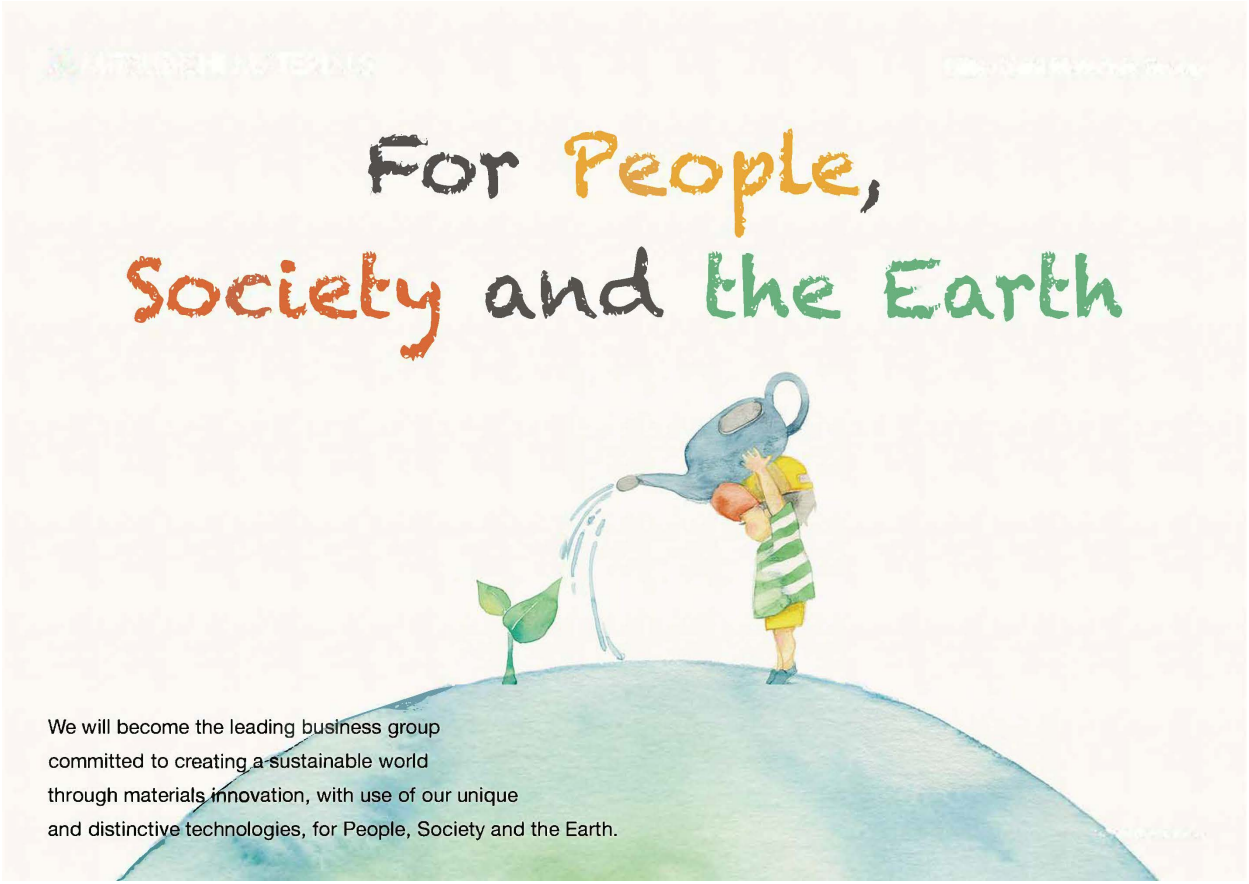
150th Anniversary

Mitsubishi Materials Group's ESG Initiatives



March 30, 2021

MITSUBISHI MATERIALS

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Corporate Philosophy・Vision

Corporate Philosophy

For People, Society and the Earth

Vision

We will become the leading business group committed to creating a sustainable society through materials innovation, with use of our unique and distinctive technologies, for People, Society and the Earth

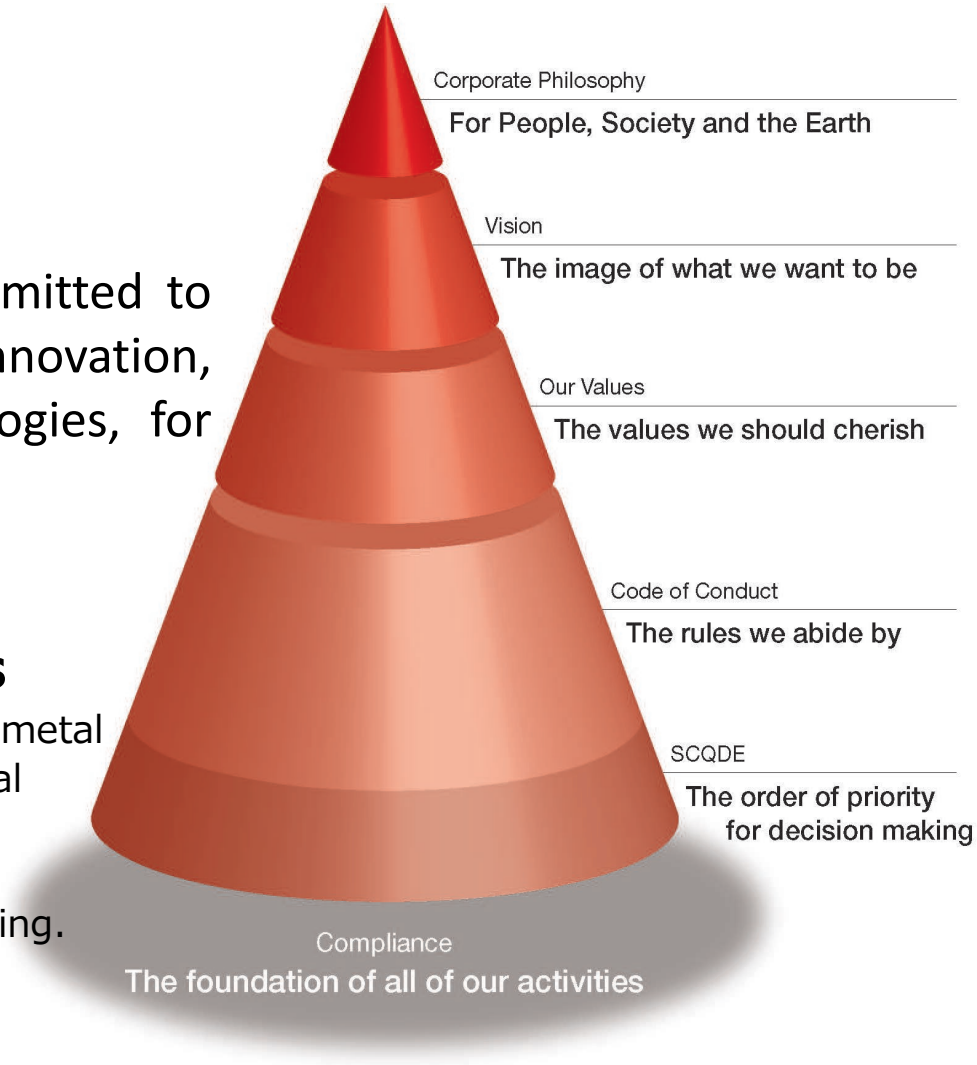
Mission

Create both social and economic values

Contribute to build a prosperous society by providing nonferrous metal materials, predominantly copper, and high value-added functional materials and products.

Contribute to build a recycling-oriented society by providing recyclable products and advanced technology-based waste recycling.

Contribute to build a decarbonized society by developing and promoting the use of renewable energies such as geothermal energy,and ensuring to consider the reduction of environmental impact in manufacturing.



Value Creation Process

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Social issues to be solved and SDGs

- Advancing mobility
- Advancement and diversification of digital devices
- Automation of production and business processes
- Longer lifespans of people and buildings
- Effective measures against disasters
- Efficient treatment of urban waste
- Efficient use of mineral resources and alternative substances
- Efficient use of energy resources
- Development of renewable and unutilized energies
- CO_2 emissions reduction

Materiality

- Stable supply of product/material
- Creation of a recycling-oriented society
- Dealing with climate change
- Environment protection technologies
- Workplace safety and hygiene
- Governance
- Development of diverse talents
- Responsibility in value chain
- Stakeholder communication
- Digital transformation

【Group-wide Policy】

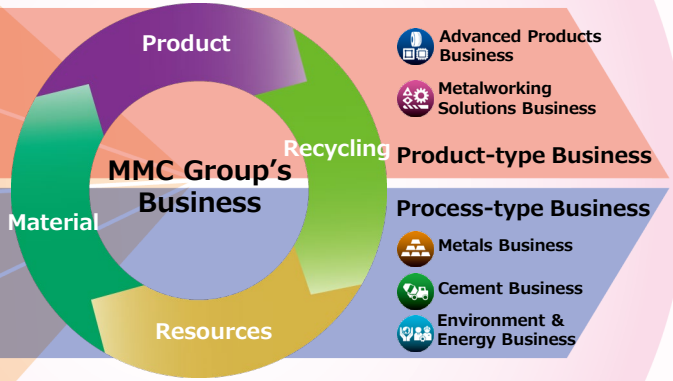
- ◆Optimization of business portfolio
- ◆Comprehensive efforts to increase business competitiveness
- ◆Creation of new products and businesses

Our strengths (advantage)

- Advanced recycling technology and business platform
- Value chain from raw materials to products with a stable supply
- Unique material development and manufacturing technology
- A team that can unite to resolve issues

Long-term business goals

Long-term strategy



FY2023 Strategy

- Business Strategies
- Corporate Strategies※1
- Governance※2

Products & Services

- High-function products for automobiles and electronics
- Processed products and services for productivity improvement and environmental protection
- Nonferrous metals products made with smelting process with a low environmental load
- Base material for construction
- Recycling system
- Renewable energy

Value Proposition

- Convenience & comfort
- Safety & security
- Conservation of resources
- Waste recycling
- Greenhouse gas reduction

Mission

Create both social and economic values

- Contribute to build a prosperous society
- Contribute to build a recycling-oriented society
- Contribute to build a decarbonized society

(※1) Digital Transformation strategy, Manufacturing excellence strategy, Quality management strategy, R&D and marketing strategy, and Human resources strategy
(※2) Strengthening of corporate governance and group governance

2030～2050

Social issues and Materiality → MMC Group's Business → Output → Outcome → Mission

MITSUBISHI MATERIALS

Long-term Business Goals／Long-term Strategy and ESG/SDGs

	Long-term business goals	Long-term strategy	ESG/SDGs	Mission		
			E (Environment) / ES / S (Society)	Contribute to build a prosperous society	Contribute to build a recycling-oriented society	Contribute to build a decarbonized society
Advanced Products Business	**Global First Supplier**	● Create new businesses and products through the sophistication and integration of our core competencies (e.g. production and development of oxygen-free copper, oxygen-free copper base alloys, and functional materials as well as technical capabilities such as bonding different metals, etc.) ● Accelerate marketing activities to replicate successful practice	E, ES	● Advance and diversifying mobility and digital devices ● Automate production and business processes	● Develop and use materials with low environmental impact ● Efficiently use mineral resources and alternative resources	● Efficiently use energy resources ● Reduce CO_2 emissions ● Develop and supply products that contribute to decarbonization
Metalworking Solutions Business	**Top 3 supplier in strategic markets**	● Promote clean manufacturing ● Provide high-efficiency products with advanced technology ● Expand advanced metal powder business in electronic devices	E, ES	● Provide high-efficiency products and digital solutions	● Promote the use of recycled cemented carbide materials	● Promote manufacturing renewable energy ● Expand electrification business by advanced metal powder technology
Metals Business	**Leader in environmentally-friendly mining & smelting business**	Stable supply and recycling of nonferrous metal materials, predominantly copper ● Creation of a sustainable raw material portfolio consisting of clean copper concentrate and E-Scrap ● Promotion of recycling ● Response to climate change	E, ES, S	● Provide copper-based materials for advanced products	● Provide recyclable products ● Recycle waste	● Promote the development and use of CO_2 reduction technologies ● Achieve manufacturing that considers environmental load
Cement Business	**Leader in the domestic and international cement industry with advanced environmental technologies**	● Stable supply of basic building materials for social infrastructure and disaster prevention infrastructure ● Sophistication of waste disposal ● Response to climate change by reducing CO_2 ● Construction of a resilient domestic business foundation through business restructuring and business growth in overseas markets	E, ES, S	● Create a safe, secure, and functional city	● Recycle waste ● Promote sustainable resource recycling	● Reduce CO_2 emissions by improving manufacturing processes
Environment and energy Business	(Environmental recycling) **Driving force of resource-recycling systems** (Renewable energy) **Leading company in geothermal development**	● Provision of a safe recycling system with thorough traceability, etc. ● Decarbonization by expanding renewable energy business	E, ES, S	● Ensure a stable supply of clean energy and recycled products	● Solve urban waste problems ● Build a sustainable social system	● Provide renewable energy

Business Strategy for Solving Social Issues

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Mission

Contribute to build a prosperous society

Contribute to build a recycling-oriented society

Contribute to build a decarbonized society

Social issues

- Advancement and diversification of digital devices
- Automation of production and business processes
- Advancing mobility
- Longer lifespans of people and buildings
- Effective measures against disasters
- Efficient treatment of urban waste
- Efficient use of mineral resources and alternative substances
- CO_2 emissions reduction
- Efficient use of energy resources
- Development of renewable and unutilized energies

Advanced Products Business	Metalworking Solutions Business	Metals Business	Cement Business	Environment & Energy Business
FY2024-2031				
● Advance multifunctional products ● Advance product function through failure diagnosis and prediction of materials corresponding to IoT ● Develop new materials and new parts into anchor products	● Expand advanced metal powder business ● Achieve 80% cemented carbide recycling rate ● Promote clean manufacturing ● Advance solutions	● Achieve E-Scrap processing of 200,000t/Y ● Operate mines to secure stable supply of clean copper concentrate ● Reduce CO_2 emissions from smelters by 10%	● Advance technological development for reducing, capturing, and utilizing CO_2 ● Improve waste disposal	● Establish comprehensive recycling facility ● Commercialize LiB-R※2、PV-R※3 ● Start operations of new geothermal power plants
FY2021-2023 (FY2023 Strategy)				
● Provide composite products in key business areas※1 and create novel materials and parts using new materials and technologies ● Respond to high current and high voltage by electric vehicles ● Respond to high frequency and large capacity communication ● Support advanced sensing technology	● Develop advanced metal powder business ● Increase cemented carbide recycling rate ● Use renewable energy ● Expand high efficiency tools ● Digitize solutions	● Advance recycling technology (e.g. dissolution/precipitation /separation technology) ● Acquire a stake in clean copper concentrate mine project ● Reduce CO_2 emissions from smelters by 5%	● Reduce CO_2 by introducing low-temperature burning technology ● Expand capabilities in waste plastics processing and install chlorine dust cleaning equipment	● Expand recycling business ● Demonstrate LiB-R※2 , PV-R※3 technology ● Complete new hydroelectric power plant (begin operations in 2023) ● Construct Appi geothermal power plant (begin operations in 2024) ● Survey new geothermal sites

※1…Next-generation automobile, semiconductor / electronics, industrial machinery / infrastructure
※2…Li-ion battery recycling　※3… Solar panel recycling

MITSUBISHI MATERIALS

Sustainable Management System

Established a Sustainable Management Promotion Division (April 1, 2020)

Objectives: Contribute to the building a sustainable society and improve medium- to long-term corporate value through business activities in accordance with corporate philosophy

- Clarify management issues related to ESGs and promote an integrated response model

■ Members (As of March 1, 2021)
General Manager ：Chief Executive Officer
Deputy General Managers: Corporate Directors
Members: All General Managers related to the Head Office
Secretariat ：Corporate Strategy Dept.・CSR Dept.

■ Activity results: Deliberation of the activities of Special Panels (every week)

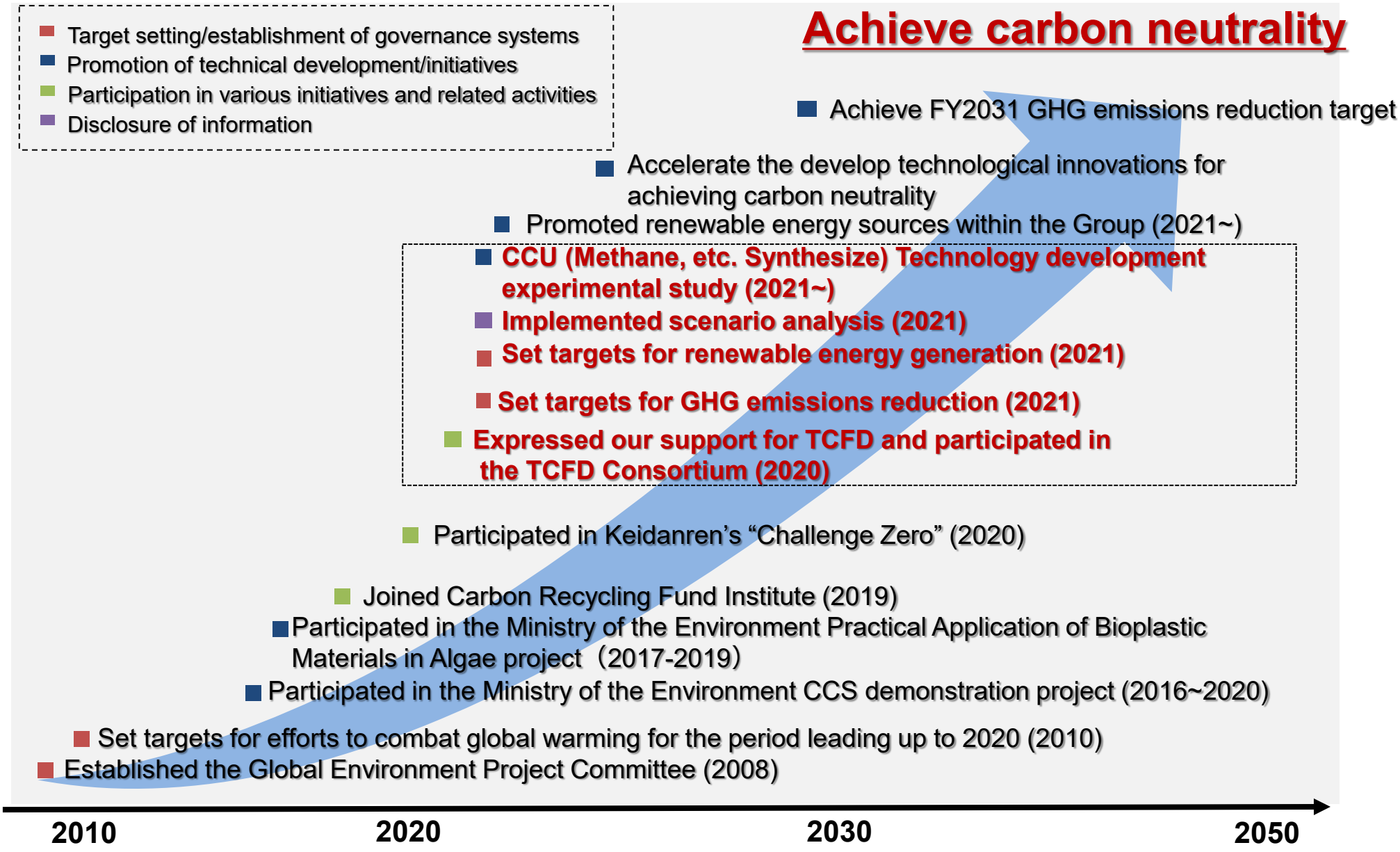
Special Panels（As of March 1, 2021）		
Communications Panel	**Environmental Management Panel**	**Governance Panel**
Corporate Functions Optimization Panel	**Quality Management Panel**	**Climate Change and Energy Panel**
Compliance Pane	**Information Security Panel**	**Health and productivity management panel**
Risk Management & Crisis Management Panel	**Zero-Accident Promotion Panel**	

ESG Initiatives: Case Studies

Contents

Initiatives to combat climate change

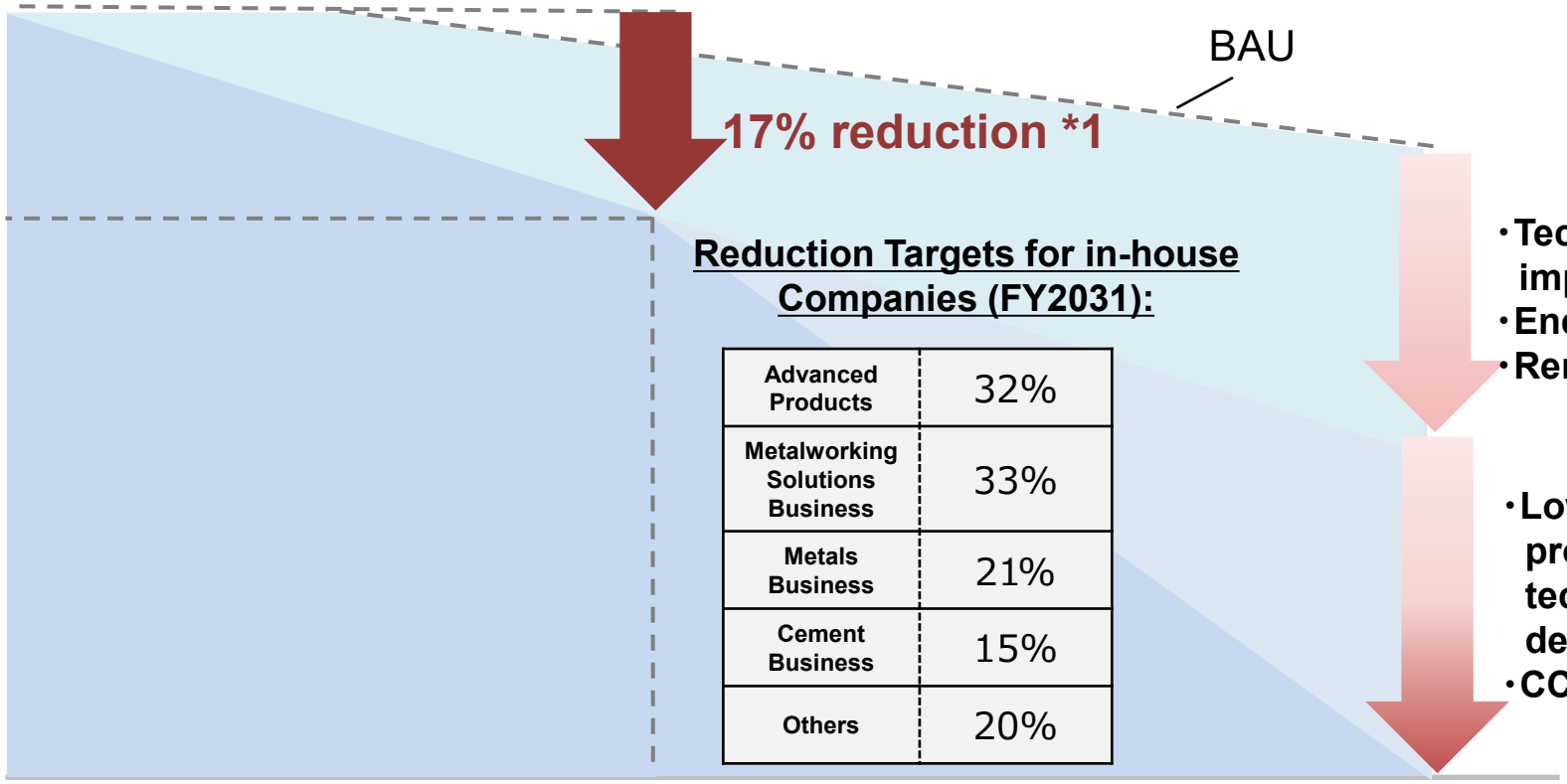
Primary Initiatives and Perspectives for Climate Change



TCFD: Task Force on Climate-related Financial Disclosures GHG: Greenhouse Gas
CCS: Carbon dioxide Capture and Storage CCUS: Carbon dioxide Capture Utilization and Storage

Greenhouse Gas (GHG) Emissions Reduction Target

- Reduce GHG emissions of the MMC Group by 17% by FY2031 (compared to FY2014)
- Reduce emissions by 30% or more in the Advanced Products and the Metalworking Solutions Business, whose energy emissions are the most significant
- Use renewable energy sources for over 20% of the Group's total electricity consumption by FY2031.
- Aim to become carbon-neutral company by the end of FY2051

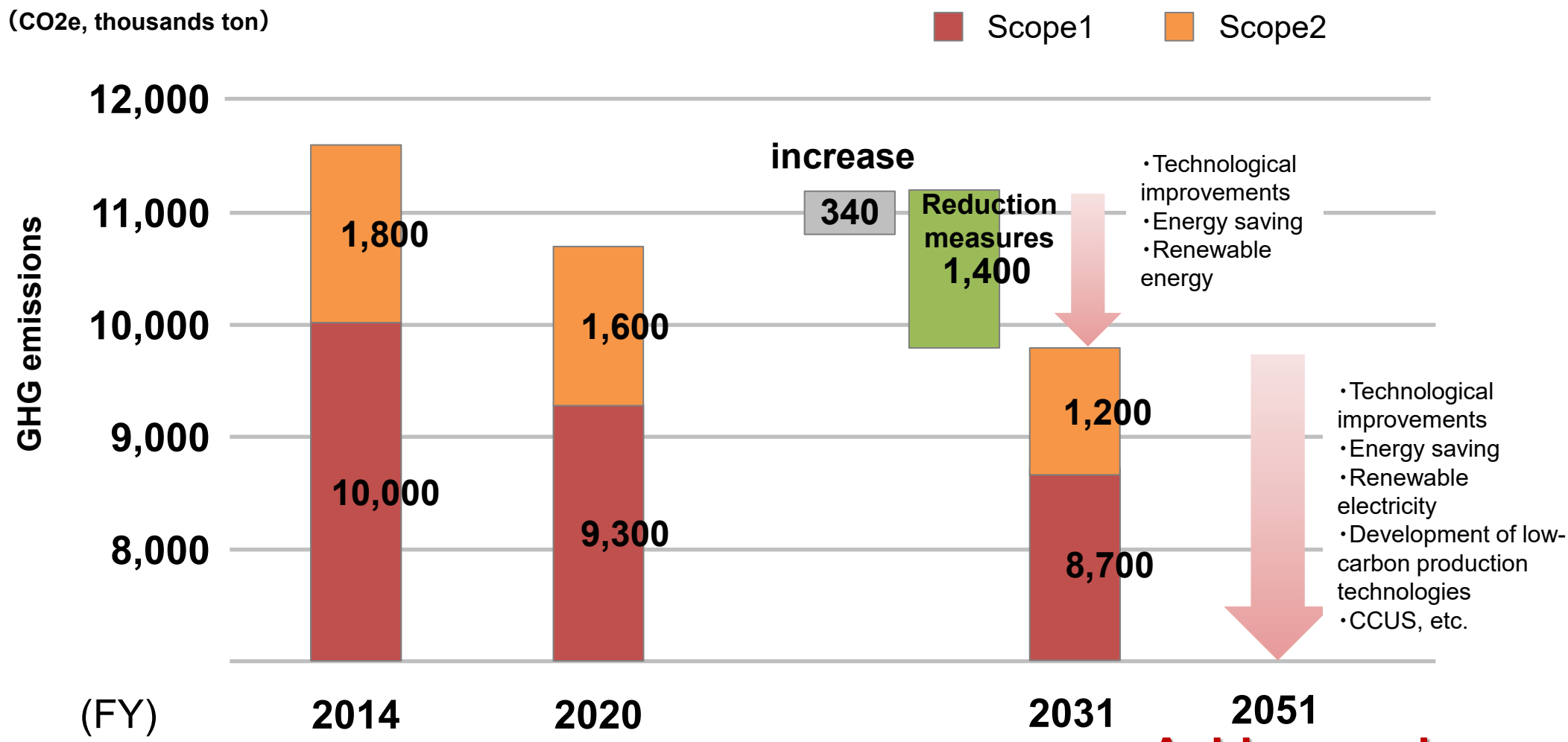


Achieve carbon neutrality

※1 Scope1＋Scope2
※2 Transition to a production process that utilizes hydrogen/electric energy

・Scope1：Direct GHG emissions by business operators
・Scope2：Indirect emissions resulting from the use of electricity, heat, and steam supplied by other companies

Reduction Plans for the FY2031 Target (MMC Group)



・Scope1：Direct GHG emissions by business operators
・Scope2：Indirect emissions resulting from the use of electricity, heat, and steam supplied by other companies

Achieve carbon neutrality

Identification Process for Risks, Opportunities, and Countermeasures

■ **Identify climate-related scenarios, analyze their impacts on the businesses, and discuss measures to reduce risks and increase opportunities.**

Identify risks and opportunities

Identify business-related climate change risks and opportunities, including transition risks and opportunities and physical risks.

Identify key risk and opportunity factors

Among the identified risk and opportunity factors, those of higher importance are selected by considering their impacts on business, their relevance to business strategies, and the degree of interest from stakeholders.

Analyze their impacts on businesses

Analyze the magnitude of the impacts of such risks and opportunities on businesses
Analysis and evaluation are based on two scenarios, one in which the temperature rises by 2℃, and the other by 4℃

【References】

International Energy Agency (IEA), Sustainable Development Scenario (SDS), 2℃ Scenario (2DS)
Intergovernmental Panel on Climate Change (IPCC): Shared Socioeconomic Pathways (SSP)
Representative Concentration Pathways (RCP), etc.

Consider countermeasures, benchmarks, and targets

Discuss countermeasures to reduce risks and obtain opportunities
Establish a GHG emission reduction target as a monitoring benchmark

Scenario Analysis – Summary of Results

Analysis results in detail are in the following pages.

Risk factors **Opportunity factors**

(Descriptions in parentheses and the arrows indicate the assessed impact for each business)

	Advanced Products	Metalworking Solutions Business	Metals Business	Cement Business	Environment & Energy Business
2℃ Scenario	Increase in EV unit sales (Opportunity: Large) ↗	Sudden change in the metalworking products market due to modal shift, etc. (Risk: Medium) ↘	Increase in demand for the E-scrap recycling (Opportunity: Medium) ↗	Introduction and enforcement of the carbon tax (Procurement, Sales) (Risk: Medium) ↘	Further penetration of and demand for renewable energy (Opportunity: Large) ↗ Demand for energy-saving home appliance replacements (Opportunity: Large) ↗
2℃ Scenario	【All businesses】 Introduction and enforcement of the carbon taxation (operating costs) (Risk: Medium) ↘				
4℃ Scenario				Increase in demand for flood disaster waste disposal (Opportunity: Small) →	
4℃ Scenario	【All businesses】 Increase in water-related risks, such as floods, tidal waves, and droughts (Risk: Large) ↘				

*Events displayed in dotted squares are explained in detail on subsequent pages.
The details of each event are found in “Reference Materials”

MITSUBISHI MATERIALS

Changes in demand for the Company's products due to shift to EVs (Advanced Products)

■ Opportunity factors：Increasing EV unit sales

Expected global situation and its impacts on businesses	**Rapidly increasing demand in EV-related products due to decarbonization** • Overall unit sales of automobiles would increase toward FY2031. The demand for terminals and connectors for automobiles in FY2031 would increase about 1.6 fold compared with FY2020, and expand to about 2.1 fold in FY2051. • The sales figure for EV units in FY2031 to be approximately 22 fold the figure from FY2020.
Impact Analysis	EV-unit sales are expected to increase dramatically, and **the demand for the Company's Copper & copper alloy and Electronic materials & component products are expected to increase significantly**. Using this **opportunity expand sales** by capturing demand by strengthening the production system for related products.
Evaluation of business impact	 **Opportunity : Large**
Future strategies and measures	• Aim to increase sales volume of copper materials for new HVs and EVs 1.3 fold or more by FY2031 relative to FY2020, and to increase sales of next-generation automobiles and eco-friendly products 3 fold or more compared to FY2020 • Contribute to the transition to a decarbonized society by investing in facilities and developing products to build a supply system that can meet the rapidly growing demand for EV products

Changes in Demand for Use of Renewable Energy (Environment & Energy Business)

■ Opportunity: Wider use of and growing demand for renewables

Expected global situation and its impacts on businesses

Mid- to long- term expansion of the renewable energy market towards Net Zero Carbon Society

- Environmental value varies from 1.3 yen to 4.0 yen /kWh depending on the degree of renewable energy penetration and demand/supply balance.
- With lower costs resulting from technological development, the preferential system for purchasing renewable energies is expected to be scaled back and the unit price of electricity sold is expected to decline. But sales will likely increase due to the massive spread of renewable energies.

Impact Analysis

While the unit price of electricity sales and the price of non-fossil certificates will fluctuate due to the progress of environmental policies and technologies, **the demand for renewable energy itself will expand, providing an opportunity for the Company to expand its renewable energy business.**
(286% increase in electricity output volume in FY2051 vs. FY2020)

Evaluation of business impact

Opportunity : Large

Future strategies and measures

- Focus on researching and developing new geothermal and hydroelectric power sources, including overseas development, as well as increasing output from existing power plants, in order to increase the total renewable energy production volume to 533GWh by FY2031
- Closely monitor the trends in solar and wind power generation, including technological development, adoption rate, and the unit price of electricity sold, and work on reducing power generation cost

Change in Direct Burden of Carbon Tax (All Businesses)

■ Risk factor：Introduction and strengthening of carbon price taxation (Operating costs)

Expected global situation and its impacts on businesses

Production cost increase due to the introduction and strengthening of the carbon price system

- Increased energy cost due to the strengthening of taxation on GHG emissions and rising electric power price
- Increased costs associated with the procurement of renewable energy certificates as well as trading of emission rights
- Compared with FY2020, the total energy cost will increase 1.59 fold in FY2031 and 1.63 fold in FY2051.

Impact Analysis

The carbon price will be a factor of the Company's cost increase. Whereas the carbon price will impact on society as a whole, **if it can not reflect in the Company's product prices, it will represent a risk that will in lower earnings**

Evaluation of business impact

Risk: Medium

Future strategies and measures

- Discuss introducing low-temperature burning technology in cement production and technology for capturing CO_2 emitted from plants. And closely monitor the feasibility and cost aspects of innovative technology such as CCUS.
- Promote energy-saving and advance discussion on the possibility of transitioning to electrification and the fuel conversion in plants
- 17% reduction (vs. FY2014) of GHG emission volume by FY2031
- Promote the introduction of renewable energy to reduce electricity-derived emission

Renewable Energy Business

■ Develop geothermal, hydroelectric, and solar power plants throughout Japan

Aim to be a leading company in Japan by expanding business through stable operation and new developments of geothermal power plants, etc.

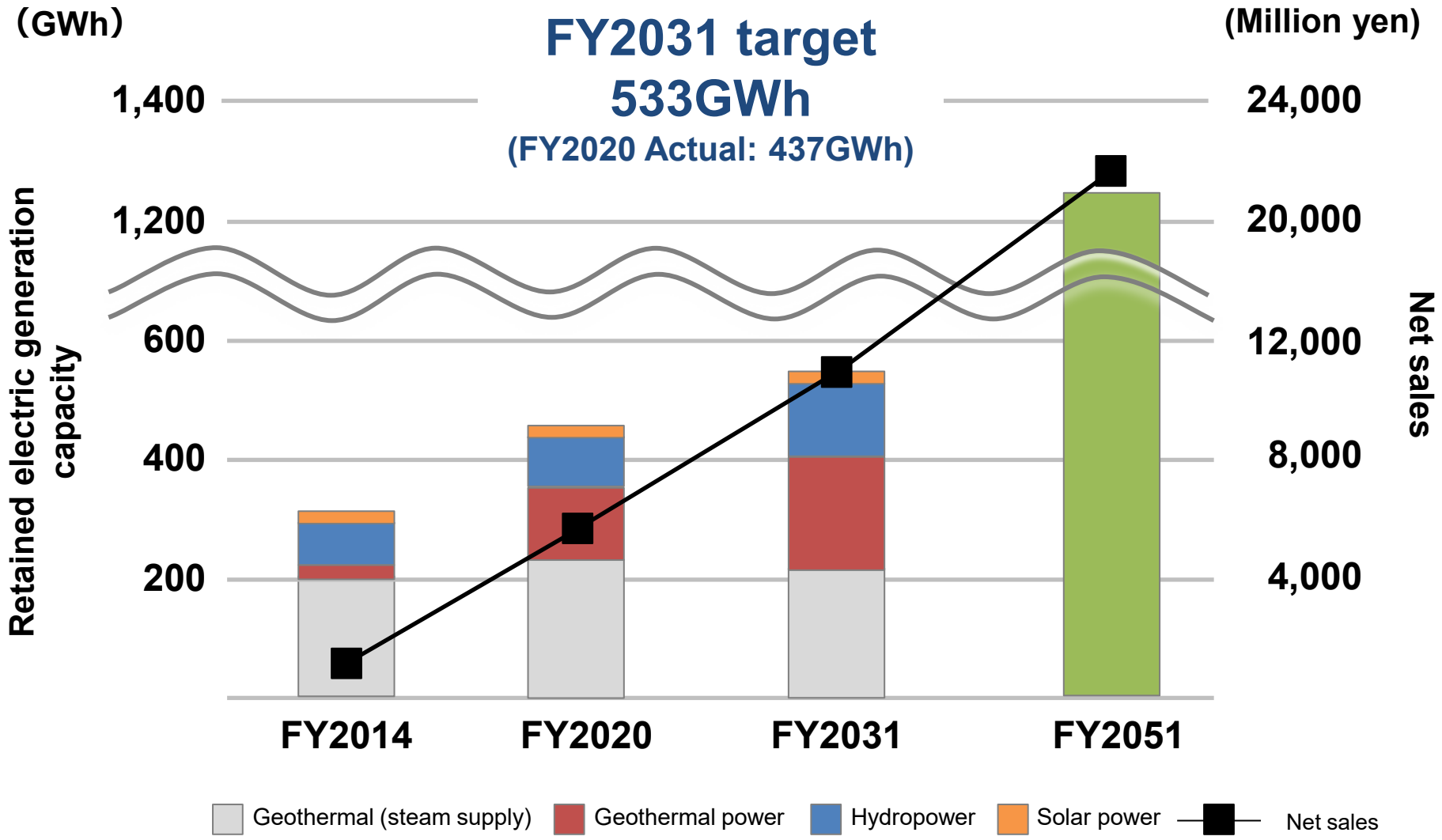
Wasabizawa Geothermal Power Plant
(Akita Prefecture)
Operating body: Yuzawa Geothermal Power Corporation.
Started operations in May 2019
Output: 46,199kW

Irigama Solar Power Plant
(Miyagi Prefecture)
Operating body: LM Sun Power Co., Ltd.
Started operations in January 2015
Output: 6,930kW

Appi Geothermal Power Plant
(Iwate Prefecture, construction in progress)
Operating body: Appi Geothermal Energy Corporation.
Start of operations expected for April 2024
Output: 14,900kW

Komatagawa new hydroelectric power plant
(Akita Prefecture, construction in progress)
Operating body: Mitsubishi Materials Corporation.
Completion of construction for December 2022
Output: 10,326kW

Renewable Energy Generation Targets and Results



*Steam supply to geothermal power plants (steam sales converted by electric energy volume)

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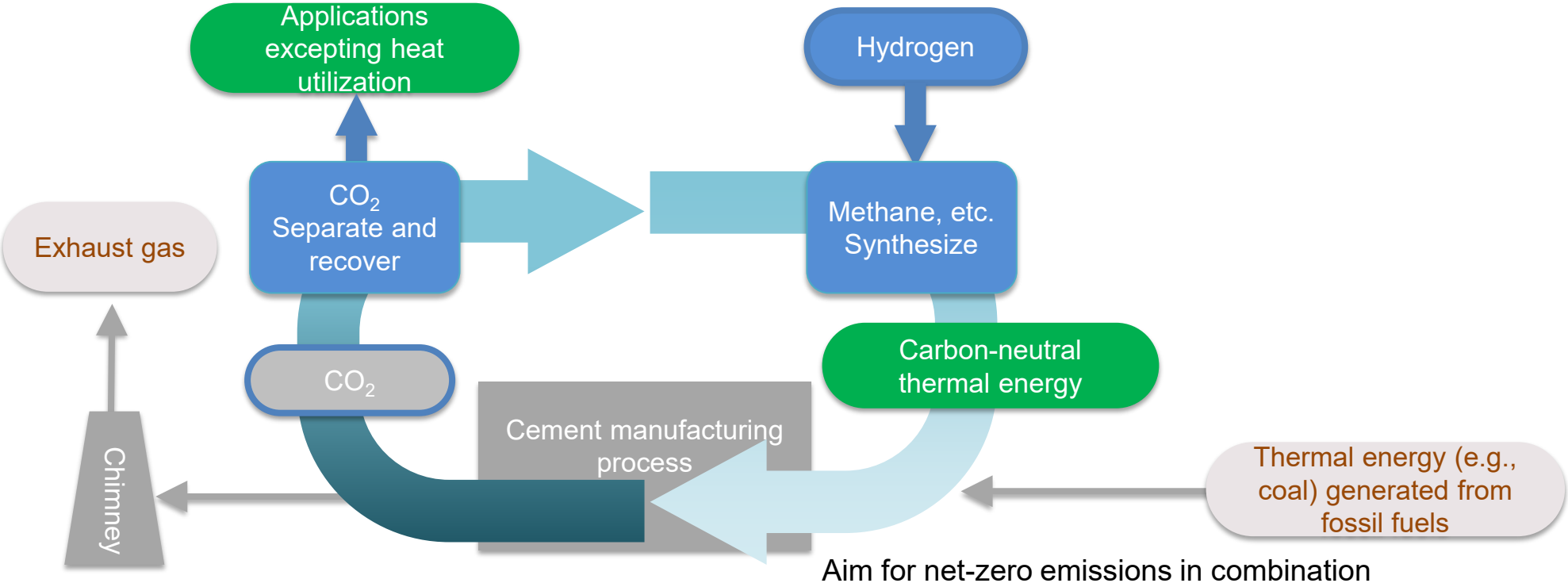
Technology development: Recovery and utilization of CO_2 emitted from our plants

■ **Get started experimental study on the recovery and utilization (heat utilization) of CO_2 emitted from our plants**

- Separate and recover CO_2 at our cement plants and utilize it as carbon-neutral thermal energy
- Generate more carbon-neutral thermal energy and aim for net-zero emissions in combination with energy saving and offset



Conceptual design of carbon recycle from our plants

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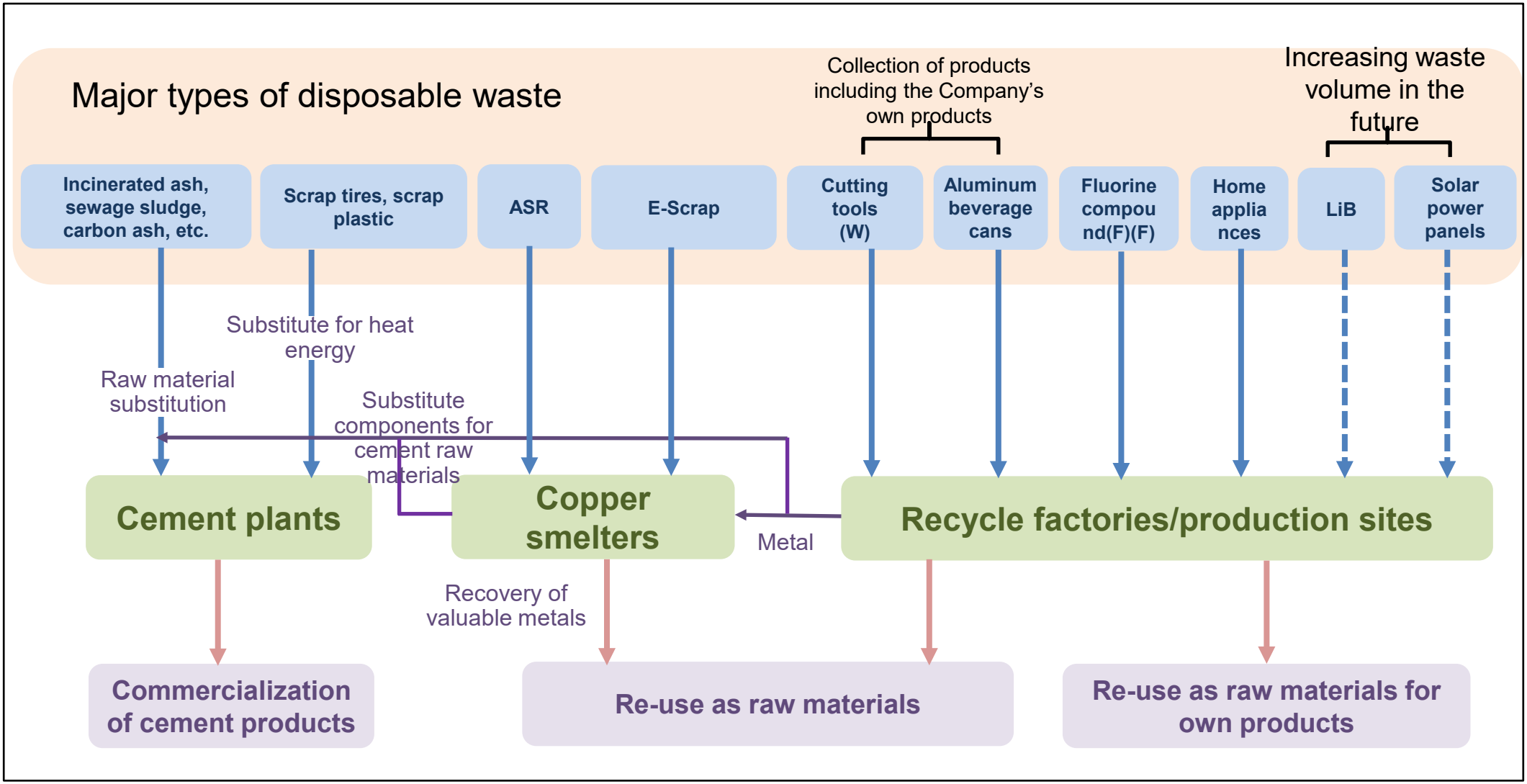
The pursuit of recycling-oriented business models (i.e., circular economies)

Overall Picture of Circular Business

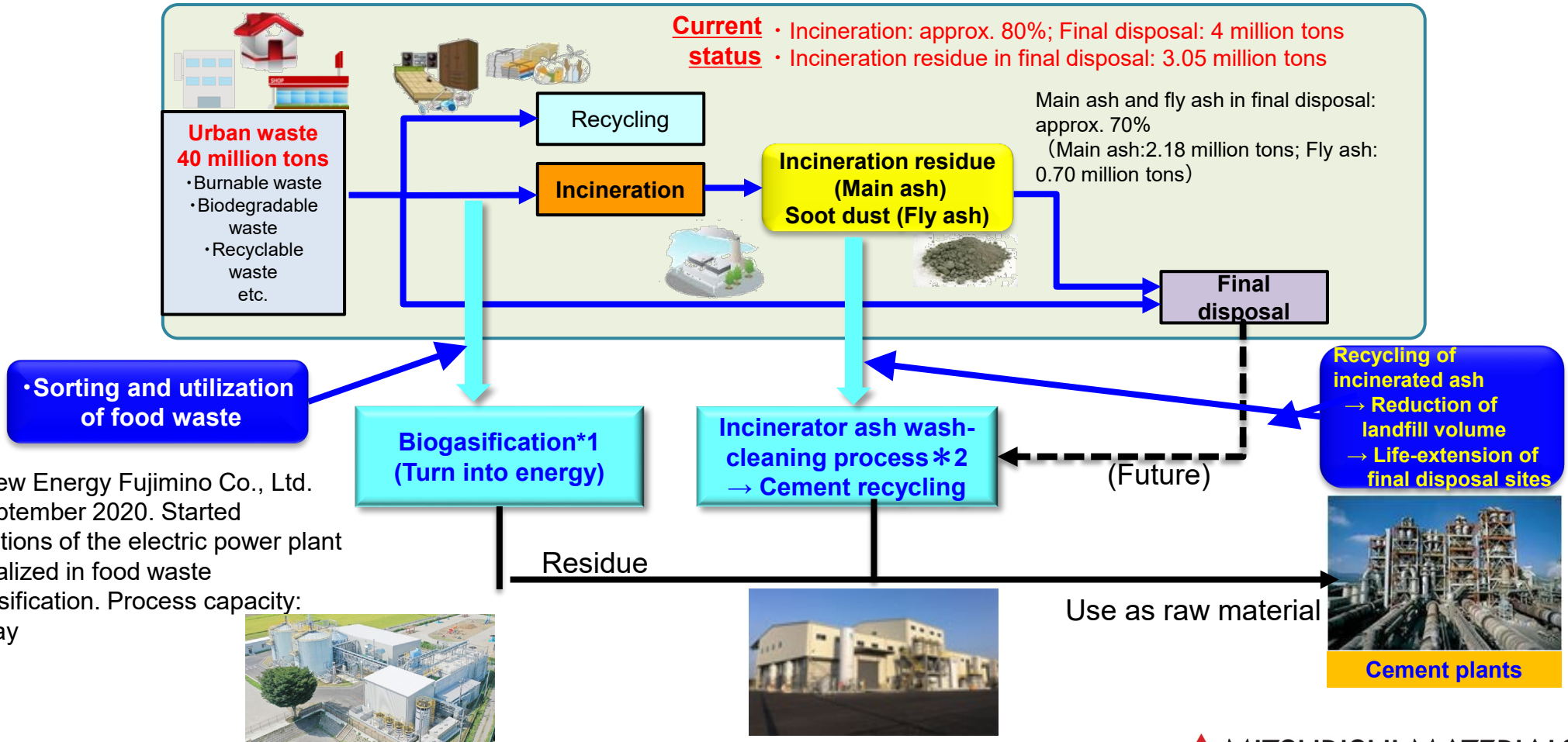


Refer to the next page for the Group's approach to "Urban Waste"

ASR: Automotive shredder residue; LiB: Lithium-ion battery;
W: Tungsten

Further Evolution of the Recycling Business

Approach to urban waste disposal
・As it is quite difficult to build a new final disposal site, reducing the incineration disposal and landfill volume is an urgent issue in order to reduce the environmental impact. Another issue is the reuse of ash from the final disposal.



*1 New Energy Fujimino Co., Ltd. In September 2020. Started operations of the electric power plant specialized in food waste biogasification. Process capacity: 40t/day

*2 Kita-Kyushu Ash Recycle Systems Co., Ltd.

Contribution Goals for a Sustainable Society (Medium-term management strategy goals)

150th Anniversary

Sales volume of copper materials for new HV/EV

1.3 times or more

FY2020 forecast	FY2023 target
721t	**1,000t**

Sales volume of materials for next-generation vehicles and environmentally friendly products

3 times or more

FY2020 forecast	FY2023 target
6.2billion yen	**20.3 billion yen**

Ratio of recycled tungsten as raw material in cemented carbide tools

Up 25%

FY2020 forecast	FY2023 target
28%	**35%**

E-Scrap processing capacity

Up 25%

FY2020	FY2031 target
160,000t	**200,000t**

Waste and by-products processing volume in cement production

Up 13%

FY2020 forecast	FY2031 target
4 million tons	**4.5 million tons**

(FY2020 production volume basis)

Annual total power generated by renewable energy

Up 30%

FY2020 forecast	FY2026 target
421GWh	**550GWh**

Annual processing volume of home appliance recycling

Up 35%

FY2020 forecast	FY2023 target
2.6million units	**3.5 million units**

※The numerical values listed are at the time of the announcement of the current Medium-term management strategy on March 25, 2020 and may be reviewed in the future based on changes in the business environment caused by COVID-19.

MITSUBISHI MATERIALS

Recycling Business Operated by the Group

Recycling of tungsten (Metalworking Solutions Business)

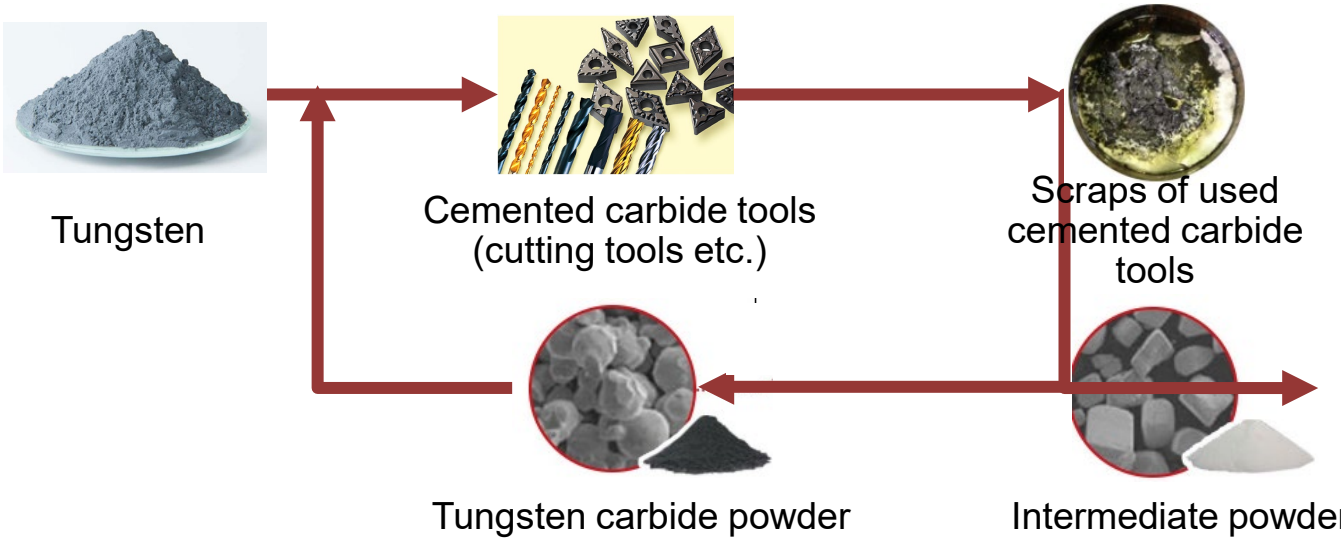
Target (FY2023)

Ratio of recycled tungsten included in raw materials: 35% (FY2020 result: 28.3%)

Initiatives

- It is imperative to increase the recycling ratio in order to secure the steady procurement of tungsten. Promote recycling by converting used cemented carbide tools into raw materials
- Investments in Masan High-Tech Materials (Vietnam), discussed collaboration in recycling business

Process to convert recycled tungsten into raw materials



Recycling Business Operated by the Group

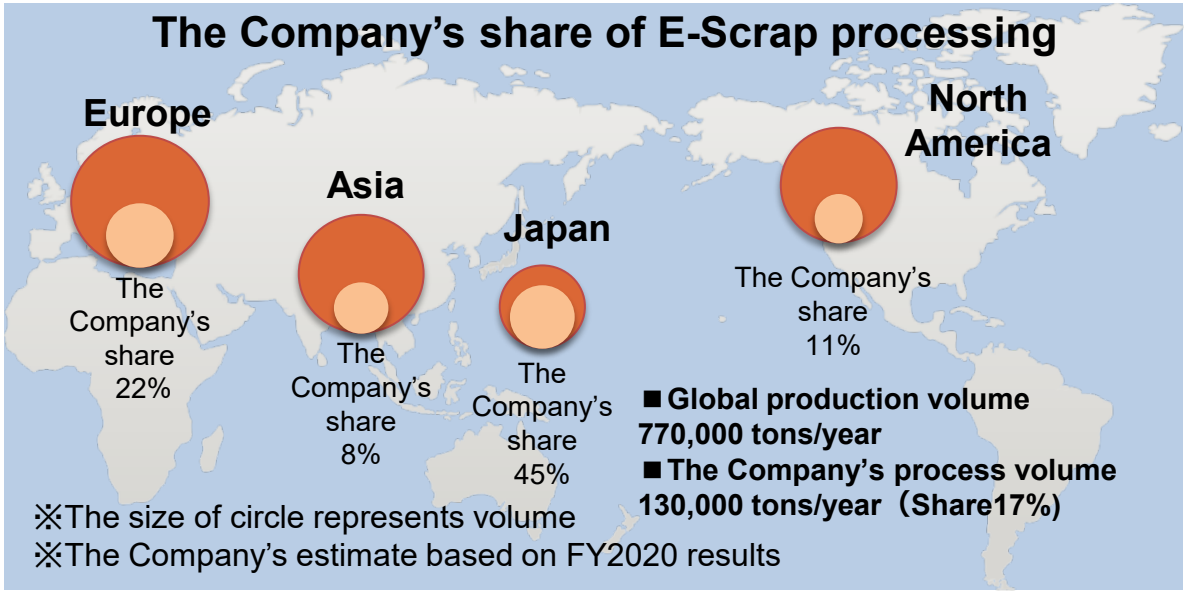
Recycling of E-Scrap (Metals Business)

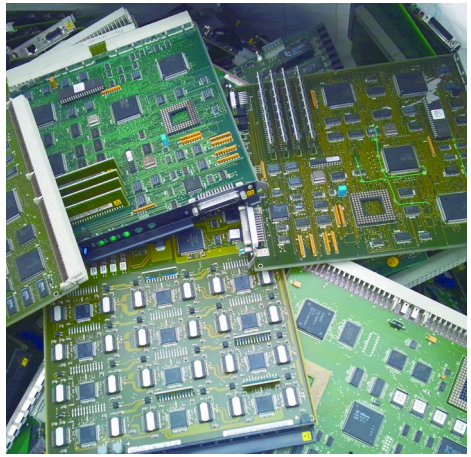
■ Target (FY2031)

Processing capacity of E-Scrap: 200,000 tons/year (FY2020 actual processing capacity: 160,000 tons/year)

■ Initiatives

- Collect E-scrap, such as electric boards and connecters collected from discarded home appliances, from around the world.　(FY2020 result: collection from 47 countries)
- The Group's smelters efficiently recycle valuable metals such as copper, gold, silver, platinum, palladium, lead, tin, etc., included in the E-scrap (material grid).





E-Scrap (Electronic substrate)

MITSUBISHI MATERIALS

Recycling Business Operated by the Group

Effective use of waste and by-products (Cement Business)

■ Target (FY2031)

Waste and by-products processing volume: 4.5 million tons/year

(FY2020 result: 3.9 million tons/year)

■ Initiatives

- Cement plants which can handle high temperature baking will process hard-to-process industrial waste to make it harmless, and make effective use of such waste without producing secondary waste.
- Use 438 kg of waste and by-products on average to produce 1 ton of cement. 94% of raw materials other than limestone, and 20% of heat energy required for production are substituted by waste and by-products.
- Sewage sludge-disposal contracts with local governments. Maintaining social systems

Scrap tires

Sewage sludge (Carrying in)

Recycling Business Operated by the Group

Home appliance recycling (Environment & Energy Business)

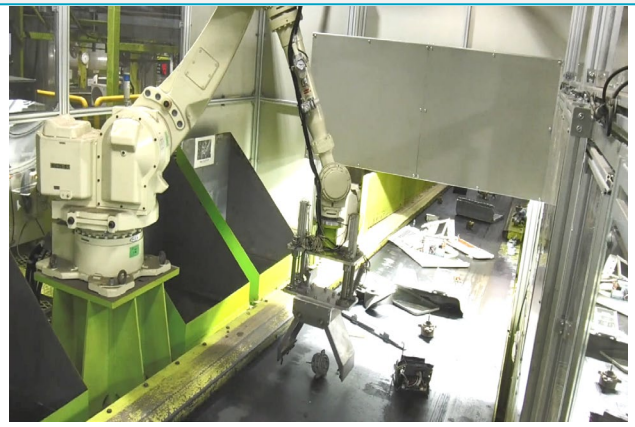
■ Target (FY2023)

Process capacity: 3.5 million units (FY2020 result: 2.75 million tons/year※)

*Contribution to the reduction in landfill volume: approx. equivalent to 120,000 tons. Domestic share of process units: approx. 20%.

■ Initiatives

- Seven home appliance-recycling factories owned by six companies nationwide have promoted the automation and enhancement of their parts and materials selection process, and improved the efficiency of their dismantling, fragmenting, and sorting process. Improve added value and recycling ratio of collected materials.
- Use copper smelting process for collected copper-based materials and printed board. Utilize the Group's infrastructure to the fullest extent.



Automatic picking robot at a home appliance recycling factory

Home appliance recycling factory

Recycling Business Operated by the Group

Recycling of fluorine

■ **Initiatives**

- Collect calcium fluoride waste and recycle fluorine resources to replace fluorite raw materials (consumption of hydrofluoric acid is increasing worldwide, and fluorite, the raw material, is being depleted.)
- Processed volume of recycle fluorine in FY2020: 2,500t (raw material recycling ratio of 16%)

Fluorite

Recycling of aluminum beverage cans

■ **Initiatives**

- Recycling rate of aluminum beverage cans in Japan is very high at over 90%.
- Implementing CAN TO CAN recycling through collaboration among our group companies, repeating the process of can manufacturing, collection, melting, casting, and rolling (largest scale in Japan).

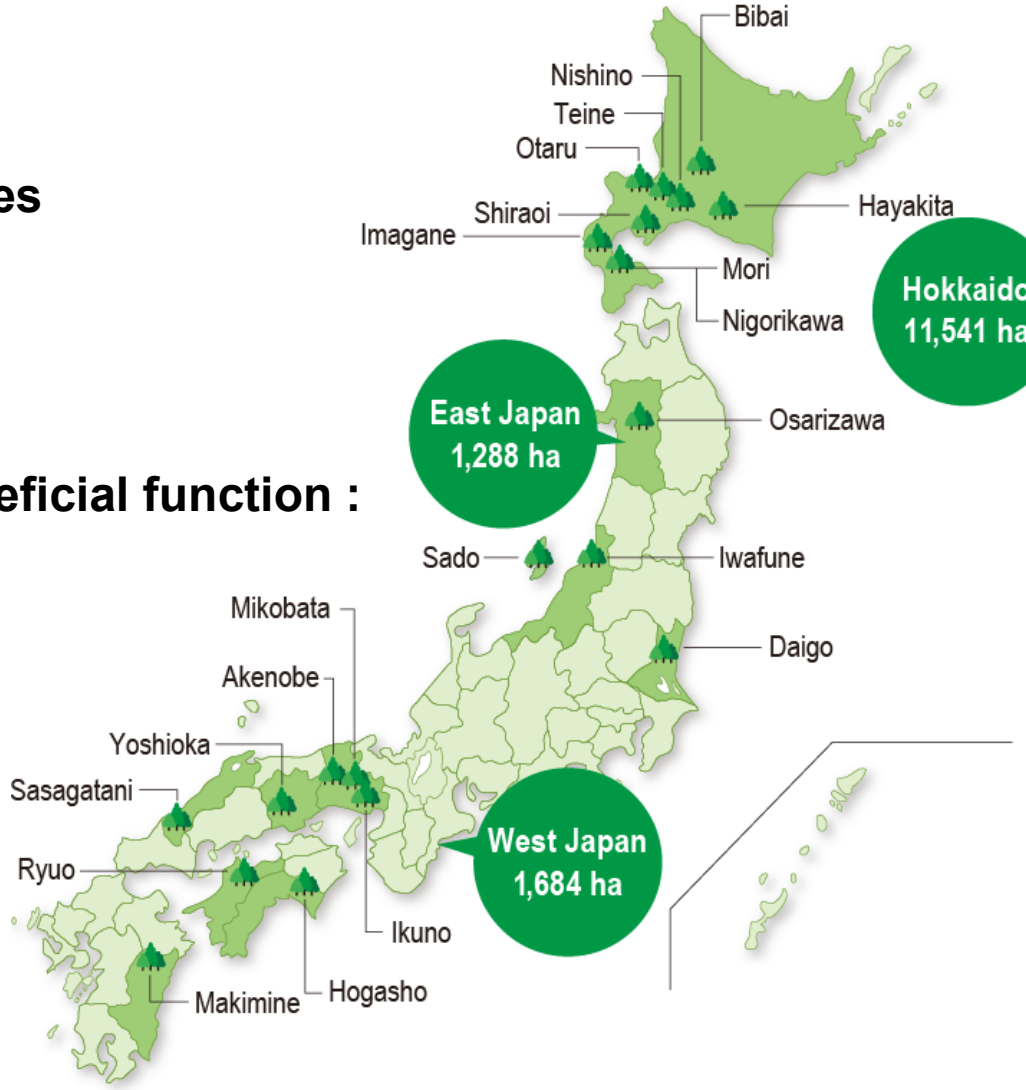
Aluminum bottles

Management of Forests

Initiatives for Forest Management

■ **Locations and areas of the Company-owned forests**

- **31 forests nationwide**
- **Total area: 14,403 hectares**
- **CO_2 fixation amount: approx. 50,000 tons/year**
  (Estimated by the Company)
- **Valuation of socially beneficial function : approx. 40.3 billion yen**
  (Estimated by the Company)



Parts of the Company-owned forests are open for local communities

Fixed point observation

MITSUBISHI MATERIALS

Valuations of the Socially Beneficial Functions of the Group-Owned Forests

■ **Monetary conversion of the socially beneficial functions of forests, such as the preservation of biological diversity.**

Socially beneficial functions	Valuation (Annual)	Valuation methods
Prevention of surface erosion	**16.22 billion yen**	Evaluate the difference in the amount of eroded sediment between forested and unforested areas (how much forest could prevent surface erosion) using the construction cost of the weir (alternative method)
Water quality purification	**8.4 billion yen**	Used water bill amount for domestic water use. For other use cases, evaluate the depreciation expense and annual maintenance cost of a rainwater treatment facility, assuming that the water quality equivalent to reclaimed water is necessary (alternative method).
Water resource storage	**5.01 billion yen**	Calculate the volume of water reserve based on the rainfall and evaporation volumes of the forests. It is then evaluated based on the depreciation expense and the annual maintenance cost of a water utilization dam(alternative method)
Prevention of surface failure	**4.84 billion yen**	Evaluate the difference of collapsed areas between forested land and unforested land (collapse reduction area) using the construction work expense of the mountainside (alternative method).
Flood mitigation	**3.71 billion yen**	Evaluate the water-flow control volume per centennial probability precipitation by the depreciation expense and the annual maintenance cost of a water use dam (alternative method) when comparing forest and bare land.
Health/Recreation	**1.29 billion yen**	Evaluate using travel expense of trips whose purpose is to appreciate domestic nature and scenery (household expenses for travels).
Carbon dioxide absorption	**0.71 billion yen**	Calculate CO2 absorption volume associated with the increase of forest biomass, and evaluate the cost of CO2 capture at a coal thermal power plant (alternative method).
Alternative to fossil fuels	**0.12 billion yen**	Calculate the difference in carbon emissions volumes between a wooden house and a house solely built by reinforced concrete and steel prefab, and then evaluate it by the cost of CO2 capture mentioned above (alternative method).

*Calculated by the Company using area proportions, based on “Quantitative valuation of forest functions” published by the Japan Forestry Agency (approx. 0.0578% of the total forest area in Japan). https://www.rinya.maff.go.jp/j/keikaku/tamenteki/con_3.html

Management of Abandoned Mines

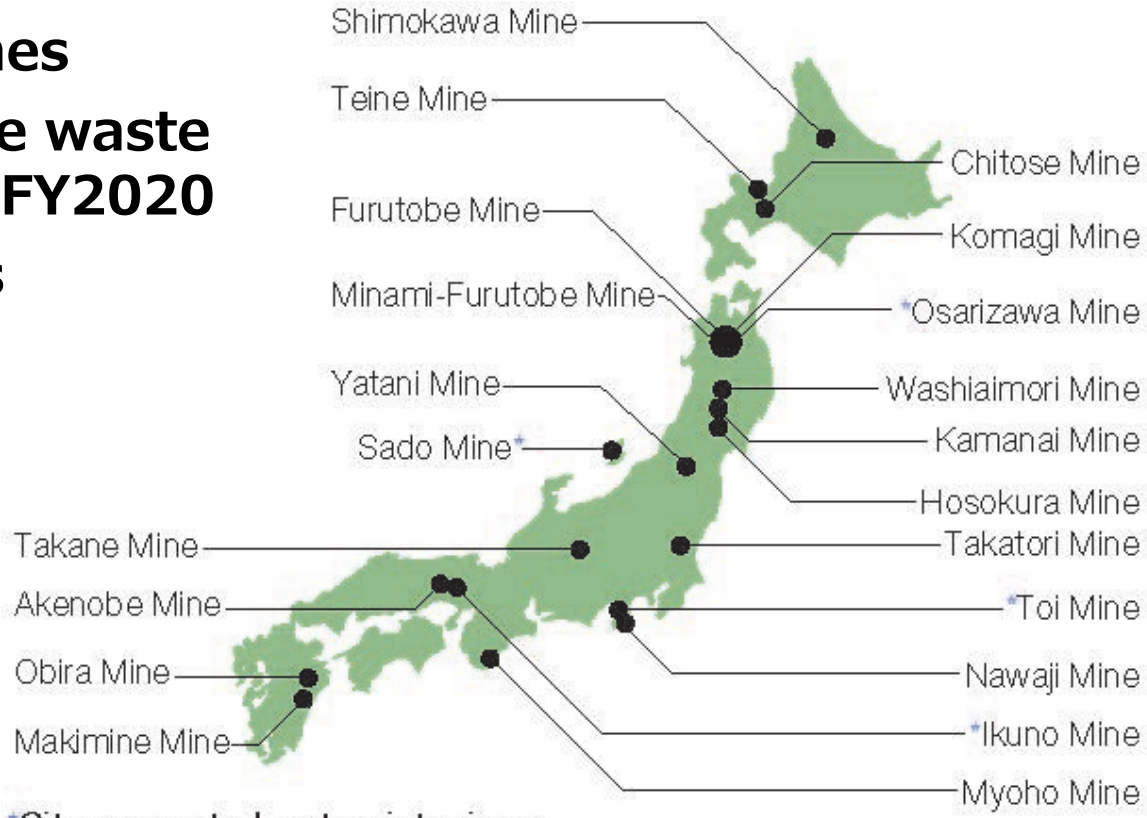
Management of Abandoned Mines ①

■ **Continuing the maintenance of collection sites, risk prevention countermeasures for sinkholes, and appropriate treatment of acid mine waste water, etc.**

【Abandoned mines (of non-ferrous metals) managed by the Group】

- **Abandoned mines: 21 Mines**
- **Treatment expense of mine waste water: 4 billion yen/year (FY2020**
- **Major administrative tasks**

- Appropriate treatment of acid mine waste water that includes heavy metals, and the maintenance of treatment facilities
- Maintenance of collection sites for disposed stones and slag
- Maintenance of other pit tunnels and headrace facilities, and risk prevention countermeasures at pitheads and sinkholes, etc.



*Sites operated as tourist mines
(Osarizawa Mine, Sado Gold Mine, Toi Gold Mine, Ikuno Silver Mine)

Management of Abandoned Mines ②

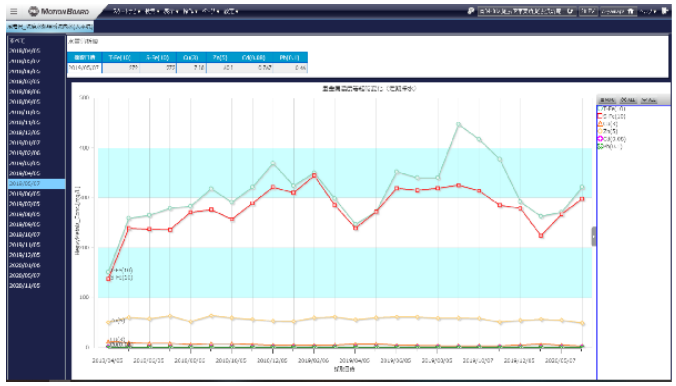
■ Promotion of work to prevent mining-induced pollution and hazard

Renewal of mine drainage treatment facilities as countermeasures against natural disasters and aging, and stabilization of collection sites, etc. to promote countermeasures against large-scale earthquakes.
Also take measures to address the sources of mine drainage using a new technology (“Chipcrete”) that enables greening even under acid rocks, which was previously Difficult.

Source control works

■ Promotion of digitalization of management

Promote enhancement of management level and operational efficiency through early detection of any abnormalities by automatic collection of operational data of mines and remote alarm, centralized management and utilization of data on the server at the headquarters and automatic preparation of reports.



Data trend display screen

Mine drainage treatment facilities

Development of Abandoned Mine Management Technology ①

■ Industry-academia collaboration

- **Hokkaido University: Support to establish courses in the field of resource environment restoration (2017-2021)**
  Environment restoration of mining sites, development of mines that minimize the environmental countermeasures after abandonment, etc.
- **University of Tsukuba: Collaboration on greening technology at mining sites**
  Conduct research and studies regarding green promotion on the collecting sites containing soils highly concentrated with heavy metals.
- **Akita Prefectural University: Cooperation on water treatment technology using bacteria**
  Investigate and study new mine drainage treatment using Mn (manganese) oxidizing bacteria.
- **AIST: Cooperation on ecological impact assessment methodology**
  Consider an assessment method using field research on ecological impact of mine drainage inflow on rivers.

Endowed courses at universities

Greenery survey

River ecological survey

MITSUBISHI MATERIALS

Development of Abandoned Mine Management Technology ②

■ Technology development

・ Mine drainage treatment technology using natural purification system and other processes

Investigate and study absorption treatment using leaf mold as non-powered mine drainage treatment technology.

Also utilize a project commissioned by METI.

・ Development of treatment process for mine drainage containing Mn (manganese) and F (fluorine)

As for treatment of mine drainage containing Mn and F, integrate deposit discharging systems and develop a new efficient process that enables volume reduction at the Group's Central Research Institute

Field tests of absorption treatment

Mn, F treatment tests

MITSUBISHI MATERIALS

Contents

Changes in social environment (i.e., building a new working environment)

Basic Policy on the Prevention of Novel Coronavirus Infection

■ Basic Policy

The Group is committed to the prevention of infection among its employees and the prevention of the spread of infection in its business sites and regions. With this as its top priority, the Group has established a Group-wide policy to ensure that essential businesses are not halted. Based on this policy, the Group will implement various measures.

1. Top priority is given to the health of employees and safety in the workplace, and all possible measures will be taken to prevent infection and its spread.

2. In addition to conducting business activities in accordance with the requests and instructions of the national government and administrative agencies, individual employees are expected to act with self-awareness in one's personal life as well.

3. Respond to the demands of customers and society by ensuring that the production and supply of products and the recycling business that support social infrastructure continue without interruption.

4. Taking the Corona disaster as an opportunity to review work styles and improve productivity.

Framework for the Prevention of Novel Coronavirus Infection

■ Novel Coronavirus Response Headquarters

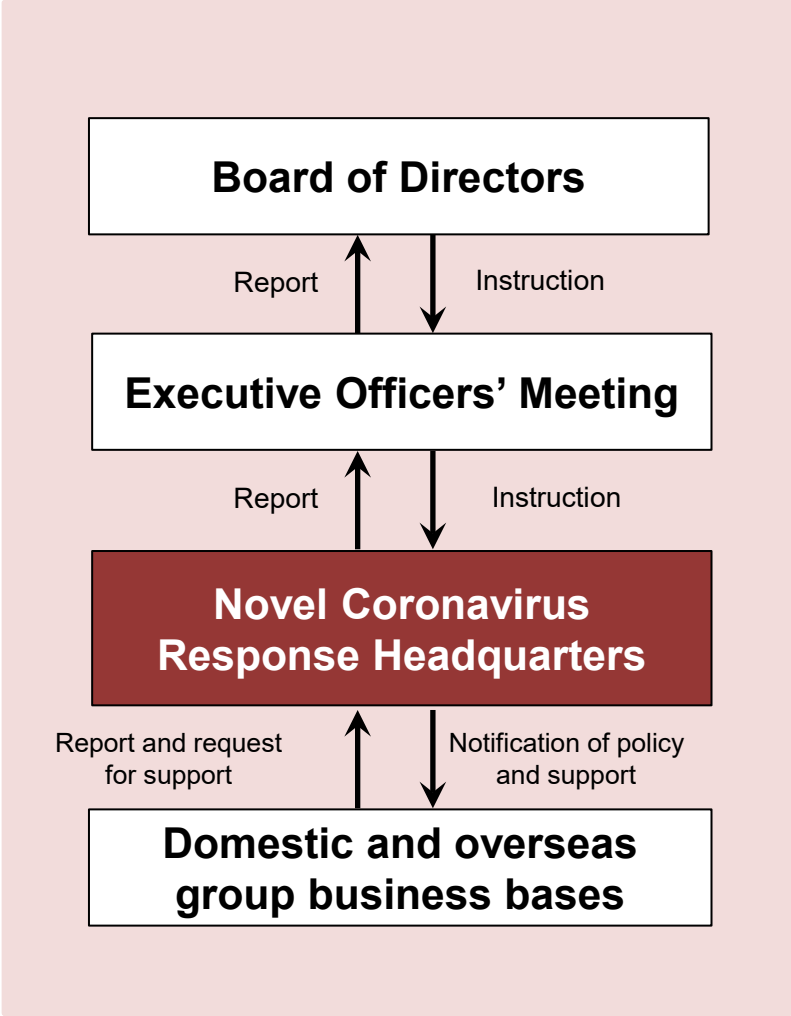
(Established in January 2020)

■ Roles

- Directing the group's unified countermeasures against infectious diseases
- Develop and deploy action and response guidelines, etc.by monitoring the prevalence of infectious diseases, medical systems, regulations, etc. around the world
- Centralized management and internal sharing of information on employee health, impact on business locations, and impact on the supply chain, etc.

■ Members

- General Manager:
  Executive Officer for Crisis Management
- Deputy General Manager:
  Manager, CSR Department
- Members:
  Corporate Division, Business Units,
  Overseas regional management companies
- Secretariat:
  CSR Department

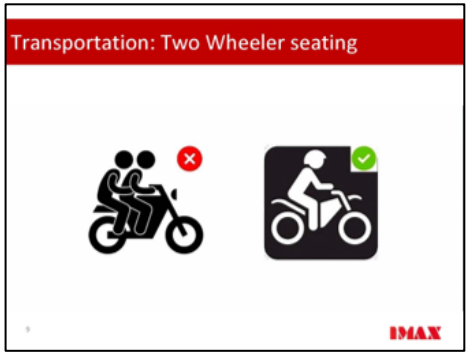


Prevention of Novel Coronavirus Infection and Business Continuity Initiatives (1)

■ Measures to Prevent Infection and Spread

- Ensuring awareness and thorough implementation of infection and spread prevention measures in the workplace (prevention of workplace clusters)
- Thorough health management of employees, establishment of a health consultation service, and survey of health status while working from home
- Reduce office attendance and encourage WFH
- Evacuation of expatriates in response to local epidemic conditions, etc.

Sanda plant (Splash prevention measures)



Group companies in India (Motorcycle driving: employee manual)

Group companies in Indonesia (temperature check, workplace disinfection)

MITSUBISHI MATERIALS

Prevention of Novel Coronavirus Infection and Business Continuity Initiatives (2)

■ Business Continuity Measures

- Under the declaration of the state of emergency (Spring 2020), the Marunouchi office (Head office) was closed and the head office functions were fully transferred to the Saitama office (with accommodation facilities) to continue operations (until the end of May 2020).
- Identification of important tasks which should be continued at production sites and preparation of production systems accordingly
- Diversification of raw material suppliers and subcontractors, duplication of distribution routes, strengthening of cooperation with customers, etc.

Time	Social conditions	Office attendance limitation (% is maximum)
From Mar. 2020	Infection spread	WFH as a general principle
From Apr. 2020	1st state of emergency	Attended BCP members only
From Jun. 2020	The state has lifted	50%
Around Jul. 2020	Infection spread again	20%
Around Sep. 2020	Pandemic is under control	50%
Around Nov. 2020	Infection spread again	20%
From Jan. 2021	2nd state of emergency	10%
From Mar. 2021	The state has lifted	20%

Head office site attendance rate (March 2020 to March 2021)

Temporary satellite office in Saitama office (The above photo was taken on March 8, 2021)

MITSUBISHI MATERIALS

Prevention of Novel Coronavirus Infection and Business Continuity Initiatives (3)

■ Practicing New Ways of Working

- Standardization of remote work (WFH, satellite office operation, etc.) in offices
  (The office attendance rate during the state of emergency declaration was less than 10%, and in the future the rate must be less than 50% even during normal times.)
- Positioning the headquarters office as a "Communication Core" where value is created through communication, and integrating three offices in Tokyo
- Create a special site on the intranet to share information on working styles
- Business reform and productivity improvement through full-scale introduction of DX (Digital Transformation)

Conceptual diagram of the “Communication Core”

Contents

Governance
(corporate governance)

Corporate Governance Initiatives

Transition to a company with a nominating committee, etc. in June 2019
<Purpose> Quicker decision-making by delegating authority, enhanced supervisory functions of the Board of Directors, and improved transparency and fairness

Continuous improvement of the Board of Directors

- Continuous pursuit of improved function as monitoring board
- Ensuring diversity of director composition
- Increase in the ratio of external directors: 6 (out of 11) in 2019, 6 (out of 10) in 2020

Established Corporate Governance Basic Guideline (as of April 1, 2020)

- Clarification of response policies to each item set forth in CG code

CEO election/dismissal/successor development plan

- Formulation of selection and dismissal process
- Selection of successor candidate with the involvement of Nominating Committee, and planning and execution of its development plan

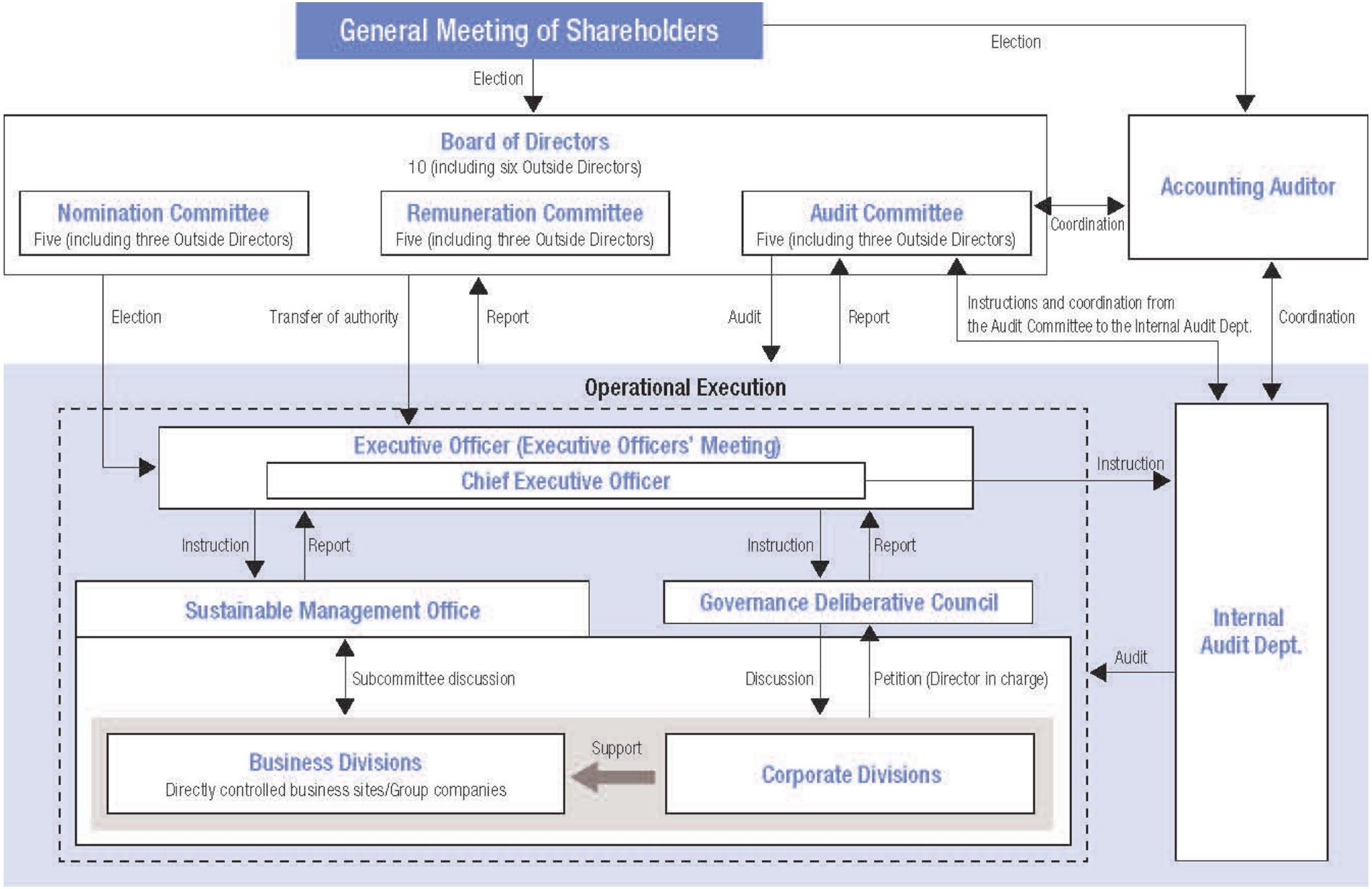
Review of officer compensation system

- The Compensation Committee has already formulated an executive compensation system with stronger incentives by increasing the ratio of variable compensation
- (started to apply in FY2021)

Enhancement of governance of subsidiaries

- Review of director nomination and compensation system
- Revitalization of the operation of the Board of Directors, etc.

Corporate GovernanceSystem



Remuneration System Changes

■ Incentive oriented system of remuneration for Officers started which raise the rate of variable compensation（FY2021）

Remuneration System

(1)Directors ・・・ Only basic remuneration (fixed) shall be paid in cash

(2)Executive Officers ・・・ Basic remuneration（fixed）,
※Annual Bonus(Short -term incentive remuneration)

※ Annual Bonus was not paid in FY2021

<Annual Bonus（Short-teem incentive remuneration）Evaluation Weight>

■ Chief Executive officer, Corporate-related Executive Officers

[Evaluation of current net profit attributable to owners of parent: 40%] + [Evaluation of consolidated operating profit: 40%] + [Evaluation of non-financial factors: 20%] × Adjustment Factor: Evaluation of growth rate 0.9 to 1.1

■ Business-related Executive Officers

[Evaluation of current net profit attributable to owners of parent: 40%] + [Evaluation of operating earnings from the relevant business:40%] + [Evaluation of non-financial factors: 20%] × Adjustment Factor: Evaluation of growth rate 0.9 to 1.1

Stock-based compensation（Medium-to Long-term Incentive Remuneration）

Company's shares and cash equivalent to the proceeds from the realization of the Company's shares shall be delivered and paid, in accordance with one's job position, upon retirement from the post of Officer by means of utilizing a BIP Trust.

Basic policy and transition on Strategic Holdings

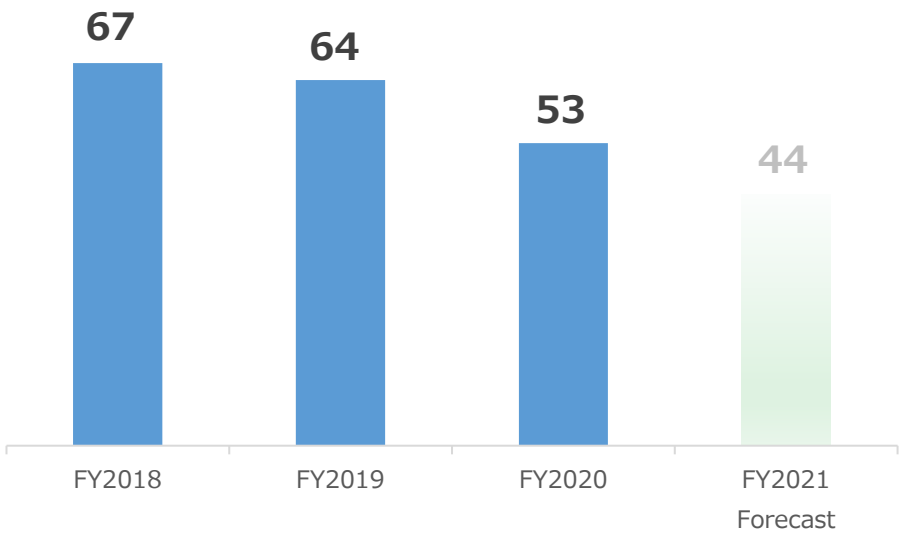
■ Basic policy on Strategic Holdings

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

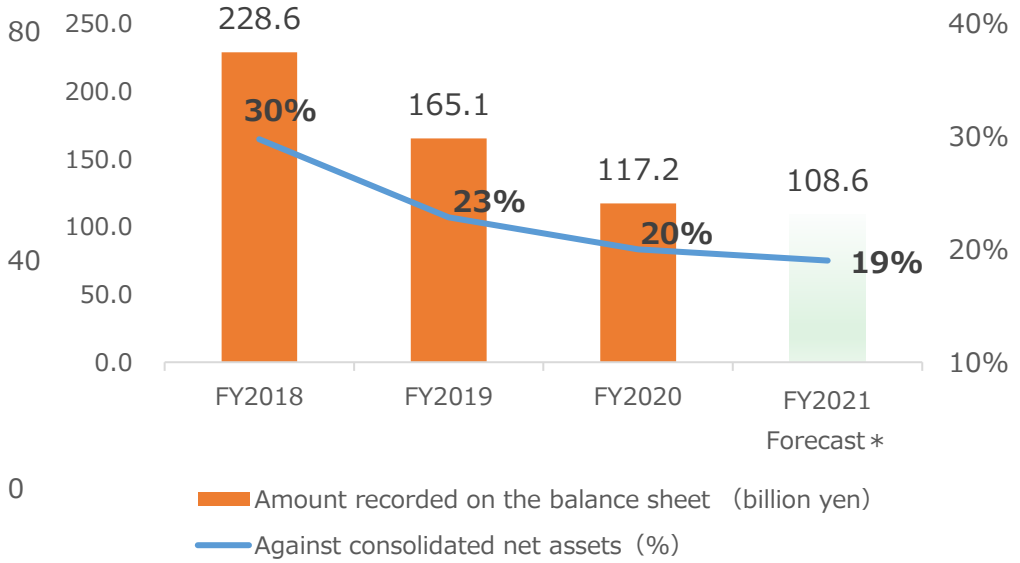
■ Changes in Number of Strategic Holdings

＊Assumption : The monthly average stock price of December 2020 and net assets as of the end of December 2020

Changes in Number of listed Strategic Holdings



Percentage of Strategic Holdings_in consolidated net assets



MITSUBISHI MATERIALS

Governance
(group governance)

Measures to enhance governance of the Group

Recognition of Group Governance Issues	1）Improvement of quality and quantity of communication 2）Maintenance and improvement of compliance framework and awareness 3）Appropriate resource allocation

Group Governance Framework Enhancement measures	Concrete measures	Future Initiatives
①Enhancement of Framework for Discussion, Reporting and Follow-up Governance-Related Matters	Development of group governance reporting system	• Group-wide efforts to identify and address governance issues and allocate resources, and continued efforts to ensure that such considerations are taken into account
	Improvement of the management/assistance function of the corporate division concerning governance-related matters	• Measures for small overseas offices with weak governance systems are still needed to be taken. Continuous efforts
②Improvement of Functions of Management Divisions and their Collaboration with Operating Divisions	Operation of new risk management system	• Major risks for the entire Group were identified and addressed, but the identified risks (shortage of human resources, aging and deterioration of facilities) will need to be addressed on an ongoing basis.
	Governance training for directors	• Improve awareness of management's responsibilities and roles through training
③Improvement of Human Resources Training and Encouragement of Active Interaction	Enhance communication and Improve compliance awareness in all levels	• Awareness of compliance and “bad-news-first” has become widely recognized, but the Company is aiming for further improvement. • The Company and its group companies have improved their communication, but the workplace communication needs further improvement. • Expanding the target audience for communication workshop participants
	Compliance awareness surveys	• Continued efforts
	Encouragement of active interaction	• Not implemented yet at all levels, expanding the scope of interaction
④Internal Audit Strengthening	Governance audits/quality audits	• Continued efforts
⑤Studies with a Business Optimization Focus	Categorizing group companies from the perspective of governance	・Respond in accordance with the Medium-term Management Strategy business portfolio approach

Measures to Prevent Recurrence of Misconduct Cases
- Case at Robertson's Ready Mix, Ltd. (RRM) and Other Companies

■ Overview of the Case

- It turned out that RRM and other companies (all of which are consolidated subsidiaries of the Company located in the U.S., hereinafter collectively referred to as "RRMs") conducted transactions with companies in which some senior executives of RRM have jointly invested.
- Insufficient checks on senior executives (minimized involvement in RRMs to maintain a climate that supported RRM's success up to that period), concentration of authorities in senior executives and the culture to follow the top (History of success by top-down management as an owner-managed company), etc. were the causes.
- The impact on the Company's consolidated financial statements for the fiscal year ending March 31, 2021 will be -293 million yen on profit (loss) attributable to owners of parent.
  *In addition, we conducted an investigation into the existence of similar cases in the Group and confirmed that there are no other cases.

■ RRMs Recurrence Prevention Measures

✓ **Enhancement of compliance system**
1)Establish a management team and have it conduct an advance review of material matters
➡**The team was established in December 2020 (being implemented)**
2) Assign Compliance Officer and necessary Staff
➡**Assigned in March 2021**

✓ **Establish external contact window for reporting with attorneys-at-law, etc being the contact window**
➡**To be established in April 2021**

✓ **Renovation and enhancement of management system at RRMs by appointing senior executives dispatched from shareholders**
➡**April 2021: To be dispatched President and CEO* of MCC Development Corporation and others from shareholders (*concurrently serving as CEO of Mitsubishi Cement Corporation (U.S.))**

✓ **Enhancement of board of directors' effectiveness and enhancement of conversations with executives at subsidiaries, etc**
➡**Increase the frequency of board meetings and dialogues with the parent company (being implemented)**

The Group-wide internal control enhancement measures

- **In response to the case of transactions with conflicts of interest by senior executives of RRMs, in addition to RRMs recurrence prevention measures, further measures to enhance internal controls have been implementing to prevent and detect fraud by senior executives throughout the Group at an early stage**

  ✓ Enhancement of internal control

  Strengthening of supervisory functions, reporting and status confirmation at the time of commencement of concurrent and related party transactions with multiple full-time officers or part-time officers dispatched from the parent company, and introduction of an internal reporting system for overseas subsidiaries and establishment of internal regulations.

  ➡ **To be implemented sequentially from April 2021.**

  ✓ Enrichment of measures for enhancement of Officers' awareness (expansion of officer governance training)

  ➡ **Expand the scope of executive governance training to include overseas subsidiaries (from April 2021)**

  ✓ Enhancement of communications between management divisions of the parent company and subsidiaries(second line of defense)

  ➡ **To be implemented sequentially from April 2021.**

  ✓ Expansion of internal audit

  ➡ **Add bookkeeping audits from FY2022; station U.S. and European subsidiary audit staff in the U.S.**

Summary of the Group’s Policy

Under the corporate philosophy of "For People, Society, and the Earth", the Group will promote initiatives to solve social issues through our business activities in order to achieve the three goals of the Group: “to contribute to the creation of a prosperous society, a recycling-oriented society, and a decarbonized society.”

In order to accelerate these efforts, the Group believes it is important to create an environment where each individual working for the Group can maximize their abilities through new ways of working and work systems, while adding the results of DX (digital transformation) that the Group is currently promoting.

In order to strengthen ESG-conscious management in the future, the Group believes it is important to share a sense of purpose from top management to the front line, and to establish appropriate evaluation standards in each ESG field.

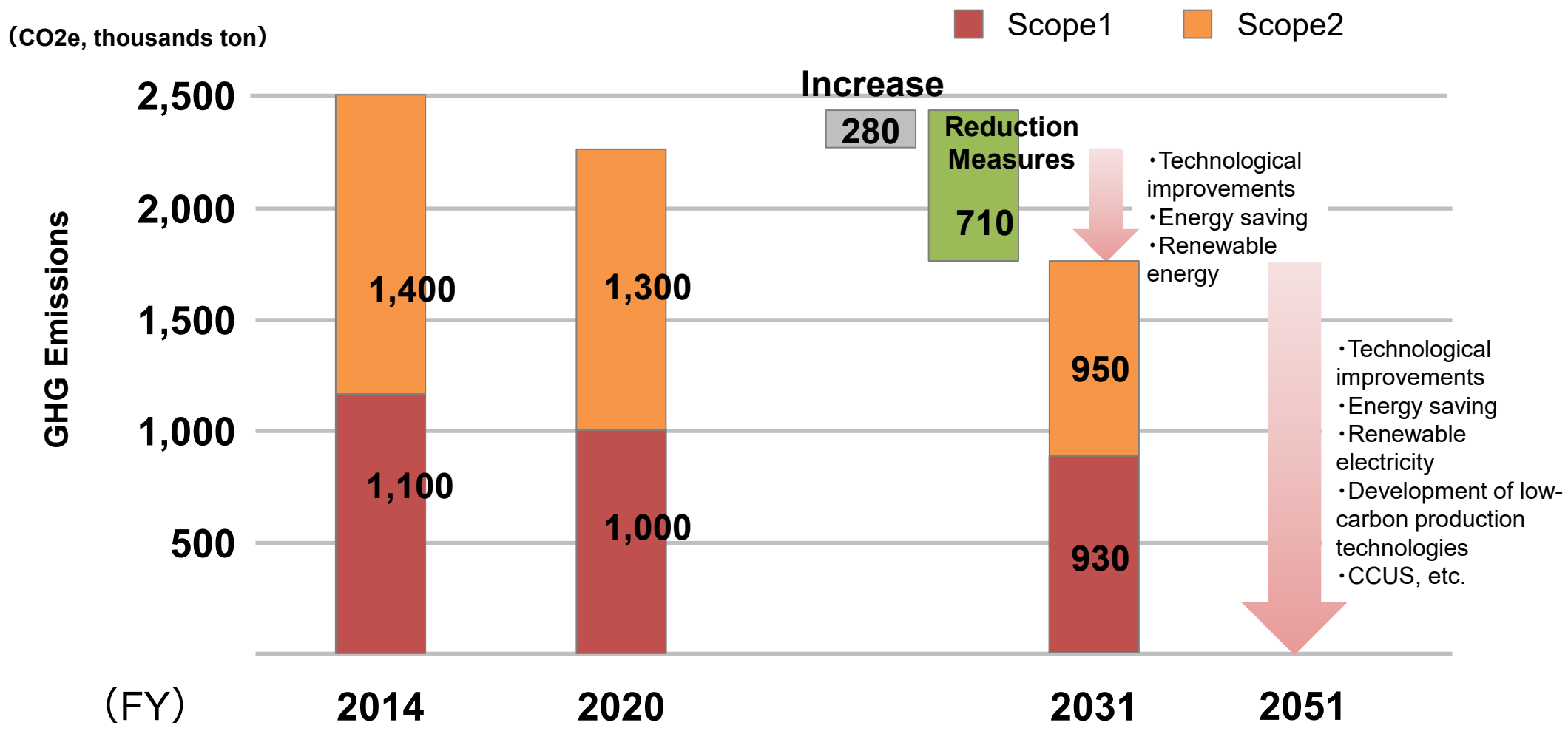
This year, the Company is celebrating the 150th anniversary of its founding.
The Group introduced a new catchphrase, "Create, Transform: MATERIALS" to express the Group’s desire to create new value and a new future, and change the way things are and themselves.

In order to create a new history for the Group, the Group, and those of us who work for the Group, will aim to change ourselves to meet the changes in the business environment and the times.

Thank you for your attention.

Reference Materials

Reduction Plans for the FY2031 Target (excl. Cement Business)



Achieve carbon neutrality

Scenario Analysis - Assumed Global Situation in 2030-2050

■ Assumed global situation in the analysis

2°C scenario (sustainable society)	4°C scenario (no measures taken)
● Develop ambitious policies and environmental technology innovations to limit the average temperature increase to less than 2°C by the end of the century and realize sustainable development ● Envision the following global social changes affecting business in a transition to a decarbonized society **【Assumed global situation】** ・Global carbon pricing and price increases ・Progress in the transition from fossil fuel to renewables ・Progress in modal shift and EV shift ・Increase in demand for a use of public transportation and car sharing ・User's preference for carbon-free products ・Shift to a recycling-oriented society and improvement of waste recycling rate ・Establishment and commercialization of technologies for CO_2 capture, storage, and effective utilization	● Although each country implements policies to achieve its own goals under the Paris Agreement, the average temperature rises by 4°C by the end of this century due to insufficient cooperation of each country, environmental technology development, and energy shift. ● Assume the world described below where measures to mitigate climate change are unsuccessful and global warming worsens **【Assumed global situation】** ・Increase independence on fossil fuel and energy cost rise ・Remarkable economic growth in emerging and developing countries ・Slower shift to low emission mobility ・More severe wind and water disasters and an increase in disaster waste ・Aggravated water stress and heat stress

Scenario Analysis - Themes of Analysis

Theme of analysis	Issues to be analyzed	Target of analysis
1. Changes in direct burden of carbon tax	• Assessing the costs required to promote GHG reduction efforts towards below 2°C scenario • Evaluate the capital expenditure for reduction based on a cost difference between cases where GHG reduction targets are achieving and those where they are not	All businesses
2. Changes in water disaster risks at business locations	• Assessing the financial impact of risk of flood caused by river flooding or storm surge at the Company's business locations	All businesses
3. Changes in demand for the Company's products due to shift to Evs	• Assessing change in demand for the Company's electronic materials corresponding to change in demand for EVs toward below 2°C scenario	Advanced Products
4. Changes in demand for the Company's products related to modal shift, EV shift and lightweight transport machinery	• Assessing demand and market growth potential of products related to the Metalworking Solutions Business based on the forecast for decarbonization of transport sector and use of traffic and transportation in the 2°C scenario and 4°C scenario	Metalworking Solutions Business
5. Changes in demand for E-Scrap recycling associated with shift to a recycling-oriented society	• Assessing the potential of demand and market growth of the E-Scrap recycling based on forecast of the quantity of E-Scrap generated	Metals Business
6. Changes in cost resulted from carbon pricing policies	• Assessing indirect impact of carbon tax burden on upstream companies affecting the Company's operating cost	Cement Business
7. Changes in demand for acceptance and disposal of disaster waste	• Assessing changes in demand for acceptance and disposal based on the changes in the amount of disaster waste generation due to climate change	Cement Business
8. Change in demand relating to home appliance recycling	• Assessing demand and market growth potential of home appliance recycling business under the 2°C scenario associated with wider use of CFC substitutes and temperature rise	Environment and Energy Business
9. Change in demand for use of renewable energy	• Assessing demand and market growth potential of the renewable energy business under the 2°C scenario due to high impact changes in external environment	Environment and Energy Business

[Reposted]

1. Change in Direct Burden of Carbon Tax (All Businesses)

■ Risk factor：Introduction and strengthening of carbon price taxation (Operating costs)

Expected global situation and its impacts on businesses

Production cost increase due to the introduction and strengthening of the carbon price system

- Increased energy cost due to the strengthening of taxation on GHG emissions and rising electric power price
- Increased costs associated with the procurement of renewable energy certificates as well as trading of emission rights
- Compared with FY2020, the total energy cost will increase 1.59 fold in FY2031 and 1.63 fold in FY2051.

Impact Analysis

The carbon price will be a factor of the Company's cost increase. Whereas the carbon price will impact on society as a whole, **if it can not reflect in the Company's product prices, it will represent a risk that will in lower earnings**

Evaluation of business impact

Risk: Medium

Future strategies and measures

- Discuss introducing low-temperature burning technology in cement production and technology for capturing CO_2 emitted from plants. And closely monitor the feasibility and cost aspects of innovative technology such as CCUS.
- Promote energy-saving and advance discussion on the possibility of transitioning to electrification and the fuel conversion in plants
- 17% reduction (vs. FY2014) of GHG emission volume by FY2031
- Promote the introduction of renewable energy to reduce electricity-derived emission

2. Change in Water Disaster Risks at Business Locations (All Businesses)

■ Risk factor: Higher water-related risks such as flood, storm surge and drought

Expected global situation and its impacts on businesses

Increase in losses due to more frequent disasters globally

- Increased losses such as property damage or loss from closure due to more frequent disasters
- Property damage at locations with a high risk of river flooding will increase approx. 1.1 fold in FY2051 and 4 fold in FY2086 domestically, and 2.8 fold in FY2051 and 25 fold in FY2086 globally (Thailand), each compared with the current figures

Impact Analysis

Increased damage due to disasters could drive up the Company's cost. If the global temperature keeps rising **and the world moves toward the 4°C scenario, there could be a serious risk to operation and supply chain depending on the location.**

Evaluation of business impact

Risk: Large

Future strategies and measures

- Assess short-term risks using Aqueduct, which is a water risk assessment tool developed by the World Resources Institute (WRI), identify specific water risk situations of each business office through regular hearing, and continuously address locations with high risk
- Obtain updated prediction information from IPCC or other sources regarding mid to long-term risks and promote proper measures assessing water disaster risks to the Company and its supply chain.

3.Changes in demand for the Company's products due to shift to EVs (Advanced Products)

[Reposted]

150th Anniversary

■ Opportunity factors：Increasing EV unit sales

Expected global situation and its impacts on businesses

Rapidly increasing demand in EV-related products due to decarbonization

- Overall unit sales of automobiles would increase toward FY2031. The demand for terminals and connectors for automobiles in FY2031 would increase about 1.6 fold compared with FY2020, and expand to about 2.1 fold in FY2051.
- The sales figure for EV units in FY2031 to be approximately 22 fold the figure from FY2020.

Impact Analysis

EV-unit sales are expected to increase dramatically, and **the demand for the Company's Copper & copper alloy and Electronic materials & component products are expected to increase significantly**. Using this **opportunity expand sales** by capturing demand by strengthening the production system for related products.

Evaluation of business impact

Opportunity : Large

Future strategies and measures

- Aim to increase sales volume of copper materials for new HVs and EVs 1.3 fold or more by FY2031 relative to FY2020, and to increase sales of next-generation automobiles and eco-friendly products 3 fold or more compared to FY2020
- Contribute to the transition to a decarbonized society by investing in facilities and developing products to build a supply system that can meet the rapidly growing demand for EV products

4. Changes in demand for the Company's products related to Modal Shift, EV Shift and Lightweight Transport Machinery (Metalworking Solutions Business)

150th Anniversary

■ Risk factor: Sudden changes of processed product market associated with modal shift or other factors

Expected global situation and its impacts on businesses

Decreased demand for cutting tools for engine due to growth of EV share

- Significant increase in EV unit sales and increased use of lightweight materials
- Declining sales of cutting tools for engine and transmission due to an expected decline in production of engine vehicles (76%-96% in FY2031 vs. FY2020)

Impact Analysis

This could **be an opportunity to boost sales by reviewing product mix and meeting growing demand** as the demand for hard-cutting tools is expected to grow along with expansion of markets related to electrification and weight reduction. Meanwhile, **there is a risk of a decline in sales of cutting tools for engine-powered vehicles**, which is the current core product.

Evaluation of business impact

Risk: Medium

Future strategies and measures

- Develop and provide products that meet the demands of the 2°C scenario, such as EV battery-related products and tools for hard-cutting materials, and contribute to the shift to a decarbonized society
- Monitor the trend of EV shift as the trend in demand in automotive product markets may vary depending on a power source of vehicles. Also develop new markets that will replace the automotive industry

MITSUBISHI MATERIALS

5. Change in Demand for E-Scrap Recycling associated with Shift to Recycling-Oriented Society (Metals Business)

150th Anniversary

■ Opportunity: Growing demand for E-Scrap recycling

Expected global situation and its impacts on businesses

Growing demand for recycling of wasted electronic devices as a result of global economic growth

- E-Scrap derived from end-of-life vehicles will increase due to factors such as an increase of global vehicle sales (1.1 times of the FY2020 level in FY2031), an increase in the ratio of EVs in autobobiles, and the growth in GDP.
- Demand for base metals and precious metals will likely inclrease further as demand for electronic devices increases due to the progress of digitalization.

Impact Analysis

The quantity Global E-Scrap generated in FY2030 is expected to increase 142% of FY2020 level. This will likely **be an opportunity to boost our profits** as **the Company enhances its recycling capabilities** to process more E-Scrap.

Evaluation of business impact

Opportunity : Medium

Future strategies and measures

- We will consider the expansion of the processing capacity of E-Scrap and the upgrading of technology for the pretreatment, and will focus on the E-Scrap recycling to contribute to the construction of a recycling-oriented society.
- As PGM※ content in electronic board is expected to decline and EV sales in Japan are expected to increase in the future, we will closely monitor the business environment for base metals and precious metals.

※PGM：Platinum group metals

MITSUBISHI MATERIALS

6. Change in Cost resulting from Carbon Pricing Policies (Cement Business)

■ Risk factor: Introduction and strengthening of carbon price tax system (procurement and sales)

Expected global situation and its impacts on businesses

Increase in procurement cost of raw materials and cement transport cost as a result of introduction and strengthening of carbon pricing system

- Rise in our expenses as upstream suppliers pass on the carbon price to our Company
- Rise in transport cost of cementitious raw materials due to changes in energy cost, and other factors
- Our competitive position weakened by imports from countries with low carbon prices(until adjustment measures are taken)

Impact Analysis

Introduction and strengthening of carbon price will drive up our Company's cost. Meanwhile, since this affects the entire industry, our Company should steadily work on measures to achieve GHG reduction target and reduce carbon price costs in order to maintain competitiveness in our products.

Evaluation of business impact

Risk: Medium

Future strategies and measures

- Comprehensively consider measures to reduce risks in procuring raw materials, such as saving energy or converting thermal energy in manufacturing processes
- Work on reducing CO_2 emissions from a freight owner's standpoint, by reviewing transportation processes (including means of transportation and channels for procurement)
- Pay attention to policy trends in both inbound and overseas regarding the Carbon Border Adjustment Mechanism and respond as an industry

7. Change in Demand for Acceptance and Disposal of Disaster Waste (Cement Business)

■ Opportunity: Increased demand for disposal of disaster waste due to water disasters

Expected global situation and its impacts on businesses

More water disasters associated with climate change such as flood, landslide or storm surge.

- Increased rainfall and flood levels will cause the broadening of areas prone to water disaster, and deeper flood depths.
- Frequency of floods in Japan will approximately be quadrupled in the 4°C scenario and doubled in the 2°C scenario.
- As water disasters occur more frequently, the amount of disaster waste also increases.

Impact Analysis

Impact on business is minor given the regionality of water disasters, the amount of disaster waste, and how inconsistent waste is produced. Meanwhile, as the threat of water disasters is expected to rise, **the cement industry's significance and opportunities for contributing to society will increase, as the cement industry accepts and disposes of disaster waste.**

Evaluation of business impact

Opportunity : Small

Future strategies and measures

- Continue to play a social role in response to requests for disaster waste disposal
- Work on development of dechlorination technology to expand our ability to dispose of high-chlorine waste※
- Contribute to reduction of CO_2 emissions by expanding our range of reusable kinds of waste, as well as continuously reusing more substitutes for thermal energy waste
- Maintain and continue stable supply of products that meet the needs for public projects regarding disaster prevention and disaster mitigation based on the government policy (resilience enhancement)

※ High chlorine creates problems in the manufacturing process, such as blockages in the preheater of raw cement materials, and also affects the quality.

8. Change in Demand related to Home Appliance Recycling (Environment & Energy Business)

■ Opportunity: Growing demand for home appliance recycling

Expected global situation and its impacts on businesses

More frequent replacement to energy-saving home appliances due to global warming and higher energy cost

- Fast deterioration of air conditioners due to heavy use and increased number of air conditioners per household
- More frequent replacement due to low carbon regulations and higher energy cost (more wasted home appliances)
- Rise in collection rate of home appliances due to stricter recycling regulations

Impact Analysis

Expect home appliances waste to increase due to temperature rise, change in households, stricter carbon and recycling regulations. **This will increase the number of home appliances that the Company handles, resulting in an opportunity to boost its sales.**
(209% increase in FY2051 vs. FY2020)

Evaluation of business impact

Opportunity : Large

Future strategies and measures

- Work on automation of facilities to handle more home appliance recycling and improvement of process to increase value of collected items, and seek to expand business
- Pay attention to market trends taking into account the market, such as the growing size of the air conditioner and flat panel TV markets, where the amount of processing is expected to increase significantly
- Pay attention to overseas markets while creating new recycling businesses such as a lithium-ion battery or solar panel recycling

[Reposted]

9. Changes in Demand for Use of Renewable Energy (Environment & Energy Business)

■ Opportunity: Wider use of and growing demand for renewables

Expected global situation and its impacts on businesses

Mid- to long- term expansion of the renewable energy market towards Net Zero Carbon Society

- Environmental value varies from 1.3 yen to 4.0 yen /kWh depending on the degree of renewable energy penetration and demand/supply balance.
- With lower costs resulting from technological development, the preferential system for purchasing renewable energies is expected to be scaled back and the unit price of electricity sold is expected to decline. But sales will likely increase due to the massive spread of renewable energies.

Impact Analysis

While the unit price of electricity sales and the price of non-fossil certificates will fluctuate due to the progress of environmental policies and technologies, **the demand for renewable energy itself will expand, providing an opportunity for the Company to expand its renewable energy business.**
(286% increase in electricity output volume in FY2051 vs. FY2020)

Evaluation of business impact

Opportunity : Large

Future strategies and measures

- Focus on researching and developing new geothermal and hydroelectric power sources, including overseas development, as well as increasing output from existing power plants, in order to increase the total renewable energy production volume to 533GWh by FY2031
- Closely monitor the trends in solar and wind power generation, including technological development, adoption rate, and the unit price of electricity sold, and work on reducing power generation cost

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