June 2, 2020

To All Concerned Parties

Company name: Mitsubishi Materials Corporation
Representative: Naoki Ono, Chief Executive Officer
(Securities code: 5711, First Section, Tokyo Stock Exchange)
Contact for inquiries: Yuji Omura, General Manager, Corporate Communications Dept.
(Tel: +81-3-5252-5206)

(Correction) Partial correction to the Appendix of “Announcement of Medium-term Management Strategy”

Since there were some errors in the content of the Appendix “Overview of Medium-Term Management Strategy for FY2021-2023 With Value Creation Process” attached to the “Announcement of Medium-term Management Strategy” announced on March 25, 2020, Mitsubishi Materials Corporation (hereinafter “MMC”) will correct them as follows. The underscore parts indicate the correction. In addition, the revised Appendix is attached hereto.

[Corrections]

1. ROIC of main businesses on page 13 in the Appendix (FY2017-FY2019 average)

<table>
<thead>
<tr>
<th>Before correction</th>
<th>After correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper &amp; copper alloy</td>
<td>6.4%</td>
</tr>
<tr>
<td>Electronic materials</td>
<td>5.3%</td>
</tr>
<tr>
<td>Metals Business</td>
<td>19.4%</td>
</tr>
<tr>
<td>Cement Business</td>
<td>4.8%</td>
</tr>
</tbody>
</table>

2. KGI by main business divisions on page 13 in the Appendix (FY2017-FY2019 average)

<table>
<thead>
<tr>
<th>Before correction</th>
<th>After correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBITDA</td>
<td>EBITDA</td>
</tr>
<tr>
<td>Copper &amp; copper alloy</td>
<td>15.7 billion yen</td>
</tr>
<tr>
<td>Electronic materials</td>
<td>5.7 billion yen</td>
</tr>
<tr>
<td>Cemented carbide</td>
<td>28.5 billion yen</td>
</tr>
<tr>
<td>ROA</td>
<td>ROA</td>
</tr>
<tr>
<td>Metals Business</td>
<td>7.8%</td>
</tr>
<tr>
<td>Cement Business</td>
<td>5.4%</td>
</tr>
<tr>
<td>Environmental recycling</td>
<td>3.3%</td>
</tr>
<tr>
<td>Renewable energy</td>
<td>4.8%</td>
</tr>
</tbody>
</table>
3. “FY2020 forecast” and “Ratio to FY2023 target” of “Sales volume of copper materials for new HV/EV” and “Sales volume of materials for next-generation vehicles and environmentally friendly products”

<table>
<thead>
<tr>
<th>Before correction</th>
<th>After correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales volume of copper materials for new HV/EV</td>
<td>Sales volume of copper materials for new HV/EV</td>
</tr>
<tr>
<td>FY2020 forecast</td>
<td>396t</td>
</tr>
<tr>
<td>↓2.5 times or more</td>
<td>↓1.3 times or more</td>
</tr>
<tr>
<td>FY2023 target</td>
<td>1,000t</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Before correction</th>
<th>After correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales volume of materials for next-generation vehicles and environmentally friendly products</td>
<td>Sales volume of materials for next-generation vehicles and environmentally friendly products</td>
</tr>
<tr>
<td>FY2020 forecast</td>
<td>3.4 billion yen</td>
</tr>
<tr>
<td>↓5 times or more</td>
<td>↓3 times or more</td>
</tr>
<tr>
<td>FY2023 target</td>
<td>20.3 billion yen</td>
</tr>
</tbody>
</table>

Even after this correction, the Medium-term Management Strategy including the financial plan is as of the time of disclosure on March 25, 2020, and does not take into account the impact of the global spread of COVID-19. MMC will carefully examine the Medium-term Management Strategy including the financial plan with the shareholder return policy based on further changes in the business environment caused by COVID-19 and its impact on the medium- to long-term business outlook. MMC will promptly announce any changes in its content if it is deemed necessary.
Overview of Medium-term Management Strategy for FY2021-2023 With Value Creation Process
(From the year ending March 31, 2021 to the year ending March 31, 2023)

March 25, 2020
I  Review of Current Medium-term Management Strategy (FY2020 Strategy)

II  Overview of New Medium-term Management Strategy (FY2023 Strategy)
I Review of FY2020 Strategy: Overview

Corporate Philosophy

Values

Code of Conduct

Vision

Sustainable Development

Resources and recycling

Processed goods

Materials

Global Strategy

Technology and Development Strategy

Marketing Strategy

HR Strategy

Long-term Management Policy

Medium- to Long-term Goals (the company in the future)

- Leading company in domestic and overseas key markets
- Achieve high profitability and efficiency
- Achieve growth that exceeds the market growth rate

Group-wide Policy

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

Medium-term Management Strategy

Key Strategies in FY2020 Strategy

- Achieve growth through innovation
- Create value by building a recycling-oriented society
- Increase the company’s market presence through investment for growth
- Increase efficiency through continuous improvement
## I Review of FY2020 Strategy: Results of Major Business Expansion and Progress of Key Strategic Measures

<table>
<thead>
<tr>
<th>Segments</th>
<th>Executed key strategic measures</th>
<th>Delayed key strategic measures</th>
</tr>
</thead>
</table>
| **Advanced Products Business** | • Acquired Special Products Division of Luvata  
• Started collaboration with Denka Co., Ltd. for ceramic insulated circuit substrates with high thermal dissipation for environmentally friendly vehicles  
• Pursued an absorption-type merger of Mitsubishi Shindoh, a consolidated subsidiary | • Synergies effect with Luvata  
(Cause of delay: ①)  
• Enhancement of thermistor sensor for automobiles and refrigerators for market expansion  
(Cause of delay: ①) |
| **Metalworking Solutions Business** | • Expanded recycling capacity of tungsten by 1.5 times  
• Established technical centers in various markets  
• Resolved to make Mitsubishi Hitachi Tools a wholly owned subsidiary | • Improvement of asset efficiency in manufacturing  
(Cause of delay: ①) |
| **Metals Business**          | • Launched an E-Scrap sampling facility in the Netherlands  
• Acquisition of stake in the Mantoverde copper mine in Chile | • Expansion of E-Scrap processing  
(Cause of delay: ①) |
| **Cement Business**          | • Expanded waste plastic process capacity of Kyushu Plant by 1.7 times  
• Expanded into Northern California area  
• Signed a Letter of Intent with Ube Industries, Ltd. regarding integration of cement business, etc. | • Development of new overseas bases  
• Improvement of the cement manufacturing technology in Japan and the US  
(Cause of delay: ①) |
| **Environment and Energy Business** | • Started joint development of recycling technology for lithium-ion battery  
• Established a food waste biogas business company  
• Started operations of Wasabilzawa Geothermal Power Plant and construction of Appi Geothermal Power Plant | • Incineration fly ash cleaning plant for cement recycling  
(Cause of delay: ①) |
| **Group wide**               | • Sold all shares in Mitsubishi Materials Real Estate Corporation  
• Invested in Incubation Alliance Inc., which develops and manufactures Graphene  
• Established New Business Development & Promotion Division and EV Material Development & Recycling Business Promotion Department  
• Established MMC Innovation Investment Business Limited Liability Partnership  
• Established Smart Factory Promotion Center | |

### Cause of delay

1. **Insufficient marketing activities**
2. **Insufficient gathering of customer information**
3. **Insufficient ability to solve manufacturing problems on site** etc.

### Countermeasures

- Strengthen marketing
- Promote digitalization
- Fortify manufacturing excellence
## Review of FY2020 Strategy: Consolidated Performance

(Unit: billion yen)

<table>
<thead>
<tr>
<th>P/L</th>
<th>FY2018 Result</th>
<th>FY2019 Result</th>
<th>FY2020 Forecast (※1)</th>
<th>Estimated FY2020 (※2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consolidated net sales</td>
<td>1,599.5</td>
<td>1,692.9</td>
<td>1,520.0</td>
<td>1,620.0-1,840.0</td>
</tr>
<tr>
<td>Consolidated net sales (excluding metal)</td>
<td>831.1</td>
<td>860.7</td>
<td>830.0</td>
<td>870.0-900.0</td>
</tr>
<tr>
<td>Consolidated operating profit</td>
<td>72.8</td>
<td>36.8</td>
<td>27.0</td>
<td>86.0-95.0</td>
</tr>
<tr>
<td>Consolidated ordinary income</td>
<td>79.6</td>
<td>50.6</td>
<td>40.0</td>
<td>82.0-100.0</td>
</tr>
<tr>
<td>ROA (ordinary income to total assets) (%)</td>
<td>4.1</td>
<td>2.6</td>
<td>2.1</td>
<td>4.5-5.0</td>
</tr>
<tr>
<td>ROE (%)</td>
<td>5.1</td>
<td>0.2</td>
<td>-</td>
<td>7.0-8.0</td>
</tr>
<tr>
<td>Net D/E ratio (times)</td>
<td>0.6</td>
<td>0.6</td>
<td>0.8</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>Assumptions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exchange rate (yen/$)</td>
<td>111</td>
<td>111</td>
<td>109</td>
<td>100-120</td>
</tr>
<tr>
<td>Exchange rate (yen/€)</td>
<td>130</td>
<td>128</td>
<td>121</td>
<td>120</td>
</tr>
<tr>
<td>Copper price (¢/lb)</td>
<td>292</td>
<td>288</td>
<td>268</td>
<td>250-270</td>
</tr>
</tbody>
</table>

※1 Announced on February 12, 2020
※2 Estimated value at the time of publishing FY2020 Strategy
Overview of FY2023 Strategy

1) Value Creation Process
2) Mission (Corporate Philosophy System)
3) Financial Plan
4) Business Strategy
5) Corporate Division’s Strategy
6) Governance
Value Creation Process

- 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
- CO₂ emissions reduction

Social issues to be solved and SDGs

- 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

Materiality

- [Group-wide Policy]
  - Optimization of business portfolio
  - Comprehensive efforts to increase business competitiveness
  - Creation of new products and businesses
  - Advanced recycling technology and business platform
  - Value chain from raw materials to products with a stable supply

Our strengths (advantage)

- Unique material development and manufacturing technology
- A team that can unite to resolve issues

Long-term business goals

- Long-term strategy
  - MMC Group’s Business
  - Product
  - Recycling
  - Material
  - Resources

- [Corporate Strategies]
  - Governance
  - Business Strategies

- [FY2023 Strategy]
  - Corporate Strategies
  - Governance

- Value Proposition

- Mission

- Products & Services
- Value Creation Process

- Corporate Philosophy

For People, Society and the Earth

- Mission

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

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

- Contribute to build a recycling-oriented society

- Contribute to build a decarbonized society

Output

- Convenience & comfort
- Safety & security

- Conservation of resources
- Waste recycling
- Greenhouse gas reduction

Outcome

- Products & Services
- Value Proposition

- Convenience & comfort
- Safety & security

- Conservation of resources
- Waste recycling
- Greenhouse gas reduction

- Value Creation Process
- Corporate Philosophy

- For People, Society and the Earth

- Mission
- Vision

2030~2050

- (※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

MMCs Group’s Business

- Social issues and Materiality
- Output
- Outcome
- Mission
II  Overview of FY2023 Strategy

1) Value Creation Process
2) Mission (Corporate Philosophy System)
3) Financial Plan
4) Business Strategy
5) Corporate Division’s Strategy
6) Governance
Mission (Corporate Philosophy System)

For People, Society and the Earth

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

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.

<Group-wide Policy>

◆ Optimization of business portfolio
◆ Comprehensive efforts to increase business competitiveness
  -> Manufacturing excellence, quality management, and digital transformation strategies
◆ Creation of new products and businesses
  -> R&D and marketing strategy
Optimization of business portfolio

Portfolio matrix

High Growth Potential

- High growth potential but requires careful business decisions for the next step
- New business
- Sintered parts
- Aluminum Business
- Copper & copper alloy
- Cemented carbide
- Electronic materials
- Mining & smelting
- Environmental recycling
- Renewable energy
- Cement

Low Growth Potential

- Improve profit structure while considering M&A and business withdrawal

Profitability (ROIC)

- Maintain and grow a healthy profit with enhanced investments
- Maintain and grow profitability through operational efficiency and M&A

[Characteristics of businesses that the company should take ownership of]
- Businesses that are consistent with the Group’s vision and mission
- Businesses that are governable by the Group
- Businesses that are capable of earning a leadership role in a specific region or the world
- Businesses that can deliver stable returns over capital costs on a medium- to long-term basis

[Building business portfolio]
- Profitability and growth potential determine the business direction
- Profitability is measured by ROIC (spread)
- Growth potential is measured by EBITDA growth rate, etc.

Reformation of business structure

- Acquisition of Luvata
- Absorption-type merger of Mitsubishi Shindoh
- Establishment of technical centers
- Making Mitsubishi Hitachi Tools as a wholly owned subsidiary
- Launch of an E-scrap Sampling Center in Netherlands
- Stake acquisition in Mantoverde copper mine
- Establishment of Mining & Metallurgy Laboratories
- Started operations of the Wasabizawa Geothermal Power Plant
- Started construction of geothermal and water power plants
- Establishment of biogas business company

Advanced Products C
- Global First Supplier
- Copper & copper alloy
- Transfer of copper tube business (Kobelco & Materials Copper Tube)

Metalworking Solutions C
- Top 3 supplier in strategic markets
- Electronic materials

Metals C
- Leader in environmentally-friendly mining & smelting business
- Mining & smelting

Cement C
- Leader in the domestic and international cement industry with advanced environmental technologies
- Cement

Environment & Energy C
- Leading company in geothermal development
- Environmental recycling
- Renewable energy

Structural Improvements
- Reform of business structure improvement
- Improvement of profitability
- Acceleration of international business

Separation of Aluminum Business

To be integrated with the cement division of Ube Industries, Ltd.
Ⅱ Overview of FY2023 Strategy

1) Value Creation Process
2) Mission (Corporate Philosophy System)
3) Financial Plan
4) Business Strategy
5) Corporate Division’s Strategy
6) Governance
## Financial Goals

### FY2020 Forecast (※ 1) FY2023 Target (※ 2) Change rate Remarks

<table>
<thead>
<tr>
<th>ROIC (%)</th>
<th>-</th>
<th>6.0</th>
<th>+1%</th>
<th>[Ordinary income fluctuation factors]</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA (Ordinary income to total assets) (%)</td>
<td>2.1</td>
<td>4.0</td>
<td>+1.9 points</td>
<td>Market conditions 23.5</td>
</tr>
<tr>
<td>ROE (%)</td>
<td>-</td>
<td>7.0</td>
<td></td>
<td>Performance of investment 17.0</td>
</tr>
<tr>
<td><strong>P/L</strong></td>
<td></td>
<td></td>
<td></td>
<td>Metal prices 3.5</td>
</tr>
<tr>
<td>Consolidated net sales</td>
<td>1,520.0</td>
<td>1,530.0</td>
<td>+1%</td>
<td>Exchange rate 1.5</td>
</tr>
<tr>
<td>Consolidated net sales (excluding metal)</td>
<td>830.0</td>
<td>650.0</td>
<td>-22%</td>
<td>Impact of the change in accounting treatment of cement business becoming a minority share holding -9.0</td>
</tr>
<tr>
<td>Consolidated operating profit</td>
<td>27.0</td>
<td>58.0</td>
<td>+115%</td>
<td>Others -1.5</td>
</tr>
<tr>
<td>Consolidated ordinary income</td>
<td>40.0</td>
<td>75.0</td>
<td>+88%</td>
<td>Total 35.0</td>
</tr>
<tr>
<td><strong>B/S</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total assets</td>
<td>1,990.0</td>
<td>2,040.0</td>
<td>+3%</td>
<td></td>
</tr>
<tr>
<td>Net interest-bearing debt</td>
<td>450.0</td>
<td>510.0</td>
<td>+13%</td>
<td></td>
</tr>
<tr>
<td>Shareholders’ equity</td>
<td>560.0</td>
<td>630.0</td>
<td>+13%</td>
<td></td>
</tr>
<tr>
<td>Net D/E ratio (times)</td>
<td>0.8</td>
<td>1.0 times or less</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Assumptions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Exchange rate (yen/$) | 109 | 110 | | [Sensitivity]
| Exchange rate (yen/€) | 121 | 125 | 1 yen increase in USD/JPY exchange rate: +0.8 billion yen |
| Copper price (¢/lb) | 268 | 290 | 10¢/lb increase in copper price (LME) : +1.7 billion yen (Ordinary income) |

※1 Announced on February 12, 2020  
※2 Assuming transition to equity method in cement business
Financial Plan: Financial Indicators

- Focus on medium- to long-term profitability and growth potential
- Profitability is measured by ROIC and growth potential by EBITDA, etc., for each business
- Complementary use of ROA in process-type businesses
- ROIC/ROE/ROA are used together as group-wide financial indicators

<table>
<thead>
<tr>
<th>Financial Indicators</th>
<th>FY2017-2019 Average</th>
<th>End of FY2023 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>The whole MMC group</td>
<td>ROIC: 4.2%</td>
<td>6.0%</td>
</tr>
<tr>
<td></td>
<td>ROA: 3.4%</td>
<td>4.0%</td>
</tr>
<tr>
<td></td>
<td>ROE: 3.4%</td>
<td>7.0%</td>
</tr>
</tbody>
</table>

<Main Businesses>

- **Advanced Products Business**
  - Copper & copper alloy*: 5.9% 4.0% EBITDA 14.4 billion yen 20.0 billion yen
  - Electronic materials: 4.5% 6.0% EBITDA 5.3 billion yen 16.0 billion yen

- **Metalworking Solutions Business**
  - Cemented carbide: 7.9% 7.0% EBITDA 28.2 billion yen 39.0 billion yen

- **Metals Business**
  - 20.3% 10.5% ROA 7.4% 6.5%
  - 4.9% 6.0% ROA 5.2% 6.0%

- **Cement Business**
  - 1.1% 4.0% ROA 1.7% 6.0%
  - 2.7% 4.0% ROA 3.5% 5.5%

**ROIC = NOPAT/ invested capital**

NOPAT: (Profit before tax + interest on funds) x (1-effective tax rate)
Profit before tax includes share of profit/loss of investments accounted for using equity method and dividend income

- Invested capital: Excludes amount equivalent to inventories that are risk-free because of price hedging
- * Plans to invest approx. 30 billion yen starting from FY2021. Investment achievements will appear during next medium-term management plan period.
- ** Calculated by excluding the price of bullion.
- Due to the launch timing of equipment under construction, the ROICs of Environmental Recycling Business and Renewable Energy Business are expected to exceed WACC in FY2024 and FY2027, respectively.
**Investment Policy**
- Make investments using cash flows from operations, and proceeds from business restructuring and asset sales.
- If there are other attractive large-scale investment projects for growth, investments will be made proactively as long as a net D/E ratio of 1.0 times or less is maintained.

**Cumulative cash flows from FY2021 to 2023** (Unit: billion yen)

<table>
<thead>
<tr>
<th>Cash in</th>
<th></th>
<th>Cash out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating CF</td>
<td>280</td>
<td>Investment for growth</td>
</tr>
<tr>
<td>Others*1</td>
<td>60</td>
<td>Investment for maintenance and upgrading</td>
</tr>
<tr>
<td>Total</td>
<td>340</td>
<td>Subtotal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Financing CF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dividends*2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
</tr>
</tbody>
</table>

- *1 Business restructuring, sales of strategic holdings, etc.
- *2 Dividends paid and dividends paid to non-controlling shareholders

**Cumulative investment plan from FY2021 to 2023**

<table>
<thead>
<tr>
<th>Total Investment 360</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance &amp; upgrading 170</td>
</tr>
<tr>
<td>Advanced Products 22% (Copper &amp; copper alloy 15, Electronic materials 7)</td>
</tr>
<tr>
<td>Metalworking Solutions 30% (Cemented carbide 28, Sintered 2)</td>
</tr>
<tr>
<td>Growth Strategy 190</td>
</tr>
<tr>
<td>Metals 21%</td>
</tr>
<tr>
<td>Cement 8%</td>
</tr>
<tr>
<td>Others 4% (Affiliated 2, Aluminum 9, Group-wide 4)</td>
</tr>
<tr>
<td>Environment &amp; energy 15%</td>
</tr>
</tbody>
</table>

**Shareholder return Policy**
- MMC intends to pay stable dividends despite fluctuating business results, and pay out an annual dividend of 80 yen per share.
- However, if the consolidated payout ratio becomes less than 25%, MMC will temporarily increase the dividend or conduct share buybacks.

<table>
<thead>
<tr>
<th>FY2020 (actual)</th>
<th>FY2021-2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dividends</td>
<td>80 yen/share</td>
</tr>
</tbody>
</table>

**Strategic holdings**
- Unless required for strategic objectives, MMC will not acquire or hold shares other than purely for investment purposes.
- Expected reduction in FY2020: 12%
II  Overview of FY2023 Strategy

1）Value Creation Process
2）Mission (Corporate Philosophy System)
3）Financial Plan
4）Business Strategy
5）Corporate Division’s Strategy
6）Governance
## Business Strategy: Long-term Business Goals / Long-term Strategy and ESG/SDGs

<table>
<thead>
<tr>
<th>Long-term business goals</th>
<th>Long-term strategy</th>
<th>ESG/SDGs</th>
<th>Mission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Products Business</td>
<td>Global First Supplier</td>
<td></td>
<td>● Contribute to build a prosperous society</td>
</tr>
<tr>
<td></td>
<td>● 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.)</td>
<td>E</td>
<td>● Advance and diversifying mobility and digital devices</td>
</tr>
<tr>
<td></td>
<td>● Accelerate marketing activities to replicate successful practice</td>
<td>S</td>
<td>● Develop and use materials with low environmental impact</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S</td>
<td>● Efficiently use mineral resources and alternative resources</td>
</tr>
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<td>● Efficiently use energy resources</td>
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<td>● Reduce CO₂ emissions</td>
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<td>● Develop and supply products that contribute to decarbonization</td>
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<tr>
<td>Metalworking Solutions Business</td>
<td>Top 3 supplier in strategic markets</td>
<td></td>
<td>● Contribute to build a recycling-oriented society</td>
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<td></td>
<td>● Promote clean manufacturing</td>
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<td>● Promote manufacturing renewable energy</td>
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<td>● Provide high-efficiency products with advanced technology</td>
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<td>● Promote electrification business by advanced metal powder technology</td>
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<td>● Expand advanced metal powder business in electronic devices</td>
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<td>● Achieve manufacturing that considers environmental load</td>
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<td>Metals Business</td>
<td>Leader in environmentally-friendly mining &amp; smelting business</td>
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<td>Cement Business</td>
<td>Leader in the domestic and international cement industry with advanced environmental technologies</td>
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<td>Stable supply of basic building materials for social infrastructure and disaster prevention infrastructure</td>
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<td>● Sophistication of waste disposal</td>
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<td>● Response to climate change by reducing CO₂</td>
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<td></td>
<td>● Construction of a resilient domestic business foundation through business restructuring and business growth in overseas markets</td>
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<tr>
<td>Environment and energy Business</td>
<td>(Environmental recycling) Driving force of resource-recycling systems (Renewable energy) Leading company in geothermal development</td>
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<td>● Provision of a safe recycling system with thorough traceability, etc.</td>
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<td>● Decarbonization by expanding renewable energy business</td>
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<td>● Ensure a stable supply of clean energy and recycled products</td>
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<td>● Solve urban waste problems</td>
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<td>● Build a sustainable social system</td>
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<td>● Provide renewable energy</td>
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</table>
Business Strategy for Solving Social Issues

**Mission**

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

**Social issues**

- Automation of production and business processes
- Longer lifespans of people and buildings
- Efficient treatment of urban waste
- CO₂ emissions reduction
- Advancement and diversification of digital devices
- Effective measures against disasters
- Efficient use of mineral resources and alternative substances
- Efficient use of energy resources
- Development of renewable and unutilized energies

**Advanced Products Business**
- 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

**Metalworking Solutions Business**
- Expand advanced metal powder business
- Achieve 80% cemented carbide recycling rate
- Promote clean manufacturing
- Advance solutions

**Metals Business**
- Achieve E-Scrap processing of 200,000t/Y
- Operate mines to secure stable supply of clean copper concentrate
- Reduce CO₂ emissions from smelters by 10%
- Advance technological development for reducing, capturing, and utilizing CO₂
- Improve waste disposal

**Cement Business**
- Develop advanced metal powder business
- Increase cemented carbide recycling rate
- Use renewable energy
- Expand high efficiency tools
- Digitize solutions

**Environment & Energy Business**
- Provide composite products in key business areas 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

**FY2021-2023 (FY2023 Strategy)**

- 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 CO₂ emissions from smelters by 5%
- Reduce CO₂ by introducing low-temperature burning technology
- Expand capabilities in waste plastics processing and install chlorine dust cleaning equipment

- Expand recycling business
- Demonstrate LiB-R² / PV-R³ 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
In March 2020, we endorsed the proposal of the Task Force on Climate-related Financial Disclosures (TCFD). Going forward, we will disclose important Group-related information concerning climate change based on TCFD recommendations.
Global First Supplier

Long-term Strategy

- 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

Specific Measures of the FY2023 Strategy

- Assign key account managers acting cross-sectionally
- Enhance information analysis by digital marketing such as the employment of AI or IoT
- Share product roadmaps with customers (co-creation capabilities)
- Develop new products through collaboration with Central Research Institute
- Fortify production capabilities such as establishing a mass production system and improving productivity
- Pursue opportunities to execute M&A or business alliances

Projected Achievements at the End of FY2023

In our main business fields*, we will have:

- Earned customers’ trust
- Released new products by integrating our technical capabilities
- Generated new applications of our products

※ Next-generation vehicles, semiconductors/electronics, industrial machinery/infrastructure

Key strategies for copper & copper alloy business

- **Expand copper alloy sales**
  - Seamless value chain by integrating Mitsubishi Shindoh
  - Agile investment with direct market information

- **Execute large-scale investments**
  - Expanding rolling business
  - Restructuring of extrusion business
  - (About 30 billion yen capital investments from FY2021 to 2027)

- **Accelerate global & downstream business**
  - Strengthening and optimizing value chain
  - Enhancing cooperation with the Luvata Group

- **Enhance marketing & technical development function**
  - Development of new users
  - Advancing new product developments by identifying next-generation market needs

Acting promptly to market needs
(Next-generation vehicles, AI/IoT, environmental load reduction, etc.)
Top 3 supplier in strategic markets

Long-term Strategy

- Promote clean manufacturing
- Provide high-efficiency products with advanced technology
- Expand advanced metal powder business in electronic devices

Specific Measures of the FY2023 Strategy

- Increase recycling rate in our tool recovery system and utilize renewable energy
- Provide high efficiency tools and digital solutions
- Transition to smart factory and optimization of logistics and supply chain
- Expand advanced metal powder business to rechargeable battery market

Projected Achievement at the End of FY2023

- Establishment of a competitive global business base capable of expanding in strategic markets using digital technologies
Business Strategy: Metalworking Solutions Business-2

Key measures

- Expansion of the utilization of new technologies and services that can solve customer issues
- Enhancement of the global supply system and functions

Expansion in strategic market

Automotive, aerospace, and medical industries

- Reinforce marketing functions focused on target customers
- Expand manufacturing and sales capability through M&A or other measures
- Use digital technologies for technical assessments and simulations
- Expand advanced metal powder business for the battery market

Strategic investment in markets with high growth potential

Build a competitive global business foundation

- Develop a global recycling system of the used cemented carbide tools
- Use digital technologies to achieve high quality and efficient manufacturing processes
- Optimize global logistics and supply chain in response to market fluctuations
- Establish manufacturing BCP to maintain stable supplies
- Encourage global collaboration of technical center functions

Global Technical Support Network
Leader in environmentally-friendly mining & smelting business

Long-term Strategy

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

Specific Measures of the FY2023 Strategy

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

Projected Achievement at the End of FY2023

- Optimization of valuable metal material flow derived from E-Scrap
- Reduction of smelter CO₂ emissions by 5%
Stable procurement of raw materials and optimization of smelting process

**Stable supply of materials**
- Secure clean copper concentrate by investing in new mines
  - Acquisition of stake in the Mantoverde copper mine
  - Implementation of Zafranal project
- Expand opportunities to participate in blue-chip projects
  - Invest from the early stages of projects
  - Organize consortium
- Develop impurity removal technology in copper concentrate
  - Establish Mining & Metallurgy Laboratories (expansion of resource technology development), and conduct joint research with a third party
  - Develop/train resource engineers

**Promotion of recycling**
- Optimize material flow
  - Material grid
  - Optimize material flow connecting each smelter and enhance the recovery of valuable metals at each smelter
  - Efficient recycling of Cu, precious metals and trace components in E-Scrap
- Improve the yield of Au and Ag by enhancing the precious metal factory process
- Understand E-Scrap input amount constraint and optimize processing process

**Response to climate change**
- Demonstrate the superiority of the Mitsubishi process
- Utilize the environment-friendly Mitsubishi Process
- Reduce fossil fuels
  - Replace fuel with recycled oil, etc.
  - Substitute fuel using E-Scrap
- Improve energy conversion efficiency
  - Improve heat transfer efficiency of boiler
  - Improve power generation efficiency
- Improve energy use efficiency
  - Efficiently use steam
  - Improve electrolysis current efficiency
- Use renewable energy

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**Key measures**

**Improve the ratio of stable raw-material procurement**

\[
\text{Amount of copper contained with copper concentrate under off-take* or long-term contract, and E-Scrap} \over \text{Amount of total copper production}
\]

*Off-take: long-term takeover rights linked to mine investment interests
Leader in the domestic and international cement industry with advanced environmental technologies

Long-term Strategy

- Stable supply of basic building materials for social infrastructure and disaster prevention infrastructure
- Sophistication of waste disposal
- Response to climate change by reducing CO₂
- Construction of a resilient domestic business foundation through business restructuring and business growth in overseas markets

Specific Measures of the FY2023 Strategy

- Improve and optimize production system through domestic business restructuring
- Expand capabilities in waste plastic processing and installation of chlorine dust cleaning equipment
- Introduce low-temperature burning technology and develop CO₂ reduction, capture, and recycling technologies
- Expand US business and develop new overseas bases

Projected Achievement at the End of FY2023

- Domestic business restructuring
- Optimized production systems and promotion of overall business efficiency
**Business Strategy: Cement Business-2**

### Key measures

Reorganization of domestic business and development of new overseas bases

Reorganize the domestic business, optimize the production system, and establish a stable profit base through economies of scale in order to respond to the demand decrease for cement in Japan.

Secure domestic advantage and grow overseas markets through the expansion of US and overseas businesses.

<table>
<thead>
<tr>
<th>Domestic</th>
<th>Overseas</th>
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<tbody>
<tr>
<td>Create rationalization effects by consolidating factories, logistics facilities, sales functions, etc.</td>
<td>Environmental business expansion, development in new technology, commercialization, etc.</td>
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</tbody>
</table>
| • Domestic business restructuring  
• Production system optimization  
• Strengthening of Kyushu Plant  
• Downstream business enhancement and optimization | • Expansion of recycling business  
• Development and commercialization of new technology to reduce, capture, and recycle CO₂ emissions |
| Benefits obtained by conducting cement business independently are limited, and therefore should pursue the merits and synergies of business consolidation | Expand business base in overseas where population growth is expected |
| | • Expansion of US business  
• Development of new overseas bases |
| | Realize expansion of overseas business with cash obtained from domestic business  
(Targets advanced and/or equivalent countries that can be developed for vertical integration, e.g. Australia) |

Improve the ratio of alternative thermal energy by focusing on thermal energy waste treatment with room for expansion
Business Strategy: Environment and Energy Business-1

Long-term Strategy

- Provision of a safe recycling system with thorough traceability, etc.
- Decarbonization by expanding renewable energy business

Specific Measures of the FY2023 Strategy

- Expand home appliance recycling business, advancement of automation, and improvement of added value of recovered products
- Demonstrate LiB recycling technology and solar panel recycling technology
- Secure stable plant operations in fly ash recycling business and biogasification business
- Complete Komatagawa new hydroelectric power plant, construction of Appi geothermal power plant, and survey of new geothermal sites

Projected Achievement at the End of FY2023

- Establishment of a stable business base for the environmental recycling business
- Expansion and stable operations of renewable energy plants and search for new geothermal sites
**Business Strategy: Environment and Energy Business-2**

**Key measures**
- Enhanced competitiveness and expansion of environmental recycling businesses
- Completion of Komatagawa new hydroelectric power plant, construction of Appi geothermal power plant, and survey of new geothermal sites

**Environmental recycling initiatives**
By making the most of the characteristics and functions of the materials company, we will contribute to the construction of a recycling-oriented society by developing and expanding the recycling business that does not rely on final disposal sites and can be trusted by stakeholders.

**Renewable energy initiatives**
Based on the management resources we have cultivated, we will expand the renewable energy business and contribute to the construction of a decarbonized society by providing a stable energy supply with a low environmental impact.
II Overview of FY2023 Strategy

1) Value Creation Process
2) Mission (Corporate Philosophy System)
3) Financial Plan
4) Business Strategy
5) Corporate Division’s Strategy
6) Governance
Corporate Division’s Strategy: R&D and Marketing Strategy

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

**Mega Trends**
- Energy
- Electronics
- Automobile
- Environment

**Key targets**
- Sensor device
- Nano functional materials
- Post LiB materials
- Energy-related materials
- CO₂ capture and utilization

**FY2021-2023 (FY2023 Strategy)**
- IoT・AI
- Infrastructure/mass production technology
- Integrated functions
- Clean energy ・Decarbonization
- Material composite
- Development of recycling technologies

**Key targets**
- Machining difficult-to-cut materials
- Polymer composite materials
- EV copper parts
- EV thermal management components
- Recovery of valuable metals
Quality management strategy
Proactive quality management to ensure that non-conforming products are not produced

Digital Transformation (DX) strategy
• Use Digital Transformation to strengthen three key pillars: (1) Business added-value (2) Business operations competitiveness (3) Management speed

Approx. 30 billion yen investment over the next five years
Approx. 100 digital professionals

DX Management Office
General Manager: CDO
※CDO: Chief Digital Officer

System Strategy Department
ICT Promotion Dept. DX Promotion Dept. Data Science Dept.
Production Technology Management Dept.
Human Resources Dept.
Quality Management Dept.
Corporate departments

Business units

DX (Digital Transformation)

Business added-value
Operational competitiveness
Management speed

Customer focus point
Data sharing/ utilization
Operational efficiency

Shared data infrastructure (integration/update)
Talent development / Corporate culture improving

Raising manufacturing capability to the next level
Elucidation of correlation between cause and result with AI/IoT
Optimization of product/process design and equipment maintenance plan

Formulation of vision based on business strategy
Enhance innovation power
Improve process development and mass production capabilities
Elevate factory management capabilities
Realize faster and deeper Kaizen capabilities
Strengthen human resource development capabilities

Activities of corporate divisions
Activities of business divisions and manufacturing bases
Central Research Institute
Production Engineering Center
Smart factory Promotion Center
Production process upgrade
Technology development
Management framework
Factory capability evaluation and issue setting
Develop employee training system for manufacturing
Foster strong Kaizen culture
All Material Kaizen Convention

Proactive quality management to ensure that non-conforming products are not produced
II Overview of FY2023 Strategy

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Governance: Strengthening Corporate Governance

- Changed to a company with a Nomination Committee in June 2019
  Purpose: Accelerate decision-making by delegating authority, strengthen the Board of Directors’ management supervisory functions, and improve the management transparency and fairness

Continuous improvement of the functions of the Board of Directors

- Continuous improvement of the monitoring functions performed by the Board of Directors
- Ensure diversity of director composition

Formulation of basic corporate governance policy (effective April 1, 2020)

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

CEO appointment and dismissal, planning and execution of successor development plan

- Adoption of appointment and dismissal process
- Establishment of the selection of a successor candidate, as well as the planning and execution of its development plan with the involvement of the Nomination Committee

Review of executive remuneration system

- Remuneration Committee establishment of an incentive-based executive remuneration system with a variable remuneration ratio (Start operations from FY2021)

Enhancement of governance of subsidiaries

- Review of systems for director nomination and remuneration
- Proactive management of the Board of Directors
Governance: Strengthening Group Governance

- Organization with good and healthy communication where employees have unrestricted communication
- Organization capable of autonomously solving issues
- Organization that adequately shares the understanding of its business

Aim for governance under which efficient and autonomous communication can take place between the parent company and subsidiaries, between the head office and plants, and among the subsidiaries.

- Appropriate operation through PDCA mechanism
- Developed multi-directional reporting lines where information is appropriately shared between the parent company and subsidiaries and among different levels of organizations
- Maintaining of interactive communication

- Evaluation of effectiveness and improvement of the board of directors of the Group companies
- The Group companies’ officer training
- Enhanced governance audits
  ※In an audit, various issues may be identified through interviews conducted by corporate department managers with various levels of audited department employees.

- Prompt decision making by delegating authority and strengthening supervisory functions
- Focused management especially in R&D, manufacturing, and human resources exchange
- Accelerated strategy execution by Digital Transformation Management Office

Governance whose strength varies for each in-house company, business locations and Group company.

Management makes prompt decisions based on the information, and the Group as a whole conducts businesses appropriately.

Cultivate a corporate culture that promotes active communication.

Targeting organization and corporate culture
Governance: Human Resources Strategy and Change of Organizations

**HR Strategy**

- **Secure and foster talents adaptive to change and forge a healthy organizational culture**
  - **Talent**
    1. Secure human resources: Reinforce hiring activities and systems, including within the Group companies, etc.
    2. Develop human resources: Visualize capabilities of employees (talent management), etc.
  - **Organizational culture**
    1. Enhance motivation: Introduce professional talent system, etc.
    2. Enhance management capabilities of the Group companies: Promote personnel exchange within the Group, etc.
  - **Improvement of social value**
    1. Employ diverse talents: Recruitment rate of new female graduates: 25% or more, etc.
    2. Health & productivity management: Health company declaration, White 500 certified

**Change of organizations**

- **Business Divisions**
  1. Promotion of Environmental and Energy Business Division to in-house Company:
     Positioned as a core business that can contribute to solving social issues
  2. Separation of Aluminum Division from Advanced Products Company:
     Fundamental improvement of profitability and acceleration of strategic review, including overseas expansion

- **Corporate Division**
  1. Establishment of Marketing Department: Strengthening of corporate marketing functions
  2. Establishment of Corporate Communications Department: Centralizing information dissemination to stakeholders

- **Company-wide organization**
  1. Establishment of Digital Transformation Management Office: Promotion of digitalization strategy
  2. Establishment of Sustainable Management Office: Ensuring business sustainability
    Establishment of subcommittees for Communications, Governance, Compliance, Risk Management, Climate Change, Environmental Management, Quality Management, Information Security, and Promotion of Zero Disasters
Forward-Looking Statements

Future plans and other statements are based on information made available to MMC's management as of the date of the release of this material. Note that there are uncertain/risk factors inherent in plans, and there may be cases in which actual results materially differ from plans and other statements made within this material.

Mitsubishi Materials Corporation