

# Framework for Sustainability Management

## Promotion of Sustainability Management Based on the Group Corporate Philosophy

The KOBELCO Group promotes sustainability management based on the Group Corporate Philosophy by addressing key management issues that are classified into two categories: a business foundation area that underpins business activities, and a value creation area that drives business growth. We will pursue sustainable growth and the medium- to long-term enhancement of our corporate value to realize a world envisioned in KOBELCO's View of the Future as we carry out KOBELCO's Mission.

**KOBELCO's Mission**  
 Our mission is to provide solutions to the needs of society, by making the best use of the talents of our employees and our technologies.

KOBELCO's assets and strengths lie in the various talents of each employee as well as in its diverse technologies that support our broad range of businesses. We have cultivated these advantages in an effort to meet the needs of the times. We continue to take on the challenge of transcending organizational boundaries and conventional thinking to solve increasingly complex issues, while supporting the foundations of society.

**KOBELCO's View of the Future**  
 We envision a world in which people, now and in the future, can fulfill their hopes and dreams while enjoying safe, secure, and prosperous lives.

Our technologies, products, and services are not only for those who live in the present, but also for future generations. KOBELCO sees a sustainable, beautiful, and flourishing world in the future, with safety and security in people's lives. Such a future will give rise to value that creates new conveniences and comfort and help people fulfill their hopes and dreams.

### Group Corporate Philosophy

#### KOBELCO's View of the Future

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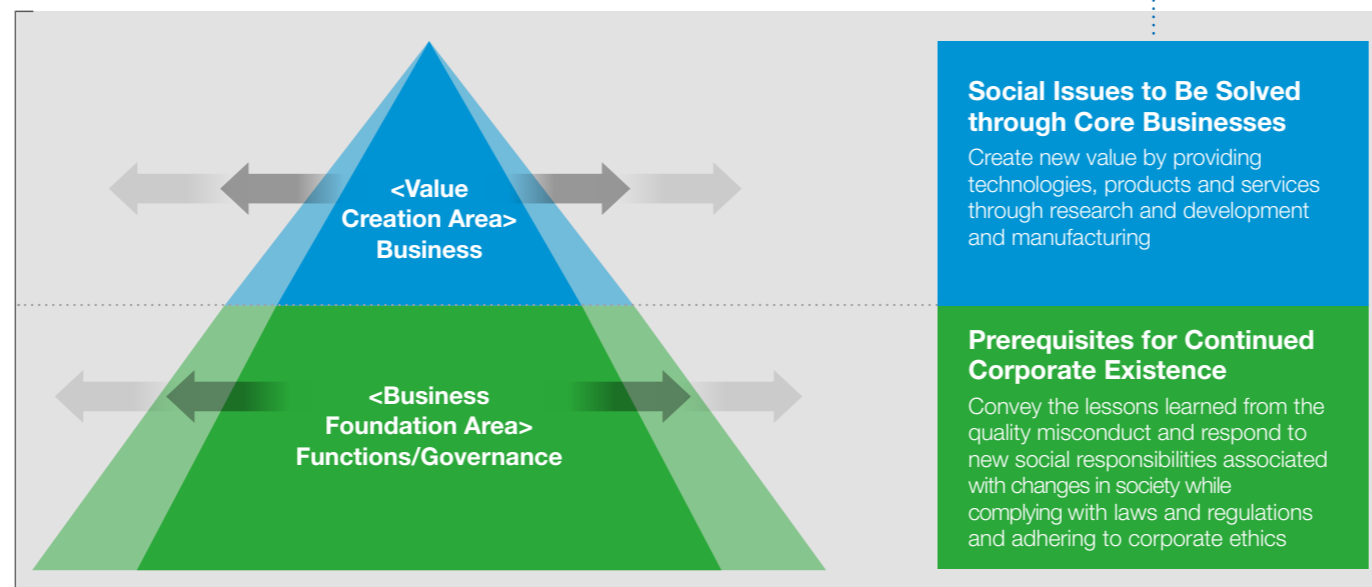
#### KOBELCO's Mission

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#### Core Values of KOBELCO

#### Six Pledges of KOBELCO

### Key Issues to Address



### Promotion Tools



### Message from the Executive Officer responsible



**Hajime Nagara**  
 Director, Executive Officer

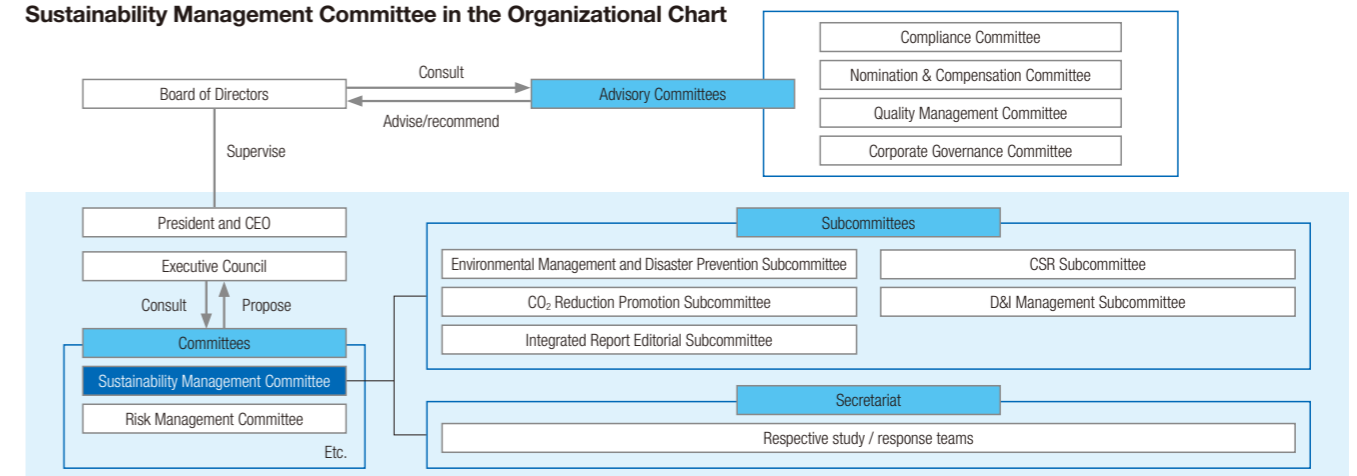
**We will provide solutions to the needs of society while fulfilling various corporate social responsibilities.**

Our Group's sustainability management is promoted under the initiative of the Sustainability Management Committee, an auxiliary body of the Executive Council, which undertakes the implementation of the management cycle for important issues. The Sustainability Management Committee promotes effective operation of activities by setting up subcommittees dedicated to specific issues of importance.

#### Sustainability Management Committee

Chair (Responsible officer): Hajime Nagara, Director, Executive Officer  
 Report to the Board of Directors: Once every quarter  
 Meetings: Once every quarter

### Sustainability Management Committee in the Organizational Chart



# Materiality and Indicators/Targets

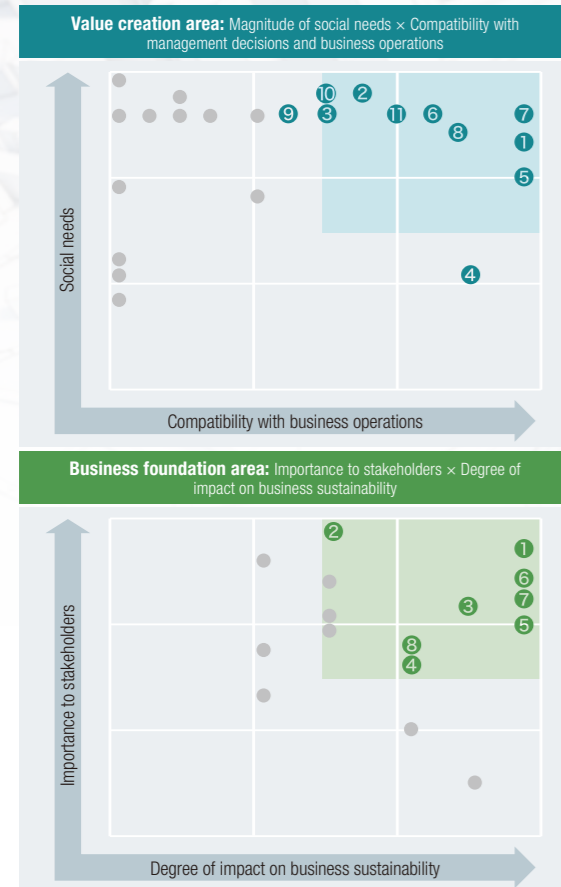
## Process of Identifying Materiality

Under the leadership of the Chair of the CSR Committee (currently the Sustainability Management Committee), we evaluated the appropriateness of the materiality evaluation process and analysis results and examined issues of materiality that should be addressed with priority.

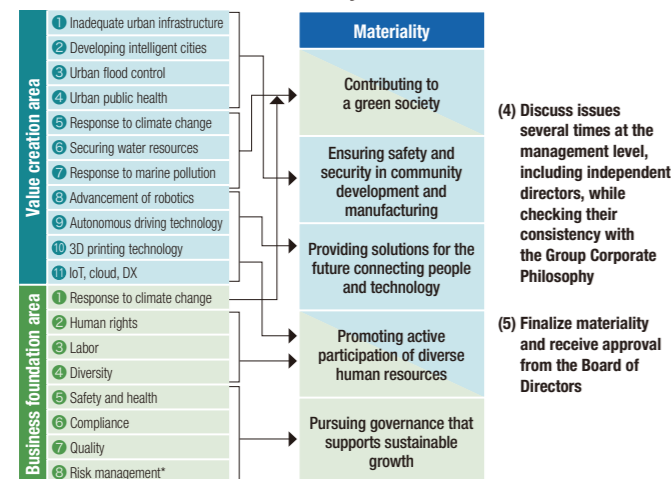
### (1) Comprehensively identify social issues with reference to megatrends and the following international frameworks and guidelines

- Ten Principles of the UN Global Compact
- Sustainable Development Goals (SDGs)
- OECD Guidelines for Multinational Enterprises
- UN Guiding Principles on Business and Human Rights
- GRI Standards
- SASB Standards
- ISO 26000

### (2) Score the social issues on their level of importance from the following viewpoints and map them out



### (3) Merge key issues that are common to both of the value creation and business foundation areas and identify similar issues



(4) Discuss issues several times at the management level, including independent directors, while checking their consistency with the Group Corporate Philosophy

(5) Finalize materiality and receive approval from the Board of Directors

\* Including top risks relating to environmental laws and regulations, disaster prevention, etc.

\*1 A green society is not limited to the narrow meaning of a society that merely uses natural energy, but is defined as a society that addresses climate change and resource recycling.  
 \*2 Although CO<sub>2</sub> emissions in fiscal 2021 increased compared to fiscal 2020 due to an increase in crude steel production, impacted by the recovery from the COVID-19 pandemic, our initiatives to reduce CO<sub>2</sub> emissions are progressing as planned.  
 \*3 Three main items: Slag, dust, and sludge \*4 S+3E = Safety + Energy Security, Economic Efficiency, and Environment \*5 Indicator was changed to verify initiatives using more detailed quantitative data  
 \*6 Progress rates of the plan to rebuild existing IT systems excluding the mainframe, which was planned at the time of formulation of the Medium-Term Management Plan (FY2021-2023)  
 \*7 a: IT evangelists (DX personnel who utilize IT to plan and implement business reforms in their own divisions), b: Data scientists (DX personnel capable of advanced data analysis)

Materiality of the KOBELCO Group	Indicators	Indicators and targets		Main initiatives in FY2021		
		Targets	Actual (FY2020)	Actual (FY2021)		
<b>Contributing to a green society</b> <sup>*1</sup> 	Response to climate change	(1) Reduction of CO <sub>2</sub> emissions in production processes	2030: Down 30-40% (compared to FY2013 levels) 2050: Taking on the challenge of realizing carbon neutrality	Down 21%	Down 16% <sup>*2</sup>	<ul style="list-style-type: none"> <li>Promote energy-saving activities and implement initiatives in line with the Roadmap toward Carbon Neutrality in the Ironmaking Process.</li> </ul>
		(2) Contribution to reduction of CO <sub>2</sub> emissions through technologies, products, and services	2030: 61 million tons (including at least 45 million tons through MIDREX <sup>®</sup> Process) 2050: 100 million tons or more	40.77 million tons	44.91 million tons	<ul style="list-style-type: none"> <li>Expand sales of technologies, products, and services that contribute to CO<sub>2</sub> reduction.</li> </ul>
		(3) Reduction of CO <sub>2</sub> emissions in the electric power business	2030: Increasing efficiency of coal-fired power plants to the USC level or higher 2050: Taking on the challenge of realizing carbon neutrality	—	—	<ul style="list-style-type: none"> <li>Implement initiatives in line with the Roadmap toward Carbon Neutrality in the Electric Power Business, including ammonia co-firing and the use of biomass.</li> </ul>
	Response to resource recycling	(4) Water recycling rate	Maintaining at 95% or higher	95.9%	95.7%	<ul style="list-style-type: none"> <li>Promote efficient use and thorough recycling of water.</li> </ul>
		(5) By-product recycling rate	Recycling of three main items <sup>*3</sup> FY2025: 99%	98.9%	99.3%	<ul style="list-style-type: none"> <li>Promote recycling of the three main items and reduce final disposal amounts.</li> </ul>
<b>Ensuring safety and security in community development and manufacturing</b> 	Supplying energy focused on S+3E <sup>*4</sup>	—	—	—	—	
	Providing materials and machinery that meet needs	(6) Percentages of target products in the product mix	FY2025: Percentage of wire rods/bars and high-strength steel in the steel products: 52%	44%	46%	<ul style="list-style-type: none"> <li>To secure stable earnings at 6.3 million tons of crude steel production, strengthen the earnings base of the steel business and expand the ratio of high-value-added products, such as special steel and high-strength steel.</li> </ul>
	Improving safety and productivity	—	—	—	—	—
<b>Providing solutions for the future connecting people and technology</b> 	Reforms in manufacturing and operations through digital transformation (DX)	(7) Hours of office work streamlined by digitization <sup>*5</sup>	FY2023: 125,000 hours/year FY2025: 250,000 hours/year	—	76,000 hours/year	<ul style="list-style-type: none"> <li>Automation of routine work: 40,000 hours</li> <li>Streamlined communication: 10,000 hours</li> <li>Streamlined translation work: 10,000 hours</li> <li>Digitization of business processes through development by users: 5,000 hours</li> <li>Others (simplified approval process, outsourcing, etc.): 11,000 hours</li> </ul>
		(8) Progress rates of reconstruction of existing systems <sup>*6</sup>	FY2025 100%	—	18.4%	<ul style="list-style-type: none"> <li>Started integration/overhaul of SAP ERP system (finance and accounting in the machinery businesses) and large-scale reconstruction of design system</li> </ul>
		(9) Number of DX personnel trained	a. IT evangelists <sup>*7</sup> FY2023: Approx. 500 b. Data scientists <sup>*7</sup> FY2023: Approx. 140	a. 35 b. 99	a. 128 b. 113 (cumulative)	<ul style="list-style-type: none"> <li>Enhanced the follow-up after training, shared internal activities on the IT Evangelist Activity Portal Site, conducted in-house publicity activities for distributing training videos, etc.</li> <li>Created training materials for practical training, created machine learning training contents for in-house use, held on-the-job training on data analysis for operators, etc.</li> </ul>
	Integration and innovation of diverse intellectual assets	(10) New business creation	FY2025: Multiple task forces (TFs) to move toward creating new businesses FY2030: Multiple TFs to launch new businesses (Annual target earnings: 1 billion yen or more per business)	—	Two businesses	<ul style="list-style-type: none"> <li>Established the KOBELCO Start-Up Motivation System (KOSMOS), a new business creation management system that supports, accelerates, and monitors new business planning, and commenced its operations.</li> </ul>
		(11) Number of employees with PhD	—	177	175	<ul style="list-style-type: none"> <li>Promoted initiatives for encouraging employees to obtain academic degrees and the hiring of students with a doctoral degree.</li> </ul>
<b>Promoting active participation of diverse human resources</b> 	Diversity and Inclusion (D&I)	(12) Percentage of women in new graduate hires	FY2023: a. Career-track administrative positions: 50% or more b. Career-track technical positions: 15% or more c. General technical positions: 15% or more	a. 34% b. 16% c. 9%	a. 35% b. 6% c. 8%	<ul style="list-style-type: none"> <li>Career-track positions: Introduced scout-type service and participated in seminars for female students</li> <li>General technical positions: Increased recruiting at schools</li> </ul>
		(13) Percentage of female managers	Double the percentage from fiscal 2020	2.7%	2.8%	—
		(14) Employment rate of people with disabilities	2.3% (statutory employment rate)	2.34%	2.56%	<ul style="list-style-type: none"> <li>Conducted recruiting activities based on the statutory employment rate</li> </ul>
		(15) Number of non-Japanese employees	—	87	76	<ul style="list-style-type: none"> <li>Conducted recruiting activities at universities in China</li> </ul>
	Work style reforms	(16) Percentage of male employees taking special leave for childcare	FY2023: 100%	77.8%	78.5%	<ul style="list-style-type: none"> <li>Raised awareness at various D&amp;I seminars, etc.</li> </ul>
		(17) Turnover of employees with less than 10 years of service	Less than 15%	15.8%	19.5%	<ul style="list-style-type: none"> <li>Conducted various activities to improve work styles and activities to support work-life balance, etc.</li> </ul>
		(18) Overtime hours	—	16.6 h (per month/employee)	17.2 h (per month/employee)	<ul style="list-style-type: none"> <li>Conducted activities at each business unit, such as finishing work by 7:00 pm and setting a day with no overtime work, etc.</li> <li>Carried out activities for improving business operations to increase operational efficiency</li> </ul>
Human resources development	(19) Number of annual paid leave days taken	15 (per year/employee)	11 days	13.9 days	<ul style="list-style-type: none"> <li>Encouraged the taking of annual leave based on annual plans created through two-way communication between supervisors and individual employees in a planned manner</li> </ul>	
	(20) Total hours worked	Under 2,000 hours/year	1,978 h	2,057 h	<ul style="list-style-type: none"> <li>Promoted activities at each business unit, such as finishing work by 7:00 pm and setting a day with no overtime work, etc.</li> <li>Carried out activities for improving business operations to increase operational efficiency</li> </ul>	
<b>Pursuing governance that supports sustainable growth</b> 	Compliance and risk management	(21) Continuation of employee awareness survey	—	Ongoing	Ongoing	<ul style="list-style-type: none"> <li>Continued to implement the survey in fiscal 2021</li> </ul>
		(22) Improving and expanding employee training a. Total hours trained (across all employees) b. Average hours of training per employee	—	a. 210,948 h b. 18 h	a. 215,667 h b. 19 h	<ul style="list-style-type: none"> <li>In addition to stratified training that is programed according to issues in each division and open training that can be selected by individuals, we conducted leader development training for selected employees. We established training formats that take advantage of face-to-face group training and online training, and also promoted the development of human resources aimed at DX strategy and KOBELCO Total Quality Management (TQM) activities.</li> </ul>
<b>Pursuing governance that supports sustainable growth</b> 	Compliance and risk management	(23) Number of internal reporting (whistleblowing) cases	—	112	113	—
		Human rights	(24) Participation rate in employee training <sup>*5</sup>	Implementation of Groupwide human rights training	—	76.4% E-learning participation rate at Kobe Steel
	Safety and health	(25) Lost time injury frequency rate	0.10 or less	0.24 (calendar year)	0.14 (calendar year)	<ul style="list-style-type: none"> <li>Implemented priority items, which include (1) Improving safety awareness and heightening attention to each other with participation of all members, (2) Monitoring the management status through safety and health diagnosis and conducting activities for improvement, and (3) Conducting test operation and evaluation of machinery safety and human safety support tools.</li> </ul>
		(26) Improving and expanding supervisor training	—	65	778	<ul style="list-style-type: none"> <li>Implemented new employee training, new supervisor training, and line manager training to help them acquire knowledge and skills related to safety and health</li> </ul>
	Quality assurance	(27) Accreditation rate in compliance with Quality Guidelines in internal quality audit	70% of internal quality audit target locations in FY2023	—	Progress during fiscal 2021: 35% (8 of 23 sites)	<ul style="list-style-type: none"> <li>Under the current Medium-Term Management Plan (FY2021-2023), 126 locations are subject to audit (as of the first quarter of fiscal 2022).</li> <li>In fiscal 2021, due to the COVID-19 pandemic, 23 local locations were designated as locations that require audit for certification (another 23 locations that were remotely audited were not eligible for certification), and eight of these were certified (certification rate: 35%)</li> </ul>
Corporate governance	(28) Automation rate of testing and inspection equipment as defined by the Company	—	—	—	<ul style="list-style-type: none"> <li>While promoting automation based on our existing automation plan we are discussing a medium- to long-term automation plan that includes partial automation of the process from data acquisition to issuance of inspection results, aimed at improving soundness of testing and inspection data.</li> </ul>	
	(29) Continuation of customer satisfaction survey	—	Ongoing	Ongoing	<ul style="list-style-type: none"> <li>Conducted surveys with questions tailored to each business division.</li> </ul>	
Corporate governance	(30) Improving the effectiveness of the Board of Directors	—	Ongoing	Ongoing	—	
		—	Ongoing	Ongoing	—	

# Value Creation Process

## Group Corporate Philosophy

### KOBELCO's View of the Future

We envision a world in which people, now and in the future, can fulfill their hopes and dreams while enjoying safe, secure, and prosperous lives.

### KOBELCO's Mission

Our mission is to provide solutions to the needs of society, by making the best use of the talents of our employees and our technologies.

### Core Values of KOBELCO

1. We provide technologies, products and services that win the trust and confidence of our customers we serve and the society in which we live.
2. We value, and support the growth of, each employee on an individual basis, while creating a cooperative and harmonious environment.
3. Through continuous and innovative changes, we create new values for the society of which we are a member.

### Six Pledges of KOBELCO

1. Uphold the Highest Sense of Ethics and Professionalism
2. Contribute to the Society by Providing Superior Products and Services [Quality Charter](#)
3. Establish a Comfortable but Challenging Work Environment
4. Live in Harmony with the Local Community
5. Contribute to a Sustainable Environment
6. Respect Each Stakeholder

## Major Operating Capital

### Financial Capital

Stockholders' equity: ¥783.1 billion  
Interest-bearing debt: ¥655.1 billion  
(Excluding project financing)

### Human Capital

Number of employees (consolidated): 38,106  
Diverse human resources

### Production Capital

Capital expenditures: ¥108.1 billion  
Tangible fixed assets: ¥1,060.1 billion  
Depreciation: ¥105.1 billion

### Intellectual Capital

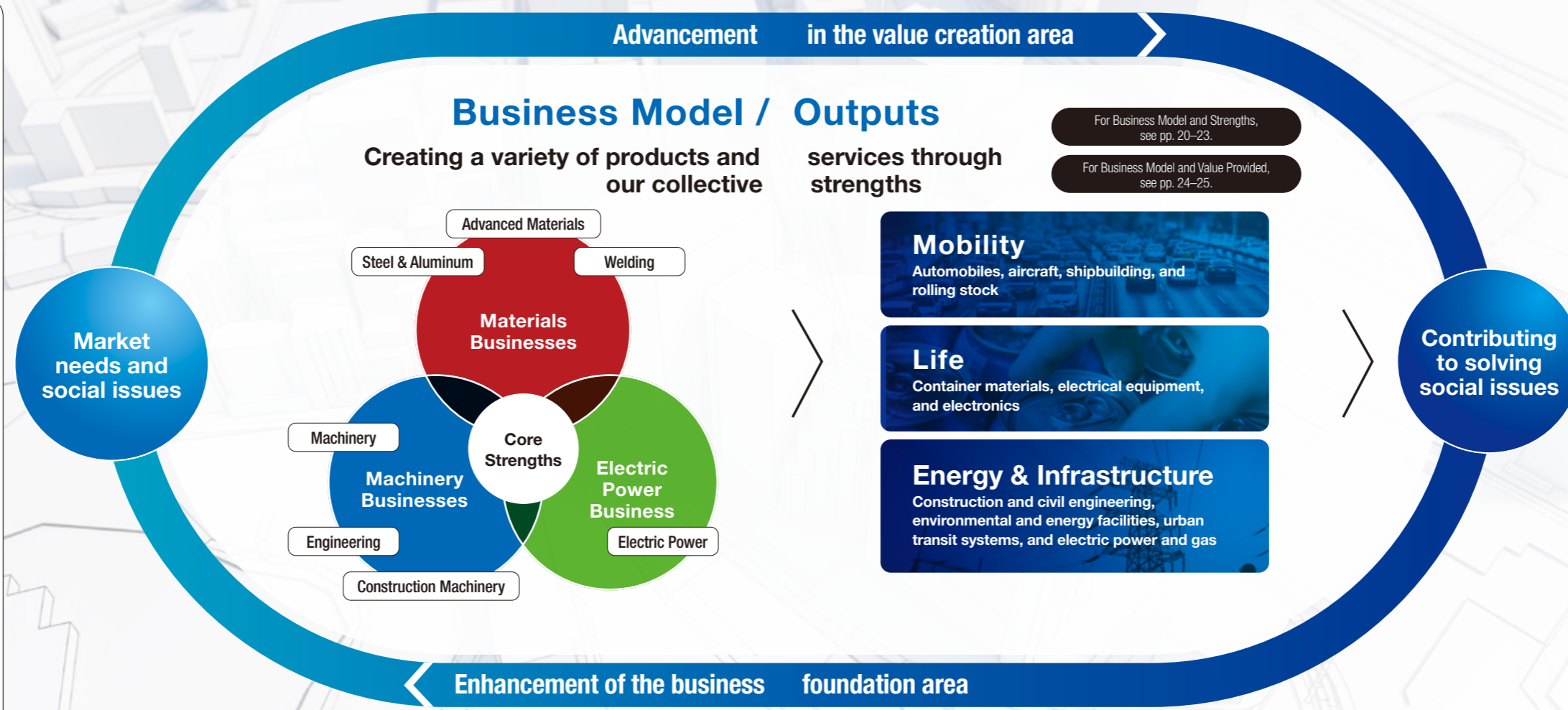
R&D expenses: ¥33.2 billion  
Intellectual property rights owned: 8,319  
(Japan 3,576, Overseas 4,743)  
Know-how and technologies developed through 116 years of business

### Social and Relationship Capital

Global operations: 23 countries and regions  
Group companies: 251  
Communication with stakeholders

### Natural Capital

Taking on the Challenge of Realizing Carbon Neutrality by 2050  
CO<sub>2</sub> reduction: 16% (compared to FY2013)  
Contribution to reduction of CO<sub>2</sub> emissions: 44.91 million tons  
Water recycling rate: 95.7%  
By-product recycling rate 99.3%



## Value Provided

### Economic value

Consolidated net sales: ¥2,082.5 billion  
ROIC: 4.7%  
Dividend payout ratio: 25.0%

### Social value

- Contributing to CO<sub>2</sub> reduction through the KOBELCO Group's technologies, products, and services
- Contributing to sustaining a recycling-oriented society for the world's eight billion people
- Increasing labor productivity with improved efficiency
- Promoting active participation of diverse human resources
- Pursuing global employment and employee training



## Increase Corporate Value and Enhance Capital Assets

### Key Issues to Be Addressed by Management (Materiality)

For Materiality and Indicators/Targets, see pp. 16–17.

#### Contributing to a green society

- Response to climate change
- Response to resource recycling

#### Ensuring safety and security in community development and manufacturing

- Supplying energy focused on "S+3E"
- Providing materials and machinery that meet needs
- Improving safety and productivity

#### Providing solutions for the future connecting people and technology

- Reforms in manufacturing and operations through digital transformation (DX)
- Integration and innovation of diverse intellectual assets

#### Promoting active participation of diverse human resources

- Diversity and inclusion (D&I)
- Work style reforms
- Human resources development

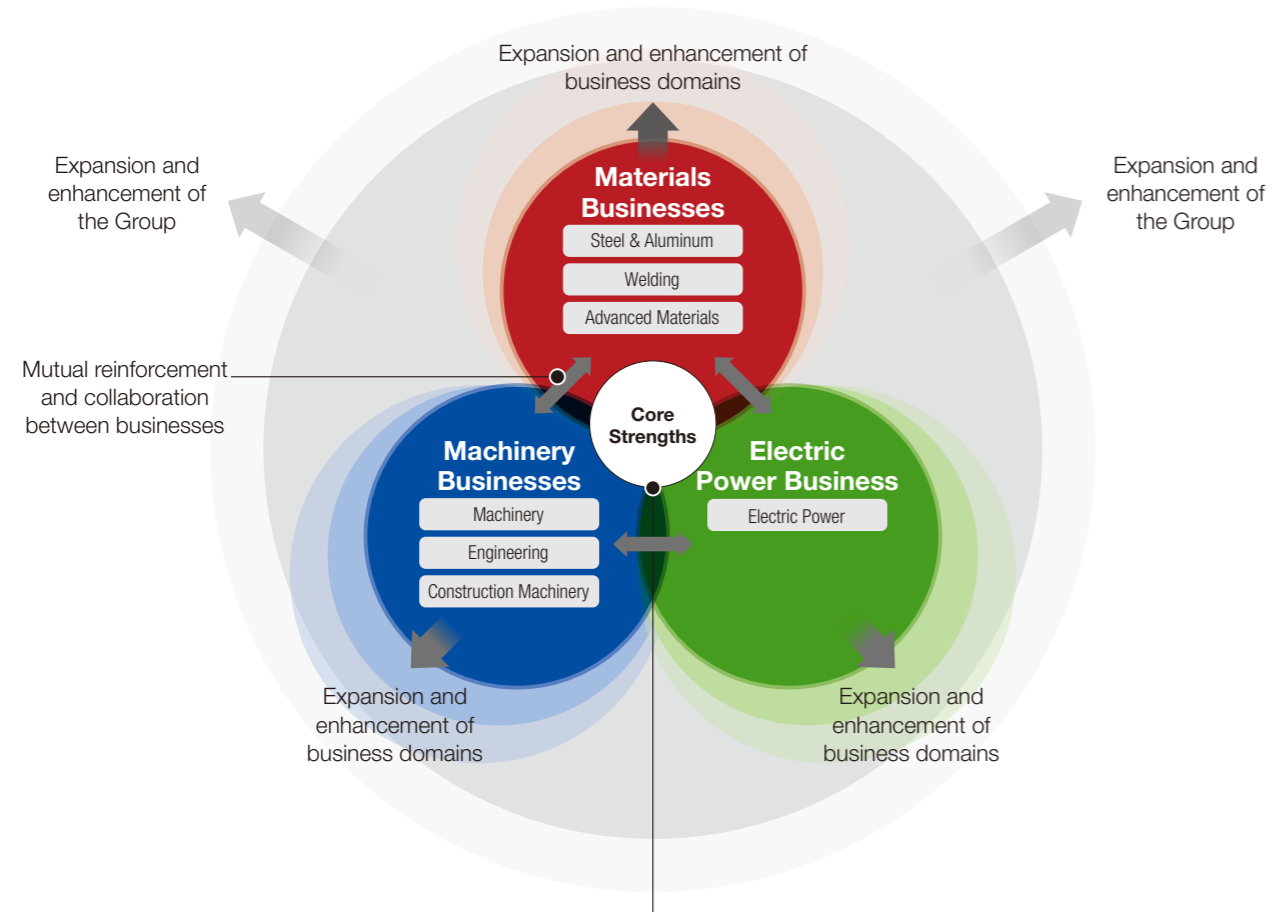
#### Pursuing governance that supports sustainable growth

- Compliance and risk management
- Safety and health
- Quality assurance
- Human rights
- Corporate governance

## Business Model and Strengths

### Creating a Variety of Products and Services through the Collective Strengths of the KOBELCO Group

The KOBELCO Group has engaged in a variety of businesses over the course of its history of 116 years. These businesses have expanded around the globe and are supported by diverse human resources. Leveraging the knowledge and technological capabilities that have been cultivated in a wide range of businesses, we will continue to provide solutions to the needs of our customers and society by creating a variety of products and services through the collective strengths of the KOBELCO Group.



#### Core Strengths to Enhance the Group's Capabilities



#### 01 Diversity in Human Resources

The KOBELCO Group operates businesses in 23 countries and regions around the world and has approximately 38,000 employees on a consolidated basis. In addition, we have a wide range of human resources who have extensive knowledge and skills in a variety of fields because we operate in diverse business domains. The KOBELCO Group will continue to grow with its global human resource base, and we will aim to make further great leaps forward.



#### 02 Research and Development

Leveraging the know-how and technological capabilities that we have developed in a wide range of business fields, the KOBELCO Group will create new value and provide solutions to the needs of its customers and society. We aim to be a provider of products and services that address social issues, including carbon neutrality, together with our customers by working to create new technologies, products, and services that satisfy our customers' needs.



#### 03 Customer Base

The KOBELCO Group has operated in a wide range of business fields. The significant assets we have acquired through many years of business activities include not only technological development capabilities and production technologies across various technology fields, but also the knowledge of trends in each field and customer needs that span a range of business domains. By sharing these assets developed with customers across business divisions, we will continue to provide our Group's unique technologies, products, and services.



Core Strengths to Enhance the Group's Capabilities

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### Human Resources with Diverse Skills and Values Acquired through a Wide Range of Businesses

The KOBELCO Group is engaged in businesses across a wide range of fields, including steel & aluminum, advanced materials, welding, machinery, engineering, construction machinery, and electric power. In order to advance these businesses, the Group has human resources who are well versed not only in various materials and machine products but also in various technologies that are required to manufacture these materials and products, such as process technology, control technology, production control, and quality control. The Group also

has professionals with expertise in various areas, such as marketing, sales, accounting, and legal affairs, which are essential in operating a wide range of businesses.

Our businesses are expanding in 23 countries and regions around the world, and people with diverse talents are playing active roles in each business location.

The Group is working to achieve sustainable growth in each business by making the best use of diverse technologies and human resources that we have developed through a wide range of businesses.



To Further Enhance Our Strengths

With the aim of becoming a company in which diverse human resources can demonstrate their individual abilities to the fullest, we will reform our work environment and organizational culture.

To that end, we will provide full support for the growth of all employees so that they can further demonstrate their abilities, while actively promoting work style reforms, including eliminating long working hours and encouraging the taking of paid leave.

#### ① Diversity and Inclusion

- We aim to enable each employee to achieve self-improvement and demonstrate their individuality and strengths, as well as to support the efforts of "KOBELCO One Team" to take on challenges and create new values from diverse ideas and experiences.

#### ② Work Style Reforms

- We aim to realize a work environment in which diverse employees can work with a sense of fulfillment and with high productivity.

#### ③ Human Resources Development

- We aim to support the constant self-improvement of our employees so that each and every individual can carry out their daily work with pride and enthusiasm.

For details, see Human Resources Strategy and Diversity and Inclusion (D&I) on pp. 74 and 76.

# 02 Research and Development

Core Strengths to Enhance the Group's Capabilities

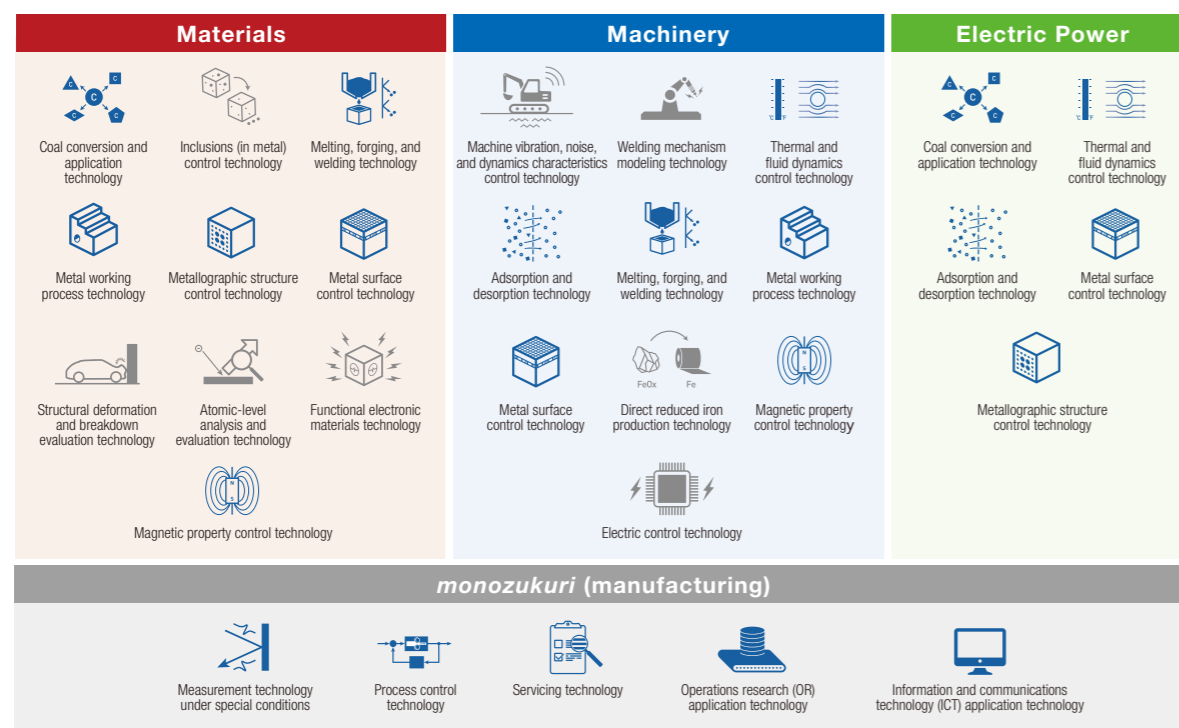
Leveraging the know-how and technological capabilities that we have developed in a wide range of business fields, including steel & aluminum, advanced materials, welding, machinery, engineering, construction machinery, and electric power, the KOBELCO Group will create new value and provide solutions to the needs of its customers and society. We aim to be a provider of products and services that address social issues, including carbon neutrality, together with our customers by working to create new technologies, products, and services that satisfy our customers' needs.

## Creating Synergies through the Fusion of 21 Core Technologies across Business Segments

The Technical Development Group has dedicated many years to building up a broad base of technologies through R&D activities in various business fields, including materials, machinery, and electric power. The technology assets that support the creation of distinctive products and our

advanced *monozukuri* (manufacturing) capabilities can be classified into the following 21 core technologies.

We will strengthen these core technologies and combine them to create new value.

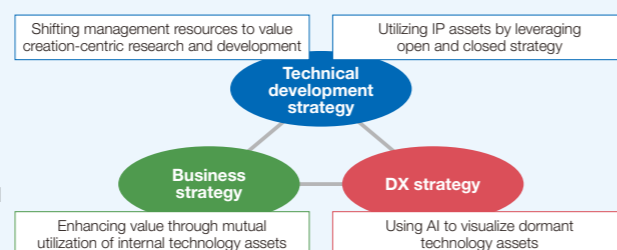


Note: Icons shown in blue represent the core technologies that are utilized across business segments.

### To Further Enhance Our Strengths

We are faced with rapid and major changes such as carbon neutrality and digital transformation (DX). Taking them as business opportunities, we will work on the planning and development of new businesses.

By linking the technical development strategy with the DX strategy and business strategy, we will accelerate mutual utilization of a wide variety of technology assets and intellectual property (IP) and create value unique to KOBELCO.



# 03 Customer Base

Core Strengths to Enhance the Group's Capabilities

The KOBELCO Group has operated in a wide range of business fields, including steel & aluminum, advanced materials, welding, machinery, engineering, construction machinery, and electric power. The significant assets we have acquired through many years of business activities include not only technological development capabilities and production technologies across various technology fields but also the knowledge of trends in each field and customer needs that span a range of business domains.

By sharing these assets developed with customers across business divisions, we will continue to provide our Group's unique technologies, products, and service.

## Our Network Built Up through Diversified Business Operations along with the Demands of the Times

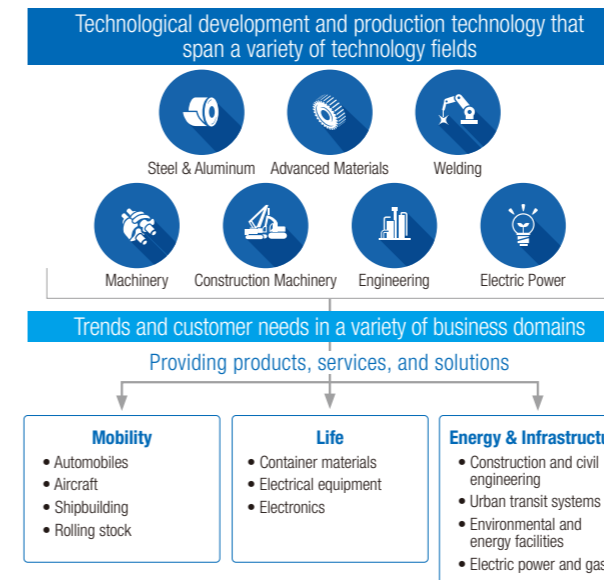
Over the 116 years since its founding in 1905, the KOBELCO Group has worked with its customers to create and provide the products that they need. The KOBELCO Group currently operates businesses in seven segments.

For diverse customers in each segment, the KOBELCO Group is working to provide products, services, and solutions from a wide range of perspectives that take into account the trends and needs of customers in a variety of fields.

In addition, we have many customers who are doing

business with multiple segments of our Group. For such customers, we can offer multiple proposals from the perspective of each segment.

In the materials business, for example, we are one of the few companies in the world that operate both steel and aluminum businesses. We offer various proposals to our customers not only from the standpoint of a provider of steel and aluminum but also from the standpoint of a provider of multi-materials that combine these different materials.



### To Further Enhance Our Strengths

As part of our Companywide DX initiatives, we are promoting "customer experience DX," which aims to strengthen customer contact points and services provided from the customer's perspective in order to enhance the value of the customer experience. We consider the issues and needs obtained from contact points with a variety of customers and stakeholders as important assets. By promptly sharing and utilizing them, we strive to obtain an accurate understanding of customer requirements and utilize them in new products and services that meet their needs.

#### Customer Experience DX initiatives

- Enhancing the value of customer experience by building a customer-specific information database shared across business segments
- Strengthening marketing activities through digital utilization at customer contact points

# Business Model and Value Provided

Economic Environment by Customer Domain  
For details, see pp. 54-55.

Operating segments  
For details, see pp. 56-65.

21 Core Technologies

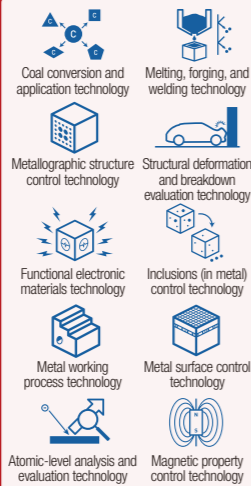
Manufacturing Process

Distinctive Technologies, Products, and Services (Examples)

## Materials Businesses

In the materials businesses, our main customers are in the fields of automobiles, aircraft, shipbuilding, rolling stock, food containers, electronics, and construction and civil engineering.

As a distinctive manufacturer with a wide range of materials including steel materials such as special steel wire rods and high-strength steel, nonferrous materials such as aluminum, copper, and titanium, and welding materials, our Group contributes to solving social issues that our customers face.

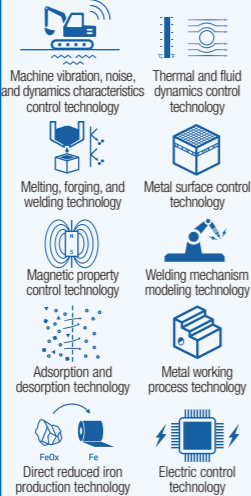


Core technologies supporting monozukuri (manufacturing) in the three fields

## Machinery Businesses

In the machinery businesses, our main customers are in the fields of automobiles, aircraft, shipbuilding, construction and civil engineering, social and industrial infrastructure, and environment and energy. Our machinery businesses are operated globally.

We are contributing to the environment and society by providing technologies, products, and services that address social issues faced by our customers on a global basis.

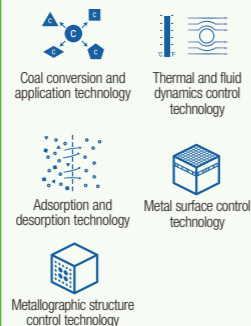


Measurement technology under special conditions  
Process control technology  
Servicing technology  
Operations research (OR) application technology

## Electric Power Business

In the electric power business, we are working to ensure stable operations by implementing thorough measures as a provider of electric power as a key component of social infrastructure.

We will continue to promote low-carbon and decarbonization in accordance with laws and regulations, as well as national policies, in order to supply electric power with safety, economic efficiency, and stability.



Information and communications technology (ICT) application technology

### Raw Materials and Parts Procurement

- Iron ore
- Coal
- Aluminum ingot
- Titanium sponge
- Other secondary materials, etc.

### Our Group's products

#### Materials and components required to manufacture products

- Steel products
- Wire rods and bars
- Steel sheets and steel plates
- Aluminum plates
- Copper rolled products
- Steel castings and forgings
- Titanium products
- Steel powder
- Aluminum extrusions
- Aluminum castings and forgings
- Welding materials

Used in production

### Raw Materials and Parts Procurement

- Various parts
- Various equipment
- Various materials
- Various components

### Our Group's products

#### Products and services related to manufacturing facilities

- Industrial machinery
- Compressors
- Various plants
- Construction Machinery

### Raw Materials and Parts Procurement

- Coal, natural gas
- Generators
- Repair parts
- Other materials

- Power generation

Mobility

- Automobiles
- Aircraft
- Shipbuilding
- Rolling stock

Life

- Container materials
- electrical equipment
- Electronics

Energy & Infrastructure

- Construction and civil engineering
- Environmental and energy facilities
- Urban transit systems
- Electric power and gas

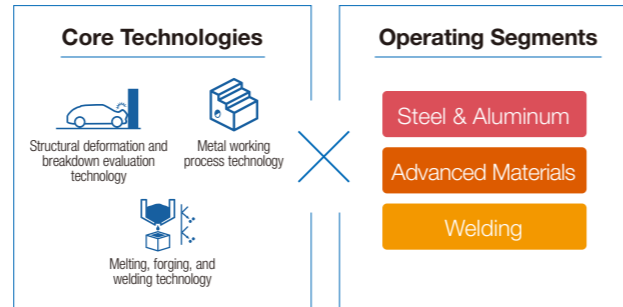
For details, see Research and Development in Business Model and Strengths on p. 22.

# Value Creation Examples

Leveraging the advantages of operating diverse businesses, the KOBELCO Group provides customers with not only the distinctive technologies, products, and services of each business division but also the Group's unique value by promoting the cross-sectoral utilization of products and technologies of other business divisions and segments.

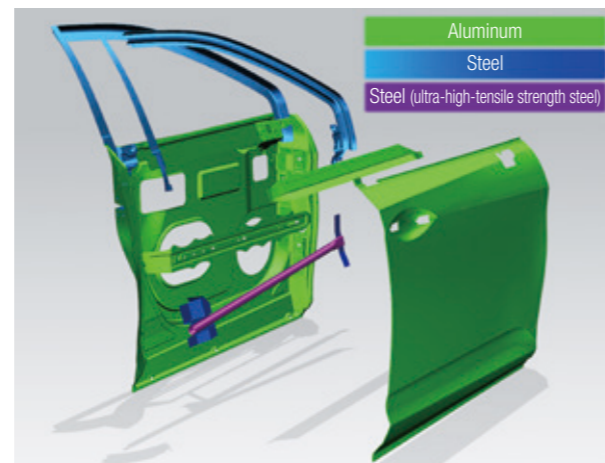
## Value Creation Example 01

### Proposing Multi-Material Solutions that Meet the Need for Automotive Weight Reduction



As a materials manufacturer, our Group has been working to reduce the weight of automobiles and other transportation equipment with the aim of improving fuel efficiency and reducing CO<sub>2</sub> emissions. In recent years, there has been a sharp increase in demand for CO<sub>2</sub> reductions aimed at realizing a carbon-neutral society, and at the same time, collision safety standards have been tightened. Against this background, there is a growing need for making lightweight yet robust vehicles, which requires solutions that balance the contradictory properties of lightness and strength.

Our Group can propose such solutions because it possesses strengths that other companies do not have. We have both steel and aluminum businesses and the technology to join these materials together. We are the only such materials manufacturer in Japan and one of a



Multi-material door structure originally developed by the KOBELCO Group (3D model)

few in the world. Using this as a weapon, we offer our customers multi-material solutions that use our unique joining technology to combine ultra-high-tensile strength steel with lightweight aluminum, which are manufactured by our Company, with the aim of expanding sales of our material products.

Another strength of the Group is its ability to provide cutting-edge solutions. A typical example of this is the technology for joining materials with different properties, such as steel and aluminum. This unique solution is based on the technology that has been developed by our Group over many years. By offering advanced solutions, we will contribute to improving the value of our customers' products and realizing lightweight and robust vehicles.

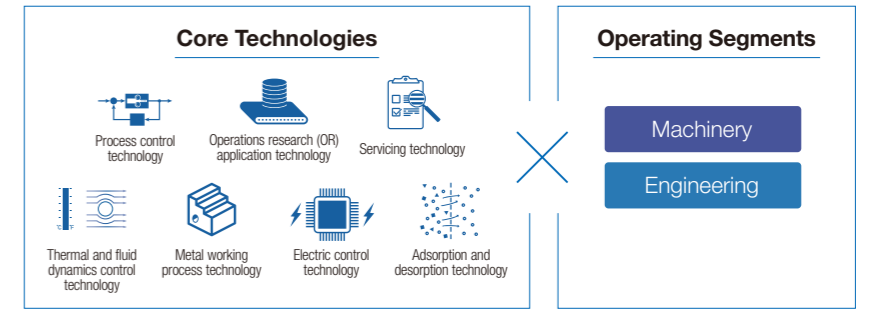
In the future, we will take on the challenge of developing technology to reduce the environmental impact of the entire process, from the manufacture of materials to the manufacture and recycling of products.



Multi-material door structure originally developed by the KOBELCO Group (prototype)

## Value Creation Example 02

### Demonstration of Hybrid-Type Hydrogen Gas Supply System



Our Group plans to start a demonstration test of the hybrid-type hydrogen gas supply system at Kobe Steel's Takasago Works from around March 2023 with a view to achieving carbon neutrality by 2050.

Our hybrid-type hydrogen gas supply system provides solutions to stable and economical hydrogen production for small- to medium-scale hydrogen users. The hybrid system is based on the following three products/technologies of the KOBELCO Group:

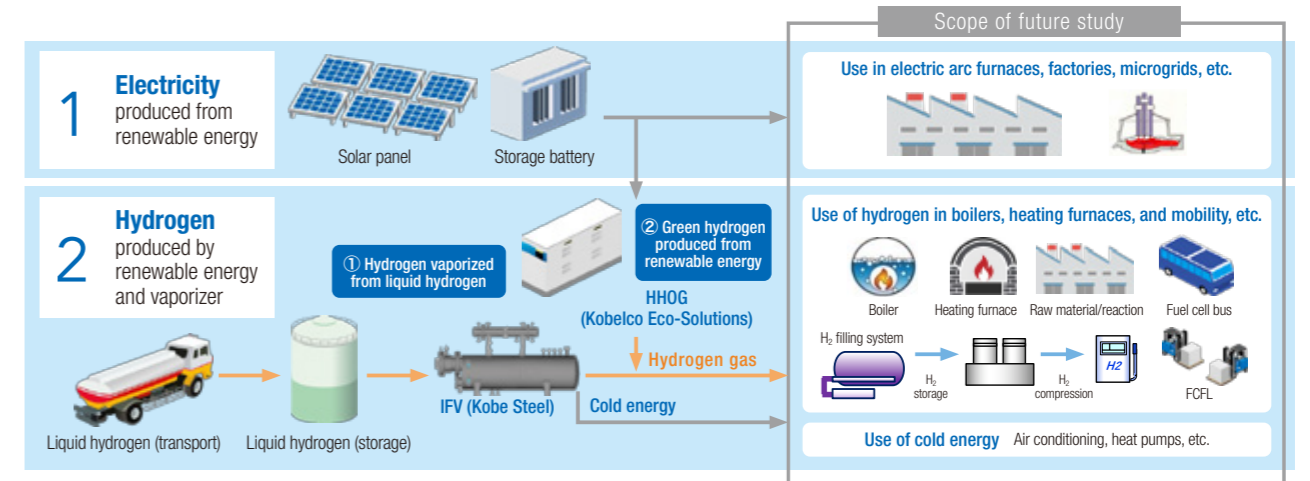
- (1) Cryogenic liquid hydrogen vaporizer under development, utilizing the machinery business' core technology of the Intermediate Fluid Vaporizer (IFV)
- (2) High-purity Hydrogen Oxygen Generator (HHOG), developed by Kobelco Eco-Solutions Co., Ltd.
- (3) Operation management system that monitors and controls hydrogen production and feed, utilizing the technological resources of the engineering business

In order to promote the utilization of hydrogen, the hybrid system is designed to have a liquid hydrogen vaporizer and a water-electrolysis hydrogen generator utilizing renewable energy in parallel, achieving both cost minimization and

elimination of supply instability of renewable energy. It also remotely monitors the amount of hydrogen used in facilities such as industrial furnaces and boilers to control the hydrogen supply system (hydrogen production) optimally for hydrogen demand change over time, so that hydrogen is always supplied stably and efficiently. In addition, the cold energy generated during the vaporization of liquid hydrogen can be used at the customer's factories for cooling manufacturing facilities, air conditioning, heat pumps, etc. It saves energy and improves the energy efficiency of their production processes.

Through these efforts, we will expand the utilization of hydrogen in various industries including our Group companies to contribute to the transition to decarbonization (namely, the transition to a hydrogen society).

The demonstration test of the hybrid-type hydrogen gas supply system will be carried out in collaboration of Kobe Steel and Kobelco Eco-Solutions through the mutual use of the management resources of the machinery business and the engineering business to provide solutions for the realization of a hydrogen society.



## Financial and Non-Financial Highlights (Fiscal 2021)

Net sales  
**¥2,082.5**  
 billion



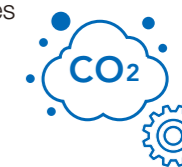
Operating income  
**¥87.6** billion



Reduction of CO<sub>2</sub> emissions in production processes  
**16.0%**



Contribution to reduction of CO<sub>2</sub> emissions through technologies, products, and services  
**44.91**  
 million tons



Ordinary income  
**¥93.2** billion



Net income attributable to owners of the parent  
**¥60.0** billion



Water recycling rate  
**95.7%**



By-product\* recycling rate \* Slag, dust, and sludge  
**99.3%**



Total assets  
**¥2,728.7** billion



Interest-bearing debt  
 (Excluding project financing)  
**¥655.1** billion



D/E ratio  
**0.8** times



Percentage of female managers  
 (non-consolidated)  
**2.8%**



Percentage of employees taking special leave for childcare  
 (Male employees, non-consolidated)  
**78.5%**



ROIC  
**4.7%**



ROA  
**3.5%**



Dividend payout ratio  
**25.0%**



Percentage of women in new graduate hires  
 (non-consolidated)

Career-track administrative positions **35.0%**  
 Career-track technical positions **6.0%**  
 General technical positions **8.0%**

Employment rate of people with disabilities  
 (non-consolidated)

\* Statutory employment rate: 2.3%

**2.56%**



Lost time injury frequency rate

**0.14**  
 (calendar year)



Free cash flow  
 (Excluding project financing)  
**¥56.6** billion



Operating cash flow  
 (Excluding project financing)  
**¥181.6** billion



Investing cash flow  
 (Excluding project financing)  
**(¥125.0 billion)**



Overtime hours  
 (non-consolidated)  
**17.2** hours/month



Number of annual paid leave days taken  
 (non-consolidated)

**13.9** days



Turnover of employees with less than 10 years of service  
 (non-consolidated)

**19.5%**

